

Digital Transformation of Madrasah in the 5.0 Society Era

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Abstract. The era of society 5.0 which is characterized by the presence of digital evolution in the form of Artificial Intelligence (AI), Internet of Things (IoT), and robotics requires the education system to be able to adapt in order to keep up with the times, including madrasah as a formal Islamic education system. Some of the problems faced by madrasahs in the society era 5.0 include the low understanding of madrasah human resources technology, as well as services and curriculum that are not yet digitally oriented. For this reason, it is necessary to innovate in the form of digital transformation of madrasahs in facing developments in the society era 5.0. This development innovation design is a literature study with SWOT analysis. The innovation design offered is in the form of digital transformation of madrasah internally and externally, namely by digitizing services and curriculum, as well as increasing the understanding of madrasah HR technology. As for externally, digital transformation is in the form of output produced by utilizing digitalization in the form of madrasah branding in the form of digital marketing, as well as a medium for da'wah.

Keywords: Digital Transformation; Madrasah; 5.0 Society Era

INTRODUCTION

Islamic education for the Indonesian people, the majority of whose population is Muslim, is a manifestation of efforts to instill Islamic values and shape the character and morals of the nation's next generation (Alawiyah, 2014). One of the efforts made is by organizing Islamic education in the form of formal education, or often known as madrasah.

Historically, the growth and development of madrasahs in Indonesia cannot be separated from traditional education patterns organized in mosques, surau and meunasah (Feillard, 2008). Therefore, historically madrasahs have strong socio-cultural roots in the life of the community. Kosim explains that madrasahs are institutions that were born from the people's progressive resistance to Dutch education policies, where education is directed at efforts to fight secularization by including Islamic content in it (Kosim, 2007). Therefore, with these strong socio-cultural roots, madrasahs should have a close relationship with education in the surrounding community.

Education and learning in madrasahs has included a curriculum that combines general and Islamic materials. This has been stated in the minister of religion's decree number 184 of 2019 concerning guidelines and curriculum implementation in madrasahs (Ministry of Religion, 2019). With this, madrasahs have an advantage when compared to public schools,

because madrasahs have a curriculum that is able to balance between religious and general learning. This should be a valuable asset for madrasahs in facing and counteracting the adverse effects of the digital era. Moreover, the Decree of the Minister of Religious Affairs Number 347 of 2022 concerning Guidelines for Implementing the Independent Curriculum in Madrasahs (Ministry of Religious Affairs, 2022) gives madrasahs the autonomous right to innovate and create educational services that are humanist and able to adapt to technological advances, especially in the society era 5.0 (Hasanah et al., 2022).

However, madrasahs are still widely assumed to be educational institutions that are left behind when compared to general education, even though constitutionally madrasahs have the same rights as other general education (Pratama, 2019), especially in digitalization efforts in the society era 5.0. Digitalization as an effort to improve learning does not seem to be too familiar among madrasahs. As is known, there are still many Islamic educational institutions or madrasahs that are weak in technology and the development of general knowledge/science. Nuryadin explained that Muslims are still weak in connecting science with existing technological advances, which results in the spirit of studying science, especially science, not yet cultured among Muslims. This is due to the understanding of the teachings of Islam is still reductive and partial, so that the spirit of science is not cultured

among Muslims. This is because the understanding of Islamic teachings is still reductive and partial, so that science and science do not get the main place (Nuryadin, 2017).

This was also said by Azyumardi Azra, namely that among madrasas, technology and science receive less attention. This is due to the mindset that only studying religion is considered sufficient (Azra, 2004). Therefore, in this case, in addition to preparing digital technology and science according to the times, it seems that madrasas must also mature or improve their human resources (HR). Because, with high-quality human resources, an educator can creatively and innovatively develop learning well and professionally (Mansir, 2020). This can also improve the quality of madrasas to face the digital era, both in learning and in the services provided.

The digital era is characterized by the emergence of various technologies that can increase the effectiveness and efficiency of human activities. The most recent is the emergence of the society5.0 or the concept of society 5.0 which is characterized by the presence of digital evolution in the form of Artificial Intelligence (AI), Internet of Things (IoT), and robotics (Hasanah et al., 2022). This transformation certainly affects various lines of life, including the world of education. The world of education needs to work hard to adapt to the development of industry 5.0, especially madrasah. This is because not all the influences of this industry lead to positive things.

One thing that needs to be faced by the world of education is the decline in the moral and moral quality of students due to the increasingly open access to information with digital platforms. Access to negative, manipulative, and uneducative content such as pornography, violence, free sex and so on can have a negative impact on the decline in the moral and moral quality of children. On the other hand, children also face threats in the form of violence, drugs, kidnapping and selling children, cyber bullying, and various other threats (Mansir, 2020). With these external threats, madrasahs must improve their quality in terms of technology in order to have qualified madrasah human resources while being able to control students' digital access. So that with the superiority of planting religious knowledge in learning, madrasas should be the main shield in the formation of children's character and morals. This can be done with digital transformation in madrasah.

