

THE CHALLENGES OF MADRASAH MANAGEMENT IN ACHIEVING SUSTAINABILITY AND ADVANTAGES IN THE DIGITAL TECHNOLOGY ERA

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Abstract: This paper aims to discuss the problems faced in managing madrasas, particularly in achieving high competitiveness in the current era of digital technology. This study uses exploratory descriptive data according to the theme and research objectives. The research data were analyzed through in-depth evaluation and interpretation of the data, so that relevant important points were found related to the discussion of challenges and competitiveness faced by school management in modern times. This study found that the governance of Islamic schools faces various challenges, due to the fact that technology and the digital era are globalization trends that have positive and negative impacts. Madrasas as places where the pillars of Islam are in achieving educational goals based on Islam are expected to be able to take advantage of all these technologies by well, namely by balancing and aligning globalization trends, so as to give birth to creativity and active learning for students in facing competitiveness in today's global world.

Keywords: challenges; madrasah; management; sustainability; competitive advantage; technology era.

Abstrak: Tulisan ini bertujuan untuk membahas permasalahan yang dihadapi dalam mengelola madrasah khususnya dalam mencapai daya saing yang tinggi di era teknologi digital saat ini. Penelitian ini menggunakan eksplorasi data deskriptif sesuai dengan tema dan tujuan penelitian. Data penelitian dianalisis dengan evaluasi mendalam, dan menginterpretasi data sehingga ditemukan poin-poin penting yang relevan terkait dengan pembahasan mengenai tantangan dan daya saing yang dihadapi oleh manajemen sekolah di zaman modern. Kajian ini menemukan bahwa tata kelola sekolah Islam menghadapi berbagai tantangan, disebabkan karena teknologi dan era digital ini merupakan trend globalisasi yang memiliki dampak positif dan negatif. Madrasah sebagai tempat pilar Islam dalam mencapai tujuan pendidikan yang berlandaskan agama Islam diharapkan bisa memanfaatkan semua teknologi tersebut dengan baik, yaitu dengan cara menyeimbangkan dan menyelaraskan trend globalisasi, sehingga melahirkan kreatifitas dan pembelajaran aktif bagi siswa dalam menghadapi daya saing didunia global saat ini.

Kata kunci: tantangan; madrasah; tata kelola; keberlanjutan; keunggulan kompetitif; era teknologi.

Introduction

In the era of digital technology, which is perceived as an all-around era, it can handle all problems with all speed and innovation, both for business knowledge and all services of human life.¹ In this era of digital technology, developments and progress in all sectors of human civilization continue to roll without stopping. There is also the inability of humans to control as a result

of technology where all work and life activities can now be managed with technology, but only sometimes will they be able to manage entirely as desired. Among other things, the development of educational governance with Islamic nuances, such as the guidance of the life of Muslims in this world where the challenge is to get a balance between the interests of the world and the interests of the hereafter between intellectual interests and the development of human character and faith. Based on the goals and interests of Muslims to live often in a balance between working for worldly victory with charity for the benefit of life

¹ Hasperi Susanto, Rambat Nur Sasongko, dan Muhammad Kristiawan, "Teachers' Professionalism in Improving the Quality of Madrasah Education in The Era of Globalization," *Jurnal Studi Guru Dan Pembelajaran*, vol. 4, no. 1 (2021), pp. 135-41.

after this later becomes a dead challenge and also has an impact on how Muslims, especially educators, can create this balance through the management of the Islamic education system, namely madrasas in Islam, face challenges in an increasingly technological era today.²

Indeed, through the application of its benefits, technology has changed the world of human life and business, including innovative education.³ However, it is not necessarily very productive, especially for increasingly conservative Muslims with strong and obedient Islamic values and traditions. Currently, there are deep concerns about the impact of technology itself which is sometimes not used responsibly and adequately so that it has an impact on the behavior of students and even teachers and other rural Muslims, from cyberbullying, crime, and copyright infringement to social behavior that is not in line with the guidelines and Muslim customs. Indeed, character education has been the focus of education for thousands of years, both formally and informally, before the existence of this modern technology. Moreover, the interests of madrasa administrators are highly centered around character instruction in the school's local area and madrasas to accomplish a faithful and flourishing instructive local area with the point of a majority rule madrasa, containing a few goals, for example, regarding others, keeping up with equity and equity, really focusing on the government assistance of the local area and help other people willfully.⁴ Character since days of yore is viewed as a perceived word with a specific implication. At the end of the day, when madrasas are considered to have an astounding person-building task as is typically utilized, the organization likewise has a few characteristics like reliability, honesty, energy, and solid devotion

contrasted with general instruction levels like secondary school and even college.⁵

Public and government support for the importance of madrasah strengthening education began before the Indonesia's independence.⁶ However, technology has made character education methods undergo drastic changes. The digital era significantly impacts student behavior, so character education must also adjust. The era of freedom and the rapid dissemination of information makes many people worry about the future of students' character. Schools began to implement character education in the digital era informally in agreements to limit internet access for students and set virtual behavior standards for students. The main challenge is to equip students to deal with swift changes. This article discusses the opportunities and challenges of character education in the digital era.⁷

