ISLAMIC EDUCATION IN THE INDUSTRIAL REVOLUTION 4.0

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Abstract: This research aims to discover how Islamic education is in the era of the industrial revolution 4.0. The type of research used is library research. While the data obtained is a descriptive narrative about Islamic education. The study results show that Islamic religious education is a process of growing and developing students' intellectual, spiritual, physical, social, ethical, aesthetic, and moral potential. To overcome the problems of Islamic education in the modern era, the author offers ideas about the development of Islamic religious education from various perspectives. In addition, the development and implementation of Islamic religious education programs must be in line with the times, where today is the era of the industrial revolution 4.0, and schools or madrasas and universities must be able to adapt to these developments by integrating Islamic religious education with intellectual capabilities in technology.

Keywords: Islamic education; Industrial revolution 4.0.

INTRODUCTION

Islamic education, in historical review, is inseparable from the Islamic renewal movement, which has had a significant impact. So that at a glance, the reform of Islamic education has described a period and phase that is quite long, which gave birth to several figures from this reform. They are departing from criticism of learning models, teaching, and materials so that it demands a contextual way of thinking that Islamic reformers have done in their time. Muhammad Abduh from Egypt and Sayyid Ahmad Khan from India have given examples of how they work to change their countries, even though resistance to all kinds of reforms has encountered various obstacles (F. Rahman, 2020). Educators as motivators who become mentors, directors, and goal-oriented so that motivated behavior will move in a specific direction. To achieve learning goals, create an environment more conducive to learning conditions (Abnisa, 2017). As well as educators, leaders need to always be attentive to their students, provide enthusiasm, and influence students to maximize learning (Abnisa, 2020). So learning in education is so important. Without knowledge, there will be no education. They are learning as an awareness that is sought, and its implementation is planned to reach students who are active in increasing excellence in themselves and forming good morals.

Education is something that can develop the potential of a country, can grow the will, and raise the spirit of the nation's generation to explore various possibilities and develop them optimally for the benefit of the development of the whole society. (Mulyasa, 2018). Therefore, education means fostering all human potential as creatures who believe and fear, think, and work
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for the benefit of themselves and their environment. Islam is a guide and guidance for human life in this world and the hereafter. Islam is not just a religion as we understand it so far, but it covers all aspects of the needs of human life. Knowledge in Islam covers all these aspects, which can be arranged hierarchically from inanimate matter, plants, animals, and humans to supernatural beings and the pinnacle of the occult. The composition of knowledge about these many aspects can be studied from Islamic thought as well as the competence of teachers who must continue to be improved to keep up with innovation and changing times (Solihin, Iqbal, et al., 2021).

Globalization is a phenomenon that can affect Islamic education. In the face of globalization, various responses occur in society. There are those who are pessimistic, and not a few who are optimistic about the progress of education. The speed of development of information technology and media will result in the unpreparedness of society in dealing with it, both in the form of social, cultural, religious, economic, educational, and others. Therefore, education must take a big role in efforts to deal with this globalization (Hidayat, 2015). So Islamic scientists must be able to address these differences in views and attitudes so that they can concentrate on Islamic education, which is necessary for the progress of the ummah and the development of the Islamic religion while still referring to the Al-Qur’an and as-Sunnah as the main source of teachings.

The issue of globalization is, of course, related to the era of the industrial revolution 4.0. Islamic education is the basis that is used as a reference because Islamic education is a source of truth, values, and strengths that can lead to activities that are aspired to. The values contained therein are important because they reflect universal values that all human beings can contribute to Islam (Ningsih, 2021). Even so, adjustments between the world of education today and the industrial revolution 4.0 can be made by adjusting the methods, strategies, models, and methods used (Hidayah, 2019). During the learning process, teachers need to innovate with various effective methods according to the characteristics of students.

Several previous studies that are relevant to this research were researched by Adun Priyanto entitled "Pendidikan Islam Dalam Era Revolusi Industri 4.0" (Priyanto, 2020), then Arip Febrianto’s research with the title "Membentuk Akhlak Di Era Revolusi Industri 4.0 Dengan Peran Pendidikan Agama Islam" (Febrianto & Shalikhah, 2021), and Muhammad Mushfi El Iq Bali’s research with the title "Modernisasi Pendidikan Agama Islam Di Era Revolusi Industri 4.0" (Bali & Hajriyah, 2020), and Muhammad Haris’ research with the title "Manajemen Lembaga Pendidikan Islam Dalam Mengahadipi Revolusi Industri 4.0" (Haris, 2019). Some of this research is indeed related to education in the era of the industrial revolution 4.0, but not so much to do with how the era of the industrial revolution was faced by Islamic education. This is the research gap and makes this research have a distinctive value.

