THE CHALLENGES OF ISLAMIC RELIGIOUS EDUCATION IN THE INDUSTRIAL REVOLUTION 4.0

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Abstract: The purpose of this research is to find out the challenges of Islamic education in facing 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 results of the study show that three things must be utilized by educators in the Revolution 4.0 era, including the internet of things in the world of Education (IoT), Virtual/Augmented reality in the world of education, and the use of Artificial Intelligence (AI). Islamic religious education teachers are required to have high competence to produce students who are able to answer the challenges of the Industrial Revolution 4.0. So an Islamic religious education teacher must have principles in the learning process, including; Learning Process, Active, Innovative, Creative, Effective, efficient and educative, and fun (PAIKEM) and the ability to integrate technology into learning.

Keywords: Islamic education; Challenge; Industry 4.0.

INTRODUCTION

Islamic religious education is an integral part of Islamic education. Because Islamic education is a whole program that is comprehensive in instilling all values from aspects of Islamic teachings to achieve a true Muslim personality. In this context, Islamic education includes institutions, processes, and programs that play a role in instilling Islamic teachings in each student so that their nature is developed into a true Muslim personality or muttaqin.

From this, it can be understood in terms of conditions that enable a person to carry out the work he wants to the maximum extent possible. This includes professional teachers who must carry out their duties to the fullest extent possible to be able to be role models for their students to give birth to students who adhere to religious teachings. Thus, the mandate must be carried out, both the order of a servant to Allah SWT, as well as the license to fellow human beings. Educators as motivators who become Allah SWT, directors, and goal-oriented, so that motivated behavior will move in a specific direction, and in an effort to achieve learning goals, it is necessary to create an environment that is more conducive to learning conditions (Abnisa, 2017). As well as educators, leaders need always to be attentive to their students, provide enthusiasm and influence students to maximize learning (Abnisa, 2020). So learning in education is very important because, without learning, there will be no education. 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. 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).

In the learning process, the teacher is the central figure and the most crucial element. The teacher's image and concept today is degraded compared to the concept in the past. A teacher used to be seen as a knowledgeable person who is wise. However, now the teacher is seen as nothing more than an education functionary whose job is to teach based on certain scientific and academic qualifications. So the most crucial factor of the teaching profession today is certainly scientific and academic qualifications, even though the figure and character of a teacher or educator are more of coloring and mature students.

In this era of 4.0, the challenges of educators or Islamic religious teachers are getting heavier and more complex due to adapting to information technology that is developing massively, related to learning methodologies which are, of course, very different from what educators in the past have done with educators today. Early educators were not required to master science and technology, but today’s educator’s mastery of information technology is something that cannot be separated from the learning process in the classroom.

Human life has entered the era of the industrial revolution, fundamentally changing the way of life, work, and relationships with one another. In terms of scope and complexity, the ongoing transformation is experiencing a shift in lifestyle from before. Progress in the fields of information, communication, and biotechnology to material engineering has accelerated tremendously and brought about radical changes in all dimensions of life (Suharto, 2019). This condition leads us to enter a new era where everything is driven by computerization and the use of machines to ease human work, and all of this takes place so quickly that it is out of control. This rapid change is now called the industrial revolution 4.0, which is the integration between the use of computers with internet facilities whose users can reach billions of users to date.

The industrial revolution 4.0 has created a phenomenon in the business world known as disruptive innovation, which is an innovation that creates a new trend and a new industrial network, which ultimately “disrupts” the market and values that previously existed, then replaces the “players”. Long time” to become a market leader and then create alliances within it (Priyanto, 2020). It can be concluded that the thing that has arisen as a result of the industrial revolution that exists today is the use of less and less human power because everything is replaced by machines and is completely computerized. The use of internet world is not only used to facilitate access to help human activities but is also used as an economic field that produces even the results exceed the results of real work that is commonly done by people in general, as well as in the world of Islamic education, where the existence of an educator has been replaced by many applications, the internet, ICT and so on.
Based the Association of Indonesian Internet Service Providers-APJII reported that the penetration & behavior of internet users in Indonesia in 2018 reached more than 200 million people. This figure has increased compared to the previous year. In 2017 internet users were only under 200 million people. This means that internet users from 2018 to early 2019 increased sharply. Even in 2021, the number of active internet users has increased dramatically, namely 7.83 billion, due to the pandemic which has forced people to adapt to the internet (We Are Social, 2021). The millennial generation, commonly known as the “net generation,” now relies heavily on social media as a source of information. The public’s primary news reporting tool and source today is social media.