Digital transformation in madrasah is very

important because the digitalization of education is something that must be faced and not avoided if it is to continue to survive in the midst of a society that has been disrupted by the digitalization of the society era 5.0. In this case, Salsabila et al. said that Islamic educational institutions must adopt technology in their learning in order to be able to meet the demands of the times (Salsabila et al., 2021). In addition to catching up to improve the quality of learning, digital transformation in the digital world also acts as a control over the negative impacts that may arise with the many advances that exist. For this reason, efforts to digitize madrasas are a must for institutions to remain in accordance with the needs of society and the times.

There are several innovative steps that can be applied to carry out digital transformation for madrasas. First, the digital transformation is internal by increasing the understanding of digitalization for madrasah human resources, which can be started from educators as the main actors in the formation of children's personality and character. Digitalization of education needs to be included in learning services and curriculum. The convenience offered by the society5.0 technology needs to be optimally utilized.

Second, the utilization of external digital transformation. This means that educators need to be creative and innovative by utilizing digital access as a means of branding for madrasah. It is undeniable that digitalization that enters all lines of life makes digital marketing a large platform in building the reputation of madrasas, for example by inviting students to use social media in learning. On the other hand, digital transformation can also be used as a medium for da'wah more broadly so that the essence of spreading Islamic values carried by madrasas can be realized more innovatively.

METHODS

This research uses literature study research to examine several reference sources and journals relevant to the author's research. The type of data used is secondary data, namely data obtained indirectly. The data needed in this research is taken from documents related to the research. Data collection techniques are carried out by reviewing and analyzing books and journals with rules related to innovation. The data analysis technique used is qualitative analysis.

RESULTS AND DISCUSSION

Theoretical Framework

The concept of society 5.0 was first initiated by Japan on January 21, 2019 as a form of development from industry 4.0. This concept aims to facilitate human activities by using modern technology-based knowledge such as Artificial Intelligence (AI), Internet of Things (IoT), and robotics. In society 5.0, humans and systems will be connected in cyberspace and get maximum results where the big data collected will be processed with the help of AI. The results will then be fed back into the real space (Latifah & Ngilimun, 2023). In the context of education, the concept of society 5.0 causes the need for innovation not only in teaching methods, but also adaptations to the curriculum in order to provide fun teaching to students without overriding the essence of madrasah education goals (Hasanah et al., 2022).

The society 5.0 offers a balanced life between humans and technology. Some of the issues that have emerged recently are the development of AI technology that can mimic a person's voice, face and expression. Some other issues include AI technology that easily searches data for plagiarism, uses personal identity, and so on. This condition is certainly very vulnerable to various abuses if not balanced with wise use. This is where madrasah has an important role in prevention, considering that madrasah Islamic education is also carried out by instilling noble character and morals, in which in this case the teacher acts as a guide, educator, role model, motivator and facilitator (Nurhidaya et al., 2017). Therefore, with the dedication of a madrasah teacher, Islamic learning in madrasah can be combined with the cultivation of noble character and morals to become an antidote to the adverse effects of the digital era.