Departing from this, researchers are interested in conducting research related to how Islamic education is in the era of the industrial revolution 4.0. because, after all, Islamic education
must keep up with the times but still adhere to the primary sources, namely the Qoran and as-Sunnah. It is hoped that this research will become one of the references in the development and innovation of Islamic education, especially in the face of the industrial revolution 4.0.

METHOD

This study uses a qualitative approach on the basis of descriptive and interpretive research so that the type of research used as a researcher’s analysis is a literature review. While the data obtained is a descriptive narrative related to Islamic education in the 4.0 industrial revolution era taken from various related sources, both from books, journals, and other scientific publications related to Islamic education in the 4.0 industrial revolution era. As a review of the literature, the data collection technique used in this research is documentation, namely analyzing sources that have been found with the principles of scientific research.

The researcher collects data from the primary literature, namely the Koran, which is the main literature in the discussion, although they also use other literature as a reinforcement of the main literature. Interpretation of the data is made into a critical narrative of the titles discussed in the research. The data analysis technique used is descriptive qualitative by reviewing previous literature books and research journals which can provide an overview of the research objectives, namely how Islamic education is in the era of the industrial revolution 4.0.

RESULT AND DISCUSSION

Implementation of Islamic Religious Education in Era 4.0

Islamic religious education has so far undergone transformations at the level of paradigms, approaches, and development tactics in order to make it current and pertinent to the circumstances and situations of the present. Additionally, there is the corridor of educational principles and objectives, which are founded on the Al-Qur’an and the Hadith, as well as on the aims of national education, the structure of the state, and the state’s governing ideology. A model of progress, continuity, and openness with innovation to transfer information and technology that is advantageous for the advancement of Islamic education is adhering to the notion of “maintaining excellent traditions and adopting better novelties.”

Islamic education has continued to develop into a role model for education. In the last ten years, marked by the growth of institutions (Kemenag, 2019), the emergence of Islamic religion-based schools such as Integrated Islamic Schools (F. Rahman, 2020), Boarding Schools, Modern Islamic Boarding School-Based Schools, and Tahfidz Schools. The transition of Islamic tertiary institutions from STAIN to IAIN or from IAIN to UIN. Not only changes in "face", but featured content and programs such as the entrepreneurship program are also offered.
Islamic education will generate graduates who are productive researchers, creators, and developers of high-quality knowledge if it is appropriately implemented. This has the following logical repercussions: (1) Dissolving the paradigm of the conflict between religious knowledge and general science (2) Changing the Islamic education model from one of indoctrination to one of participation. (3) Converting the ideological paradigm to a scientific paradigm founded on the revelation of God. (4) The curriculum needs to be rebuilt.

Even while modern science and technological advancement are essential, the paradigm of Islamic education tends to be focused on the humanities and social sciences. This means that the integration of Islamic education in the context of transformation towards quality Islamic education combines science, spirituality, and character education as a characteristic of a nation. This knowledge has not received the appreciation and proper place in the Islamic educational system. Islam's own educational system integrates reason and experience and is inextricably linked to the Al-Qur'an and Hadith, which serve as its primary sources.

The return to religion with a dash of global awareness is a trend in education. Therefore, the Muslim generation needs to be ready for international competitiveness. In order for Islamic education to shift from producing merely workers to producing competitive individuals who can generate their own possibilities (employment opportunities) based on their unique abilities, character, and entrepreneurial spirit (Hidayat, 2015). So that it directly affects the health, development, and independence of the country's economy.

The methods of teaching and learning used with students will automatically change as a result of changes in Islamic education, and these changes include:

a. Critical and creative problem-solving learning, as human life, necessitates the capacity to analyze, find a way to overcome, and attempt to find a formulated solution (trial and error).

b. Modifying the nature of the subject being studied. In order for students to be able to express their thoughts, think analytically, seem confident, and be able to solve issues using their knowledge, the teacher's paradigm of focused learning must be changed. Instead, teachers must be seen as professionals who lead and direct students' learning.

c. Learning resources are not limited to textbooks; students can access the Internet, devices, and print.