Several previous studies that are relevant to this research are 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 Mengahadapi 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 industrial revolution era was faced by Islamic education and what challenges must be prepared for solutions. This is the research gap and makes this research have its own value.

These are some initial views and descriptions regarding the state of education, and specifically Islamic religious education with the presence of a teacher or educator in welcoming and adapting to the times, especially in the 4.0 era and to get a deeper understanding of all of that, then follow the next discussion. So, the purpose of this research is to find out the challenges facing Islamic education during 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 the challenges of Islamic religious education in the era of the industrial revolution 4.0. 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 or e-journal.

The researcher collects data from the main literature, namely the Quran, which is the main literature in the discussion, although it also uses other literature as a reinforcement of the
main literature, such as e-journals, proceedings, books, and online scientific research. 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 and research journals which can provide an overview of the research objectives, namely the challenges of Islamic education in facing the era of the industrial revolution 4.0.

RESULTS AND DISCUSSION

Strategy for Islamic Education Teachers in the Industrial Revolution Era 4.0

We are currently living in the fourth industrial revolution. The digital economy, artificial intelligence, big data, and robotics were highlighted during the fourth industrial revolution. This calls for the development of creativity, critical thinking, technological expertise, and digital literacy abilities in the educational system. Changes are therefore required in the field of education and learning. In order to meet the needs of the Industrial Revolution 4.0 age, teachers must alter their perspectives on education, including both teaching strategies and theoretical frameworks.

The world is evolving quickly. Education digitization leads to significant changes. Now, there are other places to study than the classroom. The virtual world can function as a university. In connection with it, artificial intelligence is currently replacing a number of occupations during the Industrial Revolution 4.0. (artificial intelligence). Due of this quick change, a teacher’s job must include managing students’ learning as well as teaching. For the sake of the kids, teachers must be more adaptable, imaginative, engaging, and enjoyable.

The era of the Industrial Revolution 4.0 was a disruptive era in which a lot of human labor began to be eliminated and replaced by robot technology. Therefore, the world of education must carry out a revolution by inviting students to want and be able to become creative, broad-minded, and courageous human beings. Students must be equipped with strong character, qualified competence, and literacy (openness of insight). Moral character and performance characteristics are the main basis for teachers in educating the nation’s next generation, namely students. Students must also be equipped with the ability to think critically, creatively, and communicatively. Must be equipped with literate skills in culture, technology, and finance. The hope is that, in the Industrial Revolution 4.0 era, Indonesia will have future generations who are characterized, competent and literate.

Some strategies carried out by teachers to improve the quality of education, namely: (1) changing mindsets even though it is difficult and full of turmoil, (2) carrying out literacy awareness movements, (3) conducting technology-based training/movements for teachers, employees, and students, (4) carrying out learning innovations and (5) sparking the creation of simple digital-based technology in schools. All of this requires good time and cost management
(school management), the commitment of all parties, the habit of applying it in class, and collaborating with each other. All reforms in learning still do not forget local wisdom and national identity (character).

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, 2020, 2021). Teachers have been compelled by the need to be professional to advance their reading skills, improve on their writing (for scientific publications), and innovate by creating unique learning materials. This change is unsatisfactory and incomplete, in fact. These pioneering educators will encourage other educators to raise their standards as well. In this case, a favorable environment is essential.

Teachers must therefore get ready to have “21st Century Character,” which includes: first, having a passion for teaching. This is essential so that educators may understand how society's values, social structure, and psychological evolution are ever-changing. Second, create engaging, imaginative, and cutting-edge learning materials to ensure that all of the information taught by the teacher reaches the students. Third, enhance technical capabilities because teachers require them greatly for lesson design, execution, and evaluation. Fourth, having a strong sense of empathy because teaching and educating are both parts of a teacher’s job.