Irwan Fathurrochman indicated that there are somewhere around two genuine difficulties looked at by madrasa schooling. The primary test is confronting the current of mechanical change and industry 4.0. At the same time, the subsequent test is about strict balance.⁸ "The relentless change in modern innovation from 1.0 where machines supplanted energy, 2.0 machines outfitted with PC frameworks, 3.0 the development of the web to the modern period 4.0 which was exceptionally computerized and counterfeit astute, required the universe of instruction to adjust to its times," As he indicated, in the following 10 to 20 years, madrasah understudies will no longer require homerooms since their reality has risen above the limits of existence.⁹ Just by sitting and resting, kids can

² Siskandar Siskandar, "The Role Of Religious Education And Utilization Digital Technology For Improving The Quality In Sustainability Madrasa," *Jurnal Tarbiyah*, vol. 27, no. 1 (2020).

³ Hasbi Indra, Amir Tengku Ramly, dan Bahrum Subagiya, "ECONOMIC KNOWLEDGE AND ENTREPRENEURSHIP IN MADRASA," *Journal of Entrepreneurship Education*, vol. 24, no. 3 (2021), pp. 1-8.

⁴ Moch Machfudi, "The long-term impact of an english language teacher training program on teachers' practices in Madrasah Tsanawiyah in Indonesia" (PhD Thesis, University of Southern Queensland, 2017).

⁵ Muhammad Iqbal, "Public versus Private Secondary Schools: A Qualitative Comparison.," *Journal of Research & Reflections in Education (JRRE)*, vol. 6, no. 1 (2012).

⁶ Siskandar, "The Role Of Religious Education...", (2020)

⁷ Raudah Raudah, Achmad Hidir, and Muhammad Nor, "Understanding Educational Management in The Context of Environmental Protection for Madrasah Application," *Nazhruna: Jurnal Pendidikan Islam*, vol. 4, no. 2 (2021), pp. 419-33.

⁸ Irwan Fathurrochman, "Online Evaluation System in the Pandemic Disruption in Madrasah: Opportunities and Challenges Based on Qualitative Report," *Jurnal Iqra': Kajian Ilmu Pendidikan*, vol. 6, no. 2 (2021), pp. 184-97.

⁹ Ahmad Salim and Muh Mustakim, "Madrasah Reposition in Building Community Trust in Covid-19 Era Disruption," *Al-Ta'lim Journal*, vol. 28, no. 2 (2021), pp. 155-66.

surf all over the place. Students can arrange anything they desire from where they are without a problem. "The web of things will be everything. Fake keen applications that look like the human cerebrum were made to work with human work. In industry 4.0, discussing existence is not applicable," The second test, which is more complex than the first, is the issue of mainstreaming strict balance. Religion should not be perceived as outrageous, both simpleton outrageous right and liberal outrageous left.¹⁰

So mainstreaming strict control is a need. "Assuming this nation is constrained by one of these outrageous gatherings, the state request will be obliterated. In this manner, Nur Kholis trusts that madrasa training can address these two difficulties through three significant components: entertainers (educators, instruction staff, partners), climate, and offices. "Instructors, schooling staff, and madrasa training strategy holders should refresh their insight into innovation and need to settle their strict arrangement and public understanding. The climate and offices should be made so favorable with the goal that understudies can learn tangibly.¹¹

These days, globalization has achieved many changes in all parts of life. This change cannot be stopped because of advanced science and innovation.¹² This brings issues to the overall population about the significance of dominance of science and innovation. Schooling is a commitment for them. In this time of globalization, the universe of schooling unavoidably needs to acknowledge the times and mechanical advances, most of which come from western nations, like TV, cell phones, PCs, and others. Islamic training is no particular case, which cannot be isolated from the predisposition of this globalization

peculiarity since it is outside the realm of possibilities for Islamic schooling to go through fundamental strategies, for example, addresses in conveying material. However, innovation-based instruction in its conveyance is demonstrated by LCDs, language research centers, etc. As a component of instructive Islamic organizations, madrasas should have the option to adjust to life requests worldwide. One way that should be done is to adjust the educational program. Since the madrasa will be left a long way behind without endeavors to adjust the educational program, now is the ideal time. This is following the assessment as cited by experts, saying that "without endeavors to adjust the educational plan, madrasa schools or other Islamic instructive organizations will find it challenging to form into great schools.¹³

For this reason, globalization with technological sophistication is believed to have impacted the form of challenges and hopes for the arrangement of madrasas and Muslims in general.¹⁴ Because of the existence of technology and its impact, madrasa managers will be tested against each other with all challenges related to how they use existing human resources and human resources to advance Madrasas, not only in the local, national but global areas. So, Islamic instruction madrasas should attempt to foster themselves to make understudies effective with their IMTAQ and fruitful in confronting the worldwide world with their science and innovation. In this paper, the researcher talk about the difficulties of Islamic Religious Education in madrasas in the time of globalization, which are all stacked with innovation that has beneficial effects and adverse consequences. Therefore, this study has the potential to obtain answers so that the problems faced by the madrasa can be resolved, at least getting meaningful input for the sake of problem-solving.¹⁵

¹⁰ Anie Rohaeni et al., "Management of Noble Moral Education for Madrasah Aliyah Students at Persatuan Islam Boarding School," *Journal of Industrial Engineering & Management Research*, vol. 2, no. 4 (2021), pp. 154–71.