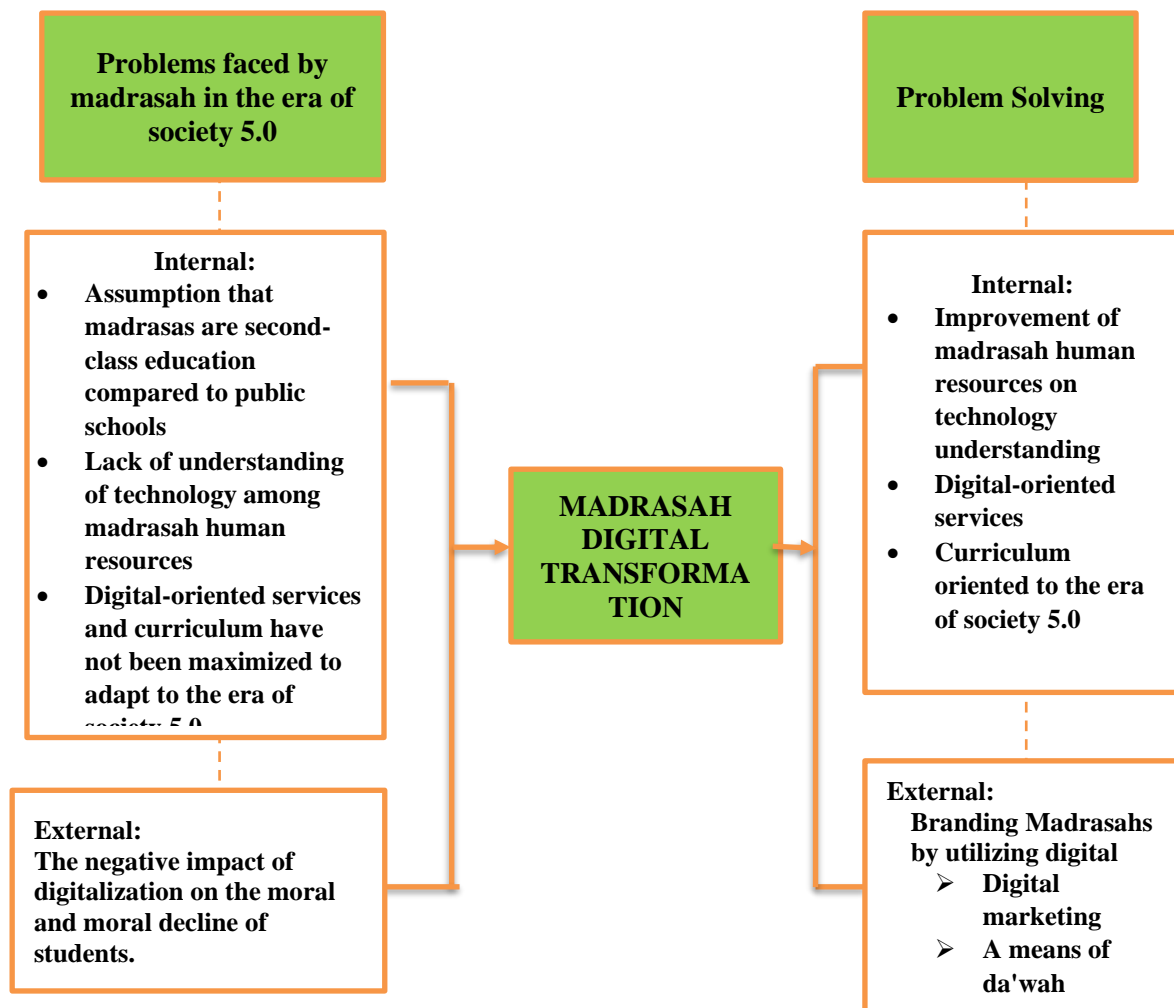
In the context of digital transformation of madrasahs in the society era 5.0, the government has issued Decree of the Minister of Religion Number 347 of 2022 concerning Guidelines for Implementing the Independent Curriculum in Madrasahs to provide autonomous rights for madrasah educators to make innovations in learning. Rahayu (2021) explains three substances related to the curriculum project in the 5.0 era which include character education; the ability to think critically, creatively and

innovatively; and the ability to apply technology in learning. Character education is able to train students to adapt to changes in the future without setting aside character and morals according to Islamic values. The ability to think critically, creatively and innovatively will help students in analyzing and combining insights, knowledge and morals in the application of increasingly advanced technology (Hasanah et al., 2022). With these values and characters embedded, students will independently and wisely face various advances and compete in the global realm.

To achieve this, madrasah educators and human resources need to understand the development of technology in the society era 5.0. The threats that arise due to open access to technology and information require madrasahs to improve their quality, especially related to existing human resources. High and qualified madrasah human resources are the internal strength of madrasah which is very important in the running of the institution. With good human resources, high productivity will be obtained by educational institutions, even determining the quality of educational institutions (Mukhlison Effendi, 2021). Therefore, high-quality human resources are an advantage of madrasahs, while low human resources and no efforts to improve quality are a threat to madrasahs. As Priyanto mentioned, the transformation of Islamic education is needed to face the era of the society 5.0 (Priyanto, 2020). With this transformation, it is certain that there are also efforts to improve the quality of madrasah human resources itself. With an increase in madrasah human resources, this can be a strength for madrasah, but if there is no effort to improve the quality of human resources, this will be an internal threat to the madrasah itself.

Development Design

Based on the problem formulation and innovation design offered, this development design is a literature study with a descriptive approach to obtain in-depth details related to the concept of digital transformation of madrasahs in the society era 5.0. Data collection is carried out by documenting various relevant studies along with a study of issues that often arise in relation to madrasahs in the society era 5.0. The innovation development procedure is as follows:



Innovation Specification

The digital transformation of madrasahs in the society era 5.0 can be implemented in digital transformation internally and externally. Internal in the sense of providing understanding of madrasah human resources, providing digitally oriented services, and developing digital-based learning curriculum. While externally in the sense of how the development of industry 5.0 in the field of education can be utilized in the form of output as madrasah branding media. This can be utilized in digital marketing as well as da'wah media.