Related to this, there are three didactic functions of technology in Islamic education learning, namely: (1) Technology to perform, functions as a substitute for paper and pencil media in learning activities. (2) Technology to train skills, serves as a learning environment to hone skills, (3) Technology to develop conceptual understanding, functions as a learning environment to develop conceptual understanding. If technology is well integrated in learning, it will bring up new and contemporary also fun learning patterns. Amin Abdullah said that "creative imagination"
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is part of the way to unite ideas, even two different conceptual frameworks, so that they are arranged into fresh configurations (Abdullah et al., 2014).

Modernization in education is useless if it is not supported by the competence of educators, because they are the spearhead of the implementation of education. For that, educators will be required to:

a. Have mastery of digital technology
b. Cultural transformation agent.
c. Pedagogical development
d. Personality-social competence.
e. Professional Development.
f. Innovative-creative-adaptive

In addition, strengthening Islamic educational institutions also needs attention, including strengthening Islamic education management, strengthening Islamic education leadership, and reforming educational policies with reference to the global education curriculum which has proven its success and integrated into the Islamic education curriculum. Nationalism insight (nationalism) which is integrated in every lesson by instilling an attitude of love for the motherland, culture, language, customs and being an agent for preserving national unity and integrity through nationalism. Learners can apply it in interactions between students, students with teachers, students with employees and the community and vice versa. This is necessary because the life of millennial society is borderless.

The formation of character and the deepening of religion emphasizes the practice in the daily life of students such as the application of siddiq, tabligh, fathonah, trustworthiness in association, the attitude of good citizens based on religious attitudes in everyday life, and applying the attitude of carrying out daily worship both in the school environment, at home and in society (Zubairi, 2022). Such a portion assumes that students at home also take religious education through informal channels, such as madin, recitation at mosques, in surau/musholla, and local religious leaders. If the madrasah is integrated with Islamic boarding schools, it may be appropriate if it is the other way around, then the output of religious scholarship has not met expectations.

The process of passing values, information, and skills from the older generation to the younger generation so that the latter can live is the essence of education (Solihin, 2021). Therefore, when we talk about Islamic education, we’re talking about two things: teaching pupils how to act in line with Islamic principles or values and teaching them about Islamic teaching material in the form of knowledge (Fadjar, 2005). The importance of comprehensive education is highlighted in Islamic teachings. The point is that education must bring knowledge of potentials that are religious in nature, grow, manage, and form insights and morals that are in line with
Islamic teachings, move and awaken individuals to always be learning. This is as stated in QS Luqman: 1-34.

**Industrial Revolution Era 4.0 and Its Influence on the Islamic Education System**

The industrial revolution 4.0 is an era where the use of electronics and IT was intensified to help facilitate human work. As for the characteristics of the occurrence of this era, is a change in lifestyle (lifestyle) and the way humans work in a complex manner. This era is very different from the previous era, Era 4.0 has volume (capacity), the environment is also a wider scale. Programs built in this era put more emphasis on automated systems using program logic controllers (PLC), on a computer basis (Bialik & Fadel, 2015). Era 4.0 is also called the real-time information era, because the physical network and the cyber network are both connected.

In theory, Era 4.0 is not related to the Islamic education system. Because both are engaged in different fields. However, because technology in the 4.0 era developed so fast, it affected all fields, including Islamic education, where in the learning system there had to be several updates, by utilizing technology in the 4.0 era, so that students could study comfortably, because it was adjusted to their habits, such as using gadgets and accessing the Internet.

The system can be interpreted as an arrangement or network. The system can be defined as a strategy or a way of thinking. In a broader sense as stated in the KBBI, the system can be interpreted as the orderliness of related devices, so as to form an overall orderly arrangement, or in simpler language, the system is called a method.

Redja Mudyaharja (Mudyahardjo, 2012), explained that the system is divided into two. First, a closed system, namely a system with a structure with parts that are difficult to adapt to their environment in a short time. Second, open systems, namely systems with structures and parts that easily adapt to a constantly changing environment.

The Islamic education system is in both systems. As a closed system, Islamic education has basic principles that cannot be changed, namely the Qur’an and Hadith. As an open system, Islamic education is related to existing systems in society, such as the economic, socio-cultural, political and technological systems that are now developing so fast. According to Ryan, the system is an organized unit that functions to create real results so that they can be observed. Meanwhile, according to Immegart, the system is something that consists of various forms that are neatly arranged.