¹¹ Muhammad Mushfi El Iq Bali and Noer Holilah, "The Role of Foster Caregivers in the Effectiveness of Online Learning in Pesantren," *Edukasi Islami: Jurnal Pendidikan Islam*, vol. 10, no. 01 (2021), pp.339–62.

¹² Isa Anshori, "Problem-Based Learning Remodelling Using Islamic Values Integration and Sociological Research in Madrasas," *International Journal of Instruction*, vol. 14, no. 2 (2021), pp. 421–42.

¹³ Mukhammad Abdullah, "School culture to serve performance of madrasah in Indonesia," *QIJS: Qudus International Journal of Islamic Studies*, vol. 7, no. 1 (2019), pp. 71–100.

¹⁴ Thomas Kemeny, "Are international technology gaps growing or shrinking in the age of globalization?," *Journal of Economic Geography*, vol. 11, no. 1 (2011), pp. 1–35.

¹⁵ Syeda Tamkeen Fatima, "Globalization and technology

Method

The study aims to discuss the obstacles and challenges faced in managing madrasas towards sustainability and high competitiveness in the era of all-digital technology.¹⁶ To answer such problems, the researcher conducted an electronic search for data on literature such as tempered books, published papers, and all information related to optimizing madrasas in improving the quality of learning in modern technology.¹⁷ The study used the phenomenological approach, an approach that answers phenomenal problems from several existing data involving coding data analysis in-depth and even interpreting the data in depth to get an understanding that can answer the problems of the study and its hypotheses with the principles of validity, validity and high transparency. When describing the findings, follow the established reporting patterns for qualitative data from literature research so that it is clear how the data addresses a relatively minor issue in the context of madrasahs and their issues in the modern world. Finally, this study approach was used to data from literature sources, hence secondary data rather than primary data were used. From the beginning of the problem formulation part of the data search, data analysis, and final reporting, these are the processes that have been taken.

Results and Discussion

Globalization Challenges for Madrasas

Meaning of Globalization According to Wikipedia, the word globalization is taken from the word worldwide, which implies all-inclusive. Globalization does not yet have a laid-out

definition besides the meaning of work (working definition), so it relies upon which side individuals take a gander at it.¹⁸ From alternate points of view of globalization, some individuals acknowledge globalization (favorable to globalization society), and individuals reject globalization. Each individual cannot escape from this current of globalization, except if he does not connect with others, does not see programs on TV, ignores the radio, and lives as he is. Even so, just a modest bunch of people can do such things since people have the idea of being social animals; in particular, they generally need others. Globalization starts with transportation and correspondence. Notwithstanding, its effect is promptly felt in different fields of human existence, including financial aspects, legislative issues, exchange, way of life, and even religion.¹⁹

So rapidly that individuals stay aware of the times they would instead not be abandoned in this turn of events. Coming up next are some of the qualities that show the developing peculiarity of globalization on the planet.²⁰ Changes in ideas and time, like the presence of cell phones, TV, and the web, make correspondence quicker. Markets and financial creation in various nations have become associated because of the development of the worldwide exchange. They are expanding social association through the advancement of broad communications and expanding everyday issues, for instance, in worldwide emergency climate, local establishments, and others. The impact of globalization, the advancement of the times has brought about changes in human ways of life from which they first required each other to become individualistic and could not have cared less about others. Globalization positively affects living simple, agreeable, modest, excellent, and progressed. It likewise has adverse consequences, specifically causing

adoption: evidence from emerging economies," *The Journal of International Trade & Economic Development*, vol. 26, no. 6 (2017), pp. 724–58.

¹⁶ Pascal Amedro et al "Impact of a centre and home-based cardiac rehabilitation program on the quality of life of teenagers and young adults with congenital heart disease: The QUALI-REHAB study rationale, design, and methods," *International journal of cardiology*, vol. 283 (2019), pp. 112–18.

¹⁷ Luis Carlos Paschoarelli, Fausto Orsi Medola, dan Gabriel Henrique Cruz Bonfim, "Características Qualitativas, Quantitativas e Quali-quantitativas de Abordagens Científicas: estudos de caso na subárea do Design Ergonômico," *Revista de Design, Tecnologia e Sociedade*, vol. 2, no. 1 (2015), pp. 65–78.