The education system in Indonesia will undergo considerable changes as a result of the Industrial Revolution 4.0, which is characterized by lightning-fast technology. The role of teachers as educators is impacted by changes to the educational system. To develop students who can meet the difficulties of the Fourth Industrial Revolution, teachers must be highly competent. Qusthalani mentioned five competencies that must be possessed by teachers in the Industrial Revolution 4.0 era, namely:

1. Educational competence, competency in educating/learning based on the internet of things as a basic skill.
2. Competence for technological commercialization has the competence to educate students to have an entrepreneurial attitude (entrepreneurship) based on technology and the results of student innovation.
3. Competence in globalization, a world without partitions, not stuttering about various cultures, hybrid competence, and problem-solving excellence (problem-solver competence).
4. Competence in future strategies, the world changes easily and moves fast, so you have the competence to predict exactly what will happen in the future and the strategies.
5. Counselor competence. Bearing in mind that in the future, the child’s problem will not be difficulty understanding teaching material but more related to psychological problems,
stress due to pressure from increasingly complex and severe circumstances, a teacher who is able to act as a counselor/psychologist is needed (Kemenag, 2019).

Every student wants to feel capable, which means that classroom interaction can help students feel capable. Teachers must be able to create an environment that can match these psychological needs. Giving prizes for student learning outcomes is one way to accomplish this. Learning trends and best practices must also be modified to obtain 21st-century abilities, with blended learning or integrated learning being one of them. Blended learning is a way of integrating the use of technology in learning that enables learning that is appropriate for each student in the class. Blended learning allows for reflection on learning (Kutsiyah, 2021; Purnama, 2020; Solihin, 2022).

Education in the 4.0 era places more emphasis on the digital economy, artificial intelligence, robots, and data so that the world of education and learning changes. Demands in this era of education 4.0, teachers face challenges to changing perspectives and methods of learning (Shodiq, 2019; Wibawa & Pritandhari, 2020). If teachers in the 4.0 education period lack quality, competence, and qualifying credentials, one of their responsibilities, namely knowledge transfer, will be replaced. In other words, teachers are responsible for controlling students in addition to teaching. For students, the teacher’s job in education and learning is to serve as an example. Teachers must facilitate learning in a way that is enjoyable, captivating, original, warm, and adaptable. The teacher also encourages teamwork, imagination, creativity, inspiration, and motivation in addition to helping students develop their moral principles. The teacher also exhibits social empathy for the students.

The duty of a teacher described above is one that cannot be taken over by technology. In order to succeed in the educational period 4.0, teachers must have the abilities that will enable them to develop the skills of their students. The ability to address pupils’ psychological needs is another requirement of the instructor. The psychological needs of these students include the Needs for competence, Needs for autonomy, Needs for relatedness, and Sustainable learning (Putra, 2019; Santrock, 2010).

This is what makes the teacher’s role irreplaceable by any great technology. This is because technology cannot be a facilitator, inspiration, motivator, imagination, creativity, social empathy, and teamwork as well as the development of character values. However, teachers are still expected to always be able to develop competencies in order to produce quality education.

Challenges of Islamic Education Teachers in the Revolutionary Era 4.0

We may use data from Indonesia’s PISA, which serves as the foundation for that country’s perception in the world, to meet this challenge. Governments utilize PISA to evaluate the effectiveness of their educational systems. It can also be used to define aspects of the educational
system, such as those that may affect how well a society is able to utilize the abilities of all of its members (Stacey, 2011). The legislation includes a statement of a liturgical movement to encourage reading among Indonesian students in elementary through high school. On the basis of Permendikbud No. 23 of 2015, the Ministry of Education and Culture has introduced the School Literacy Movement. The National Literacy Movement (GNLB), whose goal is to promote a culture of literacy and the literacy climate in society at large, was then further expanded by the Ministry of Education and Culture Ministry’s Development and Language Development Guidance Center (Nugrahanto & Zuchdi, 2019). There are four key reasons behind Indonesia’s PISA participation and its subsequent flat performance: Education funding, teachers’ qualifications, and fairness, the educational system, and decentralization of education (Argina et al., 2017).