**Innovation in the Islamic Education System in Indonesia**

In simple terms, innovation can be said as renewal. Innovation can also be interpreted as innovation, namely the replacement of old ways with newer ways. In his opinion, Klucnikov said that innovation, change and renewal are different. Innovation is a partial or pragmatic
improvement. Change is something that has a very broad meaning, it does not always mean an increase or setback. Meanwhile update is an ongoing general improvement. So that innovation can be understood as a renewal of ideas, ideas, goods, objects and actions to achieve goals in a better direction.

Innovation is different from modernization, although both are social changes. If innovation is a new thing for individuals or groups, while modernization is a process of change from things that were previously not advanced to be more advanced. As is known, the emergence of innovation and modernization is inseparable from the times.

Innovation is closely related to the system, because the system is a collection of components or elements that are regularly interrelated so as to create a unified whole to form a totality. The education system generally includes several components such as students, materials, objectives, environment, learning resources, methods, tools or media, and the learning process (Shodiq, 2019). It is from these components that an update or innovation can be made. Such as innovating in the learning process by using Google Classroom as a substitute for conventional learning.

We know that in Era 4.0, humans are very dependent on technology, therefore it is important to innovate in the current Islamic education system. The innovation of the Islamic education system must make technology an integral part of education. This is basically already in the 2013 curriculum, which makes technology the medium of all subjects. With another intention that technology is no longer a separate subject but instead becomes an integral part of all subjects. This is very good if it can be done properly.

One model of the Islamic education system used so far is; input (input), transformation (transfer process), and output (output). If this model can be applied in the Islamic education system by incorporating other elements in its development, it will look as follows:

![Figure 1. Islamic Education System Model](image-url)
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Figure 1 explains that the input or input process includes Individuals with a variety of basic potentials that need to be developed, then there is a process of transferring knowledge, developing skills and instilling values. After that, it is continued with the output of producing a person who becomes caliph on earth and always worships Allah. All of these processes will run optimally, if equipped with several instruments which include; methods, media and teaching materials; then the environment which includes; natural, cultural and human environment.

In this case the educator becomes the main actor in the educational process. After we understand this explanation, it can be seen that the model of the Islamic education system used so far is still very simple, namely oriented towards classical principles where education is limited in space and time. Therefore, reform or innovation is needed in the Islamic education system in the current era.

The conception of innovation in the Islamic education system in the current era agrees with the illustration made by Arif Rahman, as follows:

![Figure 2. Three Components of Innovation in the Islamic Education System](image_url)

The first component is "Islamic Source", namely the Qur'an and Hadith which are the main sources of Islamic teachings as well as the main guidelines for Muslims. In this realm, the implementation of the Islamic education system must be in accordance with existing provisions (according to the Qur’an and Hadith), absolutely determined.

The second component, "Human Needs", namely human needs that are always continuous and endless. Humans really need various kinds of solutions to solve problems in meeting their needs, either now, later, or in the future. Needs on the basis of human, expertise, skills are part of
The third component, "Technology", provides an effort to make human life simpler, reduce complexity, facilitate access to knowledge, and speed up work and efficiency. The modern Islamic education system must also be integrated with technology so that the learning process becomes effective and efficient. An example is the application of the e-Learning learning model in madrasas.

Based on these three components, it can be understood that the need for innovation in the Islamic education system really needs to be done in the current 4.0 era. So the authors develop the concept of the Islamic education system in Figure 1.0 to become an illustration as follows:

![Figure 3. Development of the Concept of Innovation in the Islamic Education System](image)

In Figure 3 above, it can be stated that innovation in the modern Islamic education system includes several things. First, input, in this case nothing has changed because the input is an individual with a variety of basic potentials that need to be developed. Second, the process (process). The process is not just a transfer of knowledge, character or skill development. But the process here must also be able to provide answers to human needs in the current era. In other words, before students receive learning from an educator, educators must first understand the needs of students. Educators must be smart in conveying material, lest the material presented is not in accordance with the relevance of the needs of students in the current era. Third, output. The output does not necessarily mean that the goal of Islamic education is only to serve Allah (Hereafter), but also has the goal of making students have a decent life while living in the world (Zubairi et al., 2022), this goal can be achieved if students can go through the educational process well.

Furthermore, the material to be provided must be integrated or integrated with technology and science. Integration here does not only provide Islamic education material interspersed with
technology and science material alone but must be in actual integration. For example, the delivery of Isra' and Mi'raj materials must be supported by scientific facts so as not to raise questions among students.