¹⁸ Ihsan Ihsan et al., "The contestation of national and religious curricula in Indonesia's madrasas since the passage of the uusp," *Educational Studies*, (2021), pp. 1–14.

¹⁹ Indah Kusuma Dewi, "Challenging Globalization Era by Reconstruction And Reposition of Islamic Education System," *Sustainable*, vol. 4, no. 1 (2021), pp. 32–38.

²⁰ M. Sayyidul Abrori and Moh Solikul Hadi, "Integral values in madrasah: to foster community trust in education," *Istawa: Jurnal Pendidikan Islam*, vol. 5, no. 2 (2020), pp. 160–78.

nervousness, enduring, and confusion.²¹ For society, globalization is a peculiarity that causes many pessimistic effects brought by Western nations (particularly the United States) fully intent on causing individuals to follow the lifestyle in their country. These adverse consequences can be portrayed as follows: Impoverishment of otherworldly qualities. Social activities with material worth (ineffective) are viewed as everyday activities—the fall of people from profound creatures into material creatures.²² The job of religion is moved to the undertakings of the great beyond, while common issues are under the power of science. However, God is just present in considerations and words, not conduct and activities. The blend of early-stage attaches with the political framework brought forth nepotism, bureaucratism, and dictatorship, Individualistic. The event of existential dissatisfactions, for example, an extreme longing for the ability to feel that his life is inane. Data strains happen in urban communities and towns with rich and poor buyers.²³

Additionally expresses that globalization can be an apparatus. Around then, globalization became nonpartisan, implying that it contained positive things assuming it was utilized for exemplary purposes and the other way around²⁴. What is more, globalization can likewise mean a belief system. It is significant, and impartiality is significantly diminished, causing a conflict between globalization's philosophical and strict qualities. Globalization becomes a danger and a test, whether as a device or a philosophy. Madrasas and National Education. The Role

of Madrasas in National Education Madrasahs in the talk of Indonesian human existence is social peculiarities that have been around for over a century. It is anything but a distortion, assuming that the madrasa has turned into an Indonesian social character through a somewhat escalated socialization process. This is following the reinforcement of scholarly networks (scholarly organizations) among Muslims. As one of the instructive Islamic foundations, Madrasas have their own recorded excursion, which develops and is created alongside the development and advancement of the spread of Islam.²⁵

Madrasah Sustainability

Madrasas have lost their authentic roots, which implies that the presence of madrasas is not a continuation of pesantren.²⁶ Education for the New Indonesian Society, even though it is perceived that pesantren is the primary type of instructive Islamic establishment in Indonesia. There is a dualism of significance towards madrasas. From one perspective, madrasas are related to schools since they have an educational plan content that is generally equivalent to state-funded schools. Again, madrasas are considered pesantren with an old-style framework, later known as pesantren madrasah. The substance of rigid instruction materials is diminished. In his strict information, graduates of every capable madrasah are not profound, but his general information could be higher. Focusing on some of the madrasas' perceived roles as educational institutions, it indicates that they are still far behind expectations for local educational institutions in terms of imparting knowledge, skills, and a profound level of faith and devotion while also having a respected person. Because of this, students today, in the era of globalization, are committed to overcoming life's challenges.

²¹ Mirzon Daheri, "Religious Moderation, Inclusive, and Global Citizenship as New Directions for Islamic Religious Education in Madrasah," *Nazhruna: Jurnal Pendidikan Islam*, vol. 5, no. 1 (2022), pp. 64–77.

²² Agus Purwowidodo, "Revitalization of the role of recently madrasah teacher: Modern learning perspective and utilization of ict in the globalization era," *Jurnal Pendidikan Islam*, vol. 6, no. 1 (2017), pp. 169–93.

²³ Stavre Ion, "Higher Education and Globalization in the Context of the COVID-19 Crisis," *European Journal of Education*, vol. 3, no. 2 (2020), pp. 34–48.

²⁴ Fennie Wang dan Primavera De Filippi, "Self-sovereign identity in a globalized world: Credentials-based identity systems as a driver for economic inclusion," *Frontiers in Blockchain*, vol. 2 (2020), p. 28.

²⁵ Nurul Atiqah Mohd Azlan et al., "Spiritualizing new media: The use of social media for da'wah purposes within Malaysian Muslim," *International Journal of Advanced Research in Islamic and Humanities*, vol. 2, no. 3 (2020), pp. 30–41.

²⁶ Jamel Rombo Cayamodin, "The Prospect of Integrated and Holistic Madrasah Education System (IHMES) in the Philippines: A Sustainable Approach to Prevent Violent Extremism," *TARBIYA: Journal of Education in Muslim Society*, vol. 6, no. 1 (2019), pp. 88–102.