The difficulties that Islamic education faces in the era of globalization are as follows: In an endeavor to preserve and advance sustainable development, the first task is to enhance added value, namely, how to increase national labor productivity as well as economic growth and equity; The second difficulty is in conducting in-depth research on the start of the Reformation era and the change in social structure from a traditional agrarian culture to a contemporary industrial society; Third, the challenge posed by the world’s escalating competition, specifically the need to boost the nation’s ability to produce top-notch creative works as a result of concepts, innovations, and expertise in science, technology, and the arts. Invasion and colonialism in the political and economic spheres are being replaced by new inventions and colonialism in the realms of science and technology, which provide challenges. (Rahman et al., 2019). In truth, Islamic educational institutions are things that need to be changed or the way the educational system thinks needs to be rearranged to meet this problem. As a result, Muslims must consistently improve the quality human resources in science, technology, and Imtaq while also increasing their spiritual, moral, and intellectual power. This is how the Islamic educational system has evolved in the modern world. The renovation of the Islamic educational system is required by the modernization process, commencing with the paradigm, concept, framework, management, and evaluation (M, 2018).

The problem above is a challenge for the world of education in Indonesia, especially Islamic education. For this reason, education practitioners continue to reorient the Islamic education system (Muzakki, 2022b, 2022a). Mastuhu, for example, considers that to face challenges in the era of globalization, educational institutions have the function of developing learning abilities or attitudes of Copying, Accommodating, Anticipating, Reorienting, Selecting, Managing, and Developing. Even education must be able to produce graduates who are able to live life, not just prepare students to work, be able to produce future-oriented people, be progressive, be able to sort and choose wisely and make good plans.
Because of this, Islamic education as a substitute must at least take a few steps, including restructuring the educational system that connects religion and the broader population. Islamic education must also start to advance by creating strategies to meet and address the problems posed by these changes; otherwise, Islamic education will fall behind in the race for global dominance. So in developing a strategy to respond to the challenges of these changes, one must at least pay attention to several characteristics, as follows:

a) Islamic education aims to be more process-oriented or to place more focus on learning than on instruction.

b) Islamic education can be set up in a more adaptable way.

c) Students in Islamic education can be treated as unique persons with unique and autonomous traits.

d) Islamic education is an ongoing process that constantly engages with its surroundings.

The four characteristics above can be called the paradigm of systematic-organic education, which demands education to be double tracks, meaning that education is a process that cannot be separated from the development and dynamics of society. Based on this view, it can be concluded that a new paradigm of Islamic education is needed. That is, continuous thinking must be developed through education to recapture the leadership of science and technology, as is the golden age of Islam, and the search for a new paradigm in Islamic education.

So it is clear that the teaching profession is a profession that must continue to develop because practical education will continue to occur and be unique to each individual and society in different situations and times according to developments in science and technology. This indication implies that teachers, as actors in the educational process, must continuously change themselves to have strong knowledge and are thorough and not half measured as educational professionals (Zubairi, 2014). One way is to implement teacher abilities in the distance learning (Solihin, Muin, et al., 2021). However, distance learning requires advanced skills in terms of technology.

In addition, because the teaching profession is a profession to assist and guide the development of (human) students, the relationship between humans and humans is essential to pay attention to in the context of developing teacher professionalism. In other words, the self-development of teachers as educational professionals must be able to help teachers not only have strong knowledge, complete and not half measures but no less important to help them have a mature personality and continue to develop. With vital mastery of science and technology, thoroughly and not half measures, and supported by excellent personality, teachers are expected to be skilled at arousing students’ interest in science and technology. Moreover, through a professional education process carried out by actors (especially teachers who are professional
with the characteristics mentioned above), students can be assisted and guided to be competitive in a 21st-century society characterized by rapid changes in science and technology.

CONCLUSION

Islamic religious education must carry out a transformation. The stakeholders of Islamic education must make changes to the face and content of the curriculum in accordance with the demands of the times, as well as a bulwark against moral decadence. Changes in the moral content of character education with competitive, cognitive, affective, psychomotor, and spiritual advantages. As well as the formation of students who are innovative, creative, democratic, have character, entrepreneurial, and religious.

The study's findings indicate that in the Revolution 4.0 age, educators must make use of three different technologies, including the Internet of Things (IoT) in the field of education, virtual/augmented reality, and artificial intelligence (AI). Islamic religious education instructors must possess a high level of competency in order to produce pupils who can meet the difficulties of the Fourth Industrial Revolution. Therefore, a teacher of Islamic religious education needs to have learning principles, including; Learning Process, Active, Innovative, Creative, Effective, efficient and educative, and fun (PAIKEM) and the ability to integrate technology into learning.

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