The method in the learning process must also change, not only relying on the lecture method, there are many methods that can be used in the learning process of Islamic education, one of which is the active learning method, even though in this learning the dominant role is the role of students, it must still be under the guidance of an educator. One way is to implement teacher abilities in distance learning (Solihin, Muin, et al., 2021). However, distance learning requires advanced skills in terms of technology.

Besides that, modern Islamic education innovations must also utilize technology-based media in the learning process. So that digital education emerged or commonly called e-learning, which is now growing rapidly and has been utilized by many public and state educational institutions.

Jaya Kumar said that e-learning is a learning model that utilizes a series of electronic and internet tools to convey learning material. Then there is the interaction between students and educators, as well as online-based academic guidance. There are also those who interpret e-learning as a distance learning model by utilizing Internet media.

PAI learning based on e-learning can be done by means of an educator making material according to the theme to be discussed. Then the material is written in the form of articles or slides, then distributed to other students. Apart from text content, it can also be through interactive videos, and the system is the same. Namely, an educator must first make the video and then send it and use it for learning for students.

At this time, e-learning-based PAI learning is still rarely implemented in madrasas (Priyanto, 2020). This is because this learning model is still new, so it still needs to be developed so that the results are maximized. In addition, the technology for building e-learning infrastructure is very expensive. However, it turns out that there are already several schools that are active in making changes by following the progress of the times.

However, there are a number of things to note and that need to be underlined in the implementation of e-learning-based PAI learning, which must be carried out in a mixed manner where most of the learning process uses e-learning, but still conducts face-to-face meetings to discuss teaching materials, and unresolved issues when online discussions were conducted. This really needs to be done because learning PAI is related to religion, so further discussion is needed so that students can understand completely, properly, and correctly, don't let it be because there is no room for direct discussion, making religious understanding wrong which can have an impact on mistakes practice later. The mixed conception between e-learning and conventional (face-to-
face) education can in theory be called blended learning, which is a collaboration of formal education programs that are still conventional with modern internet-based education.

In addition to the instruments or tools used in modern Islamic education system innovation, there are also things that can influence a process. When the instrument referred to as an internal factor experiences many changes and developments, then the environment (environment) can be said to be an external factor. In this case, the environment is also changing towards a more complex one. For example, from an economic point of view, if the classical education system does not use technology much, then the required development costs will not cut the school budget much. At the same time, the modern education system will cut the budget more because it is used for the development of a current system and in accordance with the times.

Based on the explanation and analysis above, it can be stated that innovation in the Islamic education system that is in accordance with the 4.0 era is essential to realize. The innovation meant here is not just utilizing technology in the learning process but also collaborating Islamic education materials with other scientific approaches. Islamic education material must be integrated with science and technology, and this is important in order to answer the problems of today's increasingly complex era.

Besides that, using other scientific approaches will facilitate students' understanding of the science of religion taught by an educator. Educators in the current era must also be sensitive to the changes and developments of the times and not become educators who are technologically illiterate. Because students who are faced today are students who have been friendly with technology since birth, educators must also adapt to the current situation so that old teaching method are not applied to teach today's children. With another intention, educators in the current era must be more creative and productive in creating a comfortable learning atmosphere so students can understand the material presented well.

CONCLUSION

The results of the study show that Islamic religious education is a process of growing and developing the intellectual, spiritual, physical, social, ethical, aesthetic, and moral potential of students. In an effort to overcome the problems of Islamic education in the modern era, the author offers ideas about the development of Islamic religious education from various perspectives. In addition, the development and implementation of Islamic religious education programs must be in line with the times, where today is the era of the industrial revolution 4.0, and schools or madrasas and universities must be able to adapt to these developments by integrating Islamic religious education with intellectual capabilities in technology.
In an effort to overcome the problems of Islamic education in the modern era, the author tries to offer ideas about the development of Islamic religious education from various perspectives. In addition, the results of this research can be a starting point. A solid foundation for implementing Islamic Religious Education, the development and implementation of Islamic religious education programs must be in line with the development of the era, where the current era is the era of the industrial revolution 4.0. Schools or madrasas, as well as colleges, must be able to adapt to these developments. Along with the times’ development, the challenges Muslims face are increasingly complex. Modernization and globalization have forced Islamic education to reconstruct it so that the human resources it produces survive in global life. More than just Islamic education in a normative sense.

BIBLIOGRAPHY


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