It is considered to be the madrasa educational system.²⁷

The existence of madrasa management is expected to positively contribute to improving the quality of education, whereas in madrasa management, the terms centralization and decentralization are known.²⁸ Centralization means that education is strictly regulated by the government, while decentralization means regional, which means that regulatory authority is given to the local government—education personnel, and the administrative system. Madrasa, the board, means to work on training's effectiveness, quality, and value. Expanded effectiveness, among others, is achieved through the adaptability to oversee local area support assets and disentanglement of the organization. While quality improvement can be achieved, among others, through renewing parental support in madrasas, adaptability in madrasa the board and getting the hang of, expanding the impressive skill of educators and madrasah directors as well as executing a prize and discipline framework, expanding value is acquired through expanding local area investment which permits the public authority to focus more on specific gatherings.²⁹

The benefits of madrasa management are broad freedom and authority in madrasas, accompanied by responsibilities.³⁰ Autonomy gives responsibility for managing resources and developing strategies according to local conditions. Madrasas can further improve the welfare of teachers to concentrate more on their primary task of teaching. The flexibility in managing resources and community participation encourages the professionalism of madrasa leadership, both in their roles as managers and as madrasa leaders. Madrasah management encourages

the professionalism of teachers and madrasah principals as education leaders at the forefront. By developing an effective and flexible curriculum, the madrasah's sense of responsiveness to local needs will increase and ensure educational services that meet the demands of students and the community. Student achievement can be maximized through increased parental participation because they can directly oversee their youngster's learning exercises. The executives' qualities of the madrasa include conceding expansive independence to the madrasah.³¹

Madrasah Competitive Advantages

Madrasas must have targets for the development of madrasa students so that they can compete. Religion is not reduced or even added to other knowledge. For this reason,³² Reiterates that his party has formulated 4 focuses on strengthening madrasah competencies, namely vocational strengthening, STEM, IT skills, and foreign languages. All are packaged in the STEM-Based Learning Quality Improvement Program. "This program has the aims and objectives of activities to improve the quality and competitiveness of Madrasah Students and Teacher competencies to meet the challenges of the Industrial Revolution 4.0. Strengthening the vocational aspect is carried out to improve the competitiveness and skills of Madrasah students. They are strengthening in Science, Technology, Engineering, and Mathematics (STEM) which aims to increase competitiveness and competence in mastering science and technology.³³

Meanwhile, strengthening IT Skills, namely Information technology literacy in Madrasahs,

²⁷ M. Emilzoli dan M. Ali, "Perceptions, attitudes, and lifestyles of students of Madrasah Ibtidaiyah Teacher Education Study Program about education for sustainable development," in *IOP Conference Series: Earth and Environmental Science*, vol. 739 (IOP Publishing, 2021), p. 012058.

²⁸ Raudah, Hidir, and Nor, "Understanding Educational...", pp. 419–33

²⁹ Siskandar, "The Role Of Religious Education...", (2020).

³⁰ Iin Hindun et al., "Implementation of lesson study for learning community (LSLC): Impact on piloting school teachers in Batu City," (2018).

³¹ Muhammad Sadri, Faisar Ananda, and Saparuddin Siregar, "Implementation of Management Based on Islamic Spiritual Entrepreneurship for the Success of Madrasah Management," *International Journal of Business Economics (IJBE)*, vol. 2, no. 1 (2020), pp. 29–38.

³² Amir Amir, "CURRICULUM MANAGEMENT IN IMPROVING COMPETITIVE ADVANTAGE IN MADRASAH," *MANAGERE: Indonesian Journal of Educational Management*, vol. 3, no. 2 (2021), pp. 52–61.

³³ Ratna Sari Dewi, "IMPLEMENTATION OF THE STEM APPROACH TO IMPROVING THE UNDERSTANDING OF CONCEPTS AND CREATIVITY OF JAMBI 4TH JAMBI CLASS VII STUDENTS ON ACIDS, BASES, AND SALTS," *International Jurnal of Education Schoolars*, vol. 1, no. 2 (2020), pp. 58–63.

aims to increase student competitiveness and competence related to Information Technology literacy, in Coding, IT Engineering, and others.³⁴ Especially for strengthening foreign languages, besides Arabic and English, Mandarin. The activity stages include piloting learning in each province (MI, MTs, and MA) with a zoning system. In addition, online resources are also provided for learning and establishing cooperation in improving the quality of learning the three foreign languages with the embassies of related countries. Blah blah said mastery of foreign languages is essential to increase competitiveness.³⁵

Madrasah and Independency

Madrasah Mandiri Berprestasi is a motto or slogan that we are currently carrying. Children today call it the tagline. The term tagline is more famous in marketing and promotion.³⁶ However, it is not wrong if 'Madrasah Mandiri Berprestasi' is the tagline. After all, the goal is to market and promote madrasahs. The tagline of Madrasah Mandiri with Achievements is deliberately carried out to develop madrasah education as a form of implementing Community Service Transformation in the field of Islamic education, both at the primary level (Raudlatul Athfal and MI/Madrasah Ibtidaiyah), middle (MTs/Madrasah Tsanawiyah) and upper level (MA/Madrasah Aliyah) From that tagline, I dream of an independent madrasah with many achievements.³⁷