Digitalization that enters the madrasah space is a very valuable opportunity. With the entry of digitalization into madrasah, educational institutions or madrasah can be managed efficiently, such as in service delivery and administration. The utilization of digital space to manage madrasah administration can be seen from the non-cash financing system and also reports that are usually reported virtually and can also use applications. The use of digital facilities

such as Google and Microsoft Outlook, for example, can make it easier for educators and staff to coordinate. Another example, for example, digitalization in services can be done by using applications and digital facilities to conduct socialization, collect data needed in an activity, register for certain programs, and so on.

Even with the digital transformation of madrasahs, the learning process during the pandemic can continue even in different spaces (Kurniawan & Wardhani, 2021) by utilizing the zoom platform, google meetings, and learning applications that facilitate the delivery of material online. Barus (2019) said that there are at least seven learning models that are still in accordance with the characteristics of era 5.0, as follows:

1. Discovery learning, which is the development of a learning model to stimulate students to be active and creative in processing, analyzing and concluding a lesson themselves. This model helps learners to better understand concepts and think critically by solving various problems independently. The teacher only functions as a facilitator and helps

- learners by providing appropriate feedback.
2. Inquiry, a learning model that positions learners in a more complex situation. Learners are guided to solve problems independently.
 3. Inquiry, a learning model that positions learners in a more complex situation. Learners are guided to independently conduct experiments in order to gain experience in finding a problem, as well as asking and answering their own questions by connecting existing findings.
 4. Problem Based Learning, which is a form of curriculum development by making learners actively solve a problem so that they are able to integrate new knowledge.
 5. Project Basic Learning, a learning model where learners are trained to extrapolate on projects so that they can skillfully use tools or materials to complete tasks.
 6. Production Based Training or Production Based Education and Training (PBT/PBET), which is a learning model that provides experience to learners contextually in the production process and society work flow in accordance with the potential of learners and the needs of the region to increase economic growth.
 7. Teaching Factory, which is a learning model at the production/service-based SMK level based on standard procedures that involve the industry absolutely based on real conditions in the field.
 8. Blended Learning, which is learning that combines face-to-face and online systems by not making space and time a limitation and obstacle in the process of transferring knowledge.

Furthermore, the digital transformation of madrasas in the society 5.0 era can be utilized so that madrasas can be more widely known. This can be done by utilizing social media or other digital media, to build the image and branding of madrasah. This kind of thing has proven to be effective as a means of introducing madrasas to the wider community and also as a form of digital marketing (Hakim et al., 2021). Digital marketing is a form of marketing efficiency from madrasah, which is supported by the ease of digital access and open access to information. Therefore, this is an opportunity for madrasas to be easily recognized by the wider community.

Diffusion and Impact of Innovation

With the various innovations in the digital transformation of madrasas in the 5.0 era above, there are several expected impacts. The following is a brainstorming of madrasah digital transformation based on SWOT analysis (Strength, Weaknesses, Opportunities, Threats):

No	SWOT Analysis	Brainstorming of Madrasah Digital Transformation in the Society Era 5.0
1	<i>Strengths</i>	<ul style="list-style-type: none"> • Madrasahs have strong socio-cultural roots • Madrasahs have strong Islamic learning as an antidote to the adverse effects of the digital era
2	<i>Weaknesses</i>	<ul style="list-style-type: none"> • Madrasahs have dedicative teachers • Madrasahs are still weak in technology, general science and science development <p>Madrasah human resources are still low</p>
3	<i>Opportunities</i>	<ul style="list-style-type: none"> • Digital transformation provides opportunities for efficiency in services, administration, and learning in madrasahs <p>The opening of space for madrasas to be more widely recognized and there are opportunities for digital marketing as well as digital da'wah media.</p>
4	<i>Threats</i>	<ul style="list-style-type: none"> • External threats, due to the adverse effects of the digital era on students and madrasahs <p>Internal threats, because madrasah human resources are low and there is no effort to improve them.</p>

CONCLUSION

The era of society 5.0 which is characterized

by the presence of digital evolution in the form of Artificial Intelligence (AI), Internet of Things (IoT), and robotics requires the education system

to be able to adapt in order to keep up with the times, including madrasah as a formal Islamic education system. Some of the problems faced by madrasahs in the era of Society 5.0 are the low understanding of madrasah human resources technology, as well as services and curricula that are not yet digitally oriented. It is necessary to innovate in the form of digital transformation of madrasahs in facing developments in the era of Society 5.0. The design of this development innovation is a literature study with a SWOT analysis. Innovation design in the form of digital transformation of madrasah internally by digitizing services and curriculum, and increasing technological understanding of madrasah human resources, while externally, digital transformation in the form of outputs produced by utilizing digitalization in the form of madrasah branding in the form of digital marketing as well as da'wah media.

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