The term "independent" in this context refers to knowing oneself, acknowledging oneself, and then growing oneself, as in independent learning, also known as autonomous learning or independent learning. In madrasahs, the teacher usually determines

what students learn, including the curriculum.³⁸ However, sometimes students know more about their strengths and weaknesses than the teacher. That way, the student knows when to devote extra time and energy to pursue what he wants. The student knows what abilities he or she should develop. Due to technological developments, the rapid flow of information will make it easier and faster for students to learn: collecting information and data, trial and error in many ways, sometimes even without assistance from the teacher. This means that students' independence in learning will be formed by itself and information technology development. So, do not be surprised if there are students who get information faster than the teacher.³⁹ This independence must be maintained so as not to be wild. Therefore, the teacher must be a facilitator and motivator in conditions like this. To form independence in learning, students must have motivation and self-confidence. Strengthening motivation and growing self-confidence is the task of educators and education staff.⁴⁰ However, keep in mind that independent learning does not mean learning at will and alone. Students still need teachers and friends to share and discuss their problems. Alternatively, encouraging each other and solving their difficulties can be effective for independent learning with other people. If a student has a problem, he or she can tell others to help clarify the problem and then draw conclusions to take action. To achieve independence in learning, teachers need to make a checklist of indicators. Whether he can meet these indicators or not, If possible, then the student is included in the independent category. If not, there must be an evaluation.⁴¹

³⁴ Dedi Riyan Rizaldi et al., "Strategies to improve teacher ability in using the madrasah e-learning application during the COVID-19 pandemic," *International Journal of Engineering, Science and Information Technology*, vol. 1, no. 2 (2021), pp. 1–6.

³⁵ Siskandar, "The Role Of Religious Education...", (2020).

³⁶ Ahmad Syar'i, Hamdanah Hamdanah, and A. Akrim, "The Development of Madrasah Education in Indonesia," *Revista Argentina de Clínica Psicológica*, vol. 29, no. 4 (2020), pp.513–23.

³⁷ Dwi Sukmanila Sayska Irhas dan Ilham Marnola, "STRENGTHENING THE MADRASAH ALIYAH INDEPENDENCE IN CENTRAL ACEH TO MAKE ALQUR'AN HADITH E-LEARNING," *UNIVERSITY-COMMUNITY ENGAGEMENT* October 8-10, 2018, vol. 3, no. 1 (2018), p. 391.

³⁸ Ronald Lukens-Bull, "Madrasah by any other name: Pondok, pesantren, and Islamic schools in Indonesia and larger Southeast Asian region," *Journal of Indonesian Islam*, vol. 4, no. 1 (2010), pp. 1–21.

³⁹ Sulistyani Eka Lestari, "Constructivism Based Blended Learning for Online Learning Madrasah Ibtidaiyah Students," in *Proceeding*, (2021), pp. 1–6.

⁴⁰ Anggun Zuhaida, "Integrative scientific madrasah in Indonesia: New developments in integrating science and religion in the learning processes," *Jurnal Ilmiah Islam Futura*, vol. 18, no. 1 (2019), pp. 34–51.

⁴¹ Erna Nurkholida, "Challenges In Developing Of Vocational Madrasah Based On Foster Father," *Riyah: Jurnal Sosial dan Keagamaan*, vol. 3, no. 01 (2018), pp. 99–111.

Madrasah and Innovative Utilities

Data Technology is an innovation used to deal with information, including handling, acquiring, gathering, putting away, and controlling information in different ways to create quality data, specifically important, precise, and ideal, utilized for individual, informational, and business purposes. Furthermore, the administration is vital data for direction.⁴² It is indicated that data innovation is not restricted to PC innovation used to process and store data but incorporates correspondence innovation to send data—correspondence innovation capacities for the conveyance. The comprehension of data and correspondence innovation, which has suggestions for utilizing PCs as electronic means or media as indicated by data innovation specialists, is as follows: Software contains informational messages or data typically introduced utilizing the gear.

The correspondence channel introduces messages between the source and the beneficiary of the message. Everything that is utilized to pass on messages and invigorate the student's contemplations, sentiments, and readiness can support the learning system that is deliberate, intentional, and controlled. To be specific, Information Technology is a medium, a gadget that can channel data from sources to beneficiaries of data.⁴³ In light of the above assessment, it tends to be inferred that data innovation is a media, material, or device, and strategies and procedures are utilized to ensure that data correspondence cooperations can occur successfully as per the standard objectives used to handle information, including handling, getting, aggregating, putting away, controlling information in different ways to deliver quality data. This is important to note that advancing Islamic training with data innovation is beneficial for progress.⁴⁴

⁴² Arshad Alam, *Inside a madrasa: Knowledge, power and Islamic identity in India* (Routledge India, 2020).

⁴³ Mustafa Tuna, "Madrasa reform as a secularizing process: A view from the late Russian empire," *Comparative Studies in Society and History* 53, no. 3 (2011): 540–70.

⁴⁴ Sapran Zalukhu, Junaidi Arsyad, dan Azizah Hanum OK, "The Effectiveness of Learning Interest and Communication Ability on Fikih Learning Outcomes of Students Madrasah Ibtidaiyah Negeri," *SCAFFOLDING: Jurnal Pendidikan Islam dan*

Innovation in Learning

Data innovation as a sight and sound learning media makes it more straightforward for understudies to have the option to get to and get different learning data required, so geological limits are, at this point, not an issue.⁴⁵ Learning should be possible all the more effectively because understudies do not have to go far through existence to meet a specialist to talk about an issue since it very well may be done from home by trading information utilizing the Internet, utilizing email (sending email), or by utilizing different components—record sharing and mailing records. Similar to the sharing of data required in exploration so that examination is not rehashed (a waste of time). Research results at colleges and research organizations can be gotten together to speed up the most common way of creating science and innovation; for instance, a virtual college is a web application with versatile qualities, which can give training that many individuals get since virtual colleges can be gotten to by anybody, from anyplace, anywhere. There are a few advantages of Information Technology as a Learning Media in the field of instruction, specifically: extending admittance to libraries; growing admittance to specialists; completing web-based addresses; scholarly data administrations of an instructive establishment; offices as an information locator; making the web a conversation office; give graduated class and school catalog offices; give offices.⁴⁶

Data Technology and Information Globalization

Uncover the fast advancement of data innovation today with the term blast; first, innovation might arrive at the whole surface of the earth in only a moment. Second, the quantity

Multikulturalisme, vol. 4, no. 1 (2022), pp. 118–29.

⁴⁵ Jin Cheng, "Evaluation of physical education teaching based on web embedded system and virtual reality," *Microprocessors and Microsystems*, vol. 83 (2021), p. 103980.

⁴⁶ Like Raskova Octaberlina and Afif Ikhwani Muslimin, "EFL Students Perspective towards Online Learning Barriers and Alternatives Using Moodle/Google Classroom during COVID-19 Pandemic," *International Journal of Higher Education*, vol. 9, no. 6 (2020), pp. 1–9.

of messages and the progression of data traffic has been mathematically multiplied. Third, the intricacy of the actual innovation is progressively refined (sophisticated), both programming and equipment. Globalization of data, particularly data innovation, can change practically all frameworks of individuals' lives, governmental issues, economy, culture, etc. The qualities of data globalization are the rising human advancement upheld by the presence of science and innovation, so the dominance and use of science and innovation are essential to satisfy the cutting-edge life of this worldwide society. The attack on correspondence and data rises above social limits. This is because the term correspondence implies warning, sharing, and trade in which the speaker anticipates thought or a response from the audience by participating in the high pace of social change, an adjustment of way of life, the sharp distinction between industrialized nations and emerging nations, with the predominance of data by non-industrial nations against immature nations.⁴⁷

Information Technology in Madrasah

Science and innovation are the premise and establishment that upholds the current development structure today.⁴⁸ The fate of a country will still be up in the air by the level of that country's authority of science and innovation. The general public or country will not have prevalence and high intensity if it does not take on and foster science and innovation; this can be perceived assuming each country today is endlessly contending rigorously in the authority and advancement of science and innovation. Islam came into an exceptionally enlightened world where the Babylonians, Pharaohs, Greeks, Romans, Byzantines, Achaemenians, and Sasanians dominated math, space science, medication, and designing, which were, at that

point, running and highly massive. Islam answered rapidly to get the worth of this learning because Allah will lift the level of educated individuals, as expressed in the QS. Al-Mujadilah 58:11. This stanza offers a chance for the Muslim Ummah to continuously foster themselves with information, which is advantageous for their lives through any media, like data innovation—like this, looking for information is mandatory for each Muslim. This is because the premise of current civilization is science and innovation; its advancement gives remarkable gifts and effortlessness to human existence.⁴⁹

Additionally, data innovation has improved the universe of schooling, particularly in the learning system. As indicated by Rosenberg, with the advancement of data innovation, there are five changes in the learning system, specifically from preparing to appearance; from the homeroom to anyplace and whenever; from paper to the station; virtual offices to organize offices; from process duration to ongoing, correspondence as an instructive medium is done with correspondence media, for example, phone, PC, web, email. One type of Information Technology item is the web which is developing quickly toward the finish of the twentieth century and on the limit of the 21st century. Its presence extensively affects human existence from different angles and aspects in his composition "Rebooting: The Mind Starts at School."⁵⁰ The article expressed that homerooms in the following thousand years would be entirely different from study halls like today, specifically as a PC research center where there could be presently no configuration for kids to sit on the educator's seat before the class. Study halls in what is to come are alluded to as "digital homerooms" or "virtual homerooms" as a spot where youngsters complete learning exercises exclusively or in bunches with a learning

⁴⁷ Purdiyanto Purdiyanto dan Hadiwinarto Hadiwinarto, "Evaluation of Teachers' Professionalism In Improving The Quality Of Madrasah Education In The Era Of Globalization," *At-Ta'lim: Media Informasi Pendidikan Islam*, vol. 19, no. 2 (2020), pp. 335–50.

⁴⁸ Rizaldi et al., "Strategies to improve teacher ability...", pp. 1–6.

⁴⁹ Md Shidur Rahman, "The advantages and disadvantages of using qualitative and quantitative approaches and methods in language 'testing and assessment' research: A literature review," (2020).

⁵⁰ Vifta Agnia Utami, "Pengintegrasian Nilai-Nilai Keislaman Dengan Pembelajaran TIK (Teknologi Informasi dan Komunikasi) Pada Siswa Sekolah Dasar," *JEMARI (Jurnal Edukasi Madrasah Ibtidaiyah)*, vol. 2, no. 2 (2020), pp. 76–83.

design called "intelligent learning" or intuitive learning through PCs and the web, and educators as a facilitator.⁵¹

Assumption was established as a madrasa to raise academic standards, particularly to acquaint pupils with the importance of piety to Allah SWT. However, changes in character-building mastery happened frequently previously due to the changing times and the advancement of science and technology. But in the end, it's more focused on succeeding in science and technology. This has prompted researchers to investigate the challenges and difficulties madrasahs or managers of Islamic education encountered as a result of decisions made by field implementers, instructors, and parents. Consequently, after obtaining different sources, investigate them using qualitative and descriptive methodologies.⁵²

How many of the listed points do you think have the key to this study's problem? The first is recognizing the positive and negative effects of the globalization age, which is fueled by Western technical advancements. Yang will have an effect on the nation or other location that the source is sent to. In connection with that, the existence of technology and information will undoubtedly have a significant impact on madrasas as Muslim educational institutions. Madrasa administrators must strike a balance between the requirements of the learning community and their goals for success and tradition while maintaining a culture of piety toward Allah SWT.⁵³

This is crucial because if human and natural resources are misused, they will have a negative effect, which is the exact opposite of what is desired. As a result, madrasas must have a strategy and practical approach to dealing with

all issues in order to ensure that the goal of madrasa marriage is balanced, harmonizing the balance between needs for the here and now and needs for the afterlife.⁵⁴ Also take note of how madrasas today must be well-rounded in their knowledge of science and technology, as well as their proficiency in foreign languages, problem-solving talents, and ability to succeed in every madrasa challenge, particularly in terms of educating kids. Additionally, it was discovered how madrasas should develop into learning institutions or independent learning community sectors, implying that rural areas need strong, independent leadership that can produce results now in order to appear as members of the alumni community that are knowledgeable and independent. Getting a job allows one to become financially independent.⁵⁵

Conclusion

These include the results of a series of efforts to review data from various sources in order to gain a better understanding of the challenges and problems faced by madrasa management as times change, particularly informatics and virtual technology, which are now becoming trends and having an impact, both positive and negative. Madrasas are places where students are guided and prepared to live and grow in the most modern of eras, spawning creativity and learning in the educational field and making madrasas a source of innovation, dynamic, and active learning. Then, as a madrasa, it has the competitiveness and driving force to show how education does not just have a negative impact but must be more beneficial in the generation that generates Islamic product. This is because they realized that this technology and information data is a trend of globalization. As the foundation of Islam, madrasas participate in the use of technology for self-development, pursuing and balancing it, and harmonizing how times change as well as how they can survive. This implies that

⁵¹ Muhamad Taufik, "Strategic Role of Islamic Religious Education in Strengthening Character Education in the Era of Industrial Revolution 4.0," *Jurnal Ilmiah Islam Futura*, vol. 20, no. 1 (2020), pp. 86–104.

⁵² Nursaid Nursaid, "The Leadership of Headmaster in Improving the Quality of Madrasa Education," *Jurnal Pendidikan Islam*, vol. 6, no. 1 (2020), pp. 95–108.

⁵³ Mohammad Zaini, "STRENGTHENING THE QUALITY OF HUMAN RESOURCES (HR) IN IMPROVING THE QUALITY OF ISLAMIC EDUCATION IN MADRASAH," *Didaktika Religia*, vol. 9, no. 1 (2021), pp. 81–100.

⁵⁴ Syar'i, Hamdanah, and Akrim, "The Development of Madrasa...", pp.513–23.

⁵⁵ Masooda Bano, "Madrasa reforms and Islamic modernism in Bangladesh," *Modern Asian Studies*, vol. 48, no. 4 (2014), pp. 911–39.

while not all technology is beneficial, some of it is. This implies that, while not all technology is beneficial, it will harm students in madrasahs if it is not implemented properly.

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