



E-Learning Based Teaching Revolution of the Quran Interpretation at Universitas Muhammadiyah Surakarta

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Abstract. Quranic education plays a very critical role in preparing human resources. The Quran interpretation programs in various tertiary institutions are one of the efforts to introduce students to the Quran. It is necessary to create a Quran learning system based on e-learning. This study aimed to discover e-learning-based learning of the Quran interpretation in the Industrial Revolution 4.0 era at the Islamic boarding school, Pondok Hajah Nuriyah Shabran. This research is a qualitative study using library data. The result of this research showed that the existence of science could make the Quran more alive and meaningful since science has been able to prove the truth of the Quran. Learning Quran interpretation based on e-learning significantly increases learning motivation.

Keywords: Quran Interpretation · E-Learning · Industrial Revolution 4.0

1 Introduction

The world nowadays is facing the era of the Industrial Revolution 4.0. This era is characterized by the emergence of autopilot aircraft, smart robots, supercomputers, neurotechnology, and nanotechnology [1]. The Industrial Revolution 4.0 is a change in how we work that focuses on the patterns of the digital economy, artificial intelligence, big data, robotics, and others [2]. This change is referred to as the disruptive innovation phenomenon. The use of internet technology and its speed are of utmost importance in the modern world. The Industrial Revolution 4.0 will present new challenges that demand highly competitive human resources that value quality over quantity [3].

An institution that is crucial to developing human resources is education [4]. Education supports the development of the Industrial Revolution 4.0. Technology and science go hand in hand [5]. Science is the study of nature and how it can be applied to and used in daily life [6]. Technology can be accessed anywhere and by anyone without limits [7]. However, technology can have both positive and negative effects [8]. Having a thorough understanding of religion is necessary to reduce the adverse effects of technology [9]. Islam is one of the major religions in Indonesia. Modernity and advancement are never

against the law in Islam [10]. Islam fervently defends the right of its adherent to engage in scientific and technological research and experimentation. From the Islamic perspective, science and technology are considered part of the verses of Allah (the Quran) that need to be researched [11].

Learning the Quran also affects morals because many of its verses provide explanations of *akhlakul karimah* (good attitudes) [12]. A more comprehensive range of morals means living to be a mercy to all the world. Learning *Tahfidz* Quran is education that explores the problem of the Quran in its meaning: recite (*tilawah*), understand (*tadabbur*), memorize (*tahfidz*), and practice and teach or maintain it through various elements [13]. Learning *Tafsir* (Interpretation) of the Quran is not merely about memorization; it also involves applying the Quranic principles, which will be evident in the attitudes and actions of students wherever they are. The Quran should not be read quickly or hastily because doing so can alter its reading and meaning [14].

Adolescence is a delicate and bright period in the memory-building process. It is at this time that it is best to be guided, assisted, and directed for the cultivation of memorization of the Quran so that the Quran remains attached until it undergoes a transition process toward adulthood [15]. One of the genuine initiatives for the maintenance of the Quran that has started to be introduced, taught, and instilled in students who are in transition is the program of Quran Interpretation in some universities [16]. Learning the Quran Interpretation has the virtue of making us aware that we are the ones who require this *tahfidz* learning. The position of those who learn and memorize the Quran differs from that of those who do not [17].

Learning Quran Interpretation aims to assist people in developing their personalities, which are reflected in their daily actions and attitudes. Learning Quran Interpretation requires not only the individual's effort but also the support of the entire community, especially parents [18]. Educational institutions need to be able to coordinate with various parties, such as communities that support one another and are responsible for the development of moral and virtuous students and communicate the pattern of learning Quran Interpretation to them [19].

Quran Interpretation emphasizes the ability to read *tartil* and memorize the verses. *Tartil* is to read slowly and calmly, removing letters from the *makhraj* (the place of articulation) by giving the original nature or making changes that pay attention to the meaning of the verse being read [20]. The COVID-19 pandemic has had an impact on the education sector, including higher education. This pandemic was able to accelerate Education 4.0 [21]. One of the issues as well as a potential solution for the learning system, is that it is conducted remotely using information technology known as Quran-based e-learning [22].

Numerous studies have examined science and technology in the era of the Industrial Revolution 4.0, which is integrated with the Quran in the era of the Industrial Revolution 4.0. Those studies show that the Quran-based e-learning system that utilizes information technology fosters motivation to learn it [23]. It is consistent with studies demonstrating how e-learning can boost interest in learning the Quran [24]. The difference between this study and the previous one is the research methods used. The literature of numerous journals, books, and the Quran served as the primary research sources for this study.

2 Research Methods

This type of research is qualitative, using literature as a source or library research [25]. The method used is qualitative content analysis. Research theory through data sources such as the Quran, books, and articles related to Quran-based science in the era of Industrial Revolution 4.0 is explained descriptively [26].

3 Results and Discussion

A. Science and Technology Progress

Science is created by God, while humans discover and develop it. In the teachings of Islam, science occupies a significant position [27]. It is demonstrated by the numerous verses in the Quran that refer to learned individuals. The word science in the Quran is used more than 800 times. In addition to elevating knowledge and knowledge holders, the verses of the Quran also exhort readers and reciters to constantly explore new sources of knowledge [28]. It aligns with Surah Al-Alaq verses 1–5, “Read, in the Name of your Lord Who created.” Created humans from a clinging clot. Read! And your Lord is the Most Generous, Who taught by the pen, taught humanity what they knew not.” Surah Al-Alaq encourages Muslims never to stop learning and to keep reading [29].

There are many things to learn in the fields of science and technology. The study of the universe and its components is one of the science disciplines. The universe is essentially an order that works with the laws and potentials that God gives to His people [30]. God has given man the task to discover, comprehend, and master the laws of nature to be utilized for respectable purposes. Therefore, the universe created by God is not ready to be utilized without having the knowledge to be processed and built by humans [31].

The study of natural knowledge or science throughout the history of human civilization has continually occupied a particular position that has been the center of attention in each of its eras. The achievements of science are both evidence and witnesses to the history of human civilization. Interestingly, the more a person studies science, the more his faith grows [32]. Knowledge is a gift from God that shows His greatness and omnipotence. According to Cecep Sumarna, current advancements result from scientific and technological development, which appears to have peaked. What was once considered impossible is now a remarkable reality [33]. Even though times will inevitably change, Islam will constantly be relevant and consistent. The Quran is a *hudan* (guide for humans) that can be used at any time without limits.

There has never been any change in the verses of the Quran, but modern science has managed to uncover the secrets of Allah through the teachings contained in the Quran. Without science, the Quran would only be a collection of texts that cannot explain natural phenomena in detail and contain universal teachings that are still subject to debate [34]. The existence of science can make the Quran more alive and meaningful because science can prove the truth of the Quran. It implies that unrevealed religious teachings have benefited significantly from science [35].

Similarly, religion has provided the basis for valuable information for scientific purposes, which is then confirmed by science and acted upon through scientific evidence.

The Quran, a holy book containing Allah's teachings, will always inspire and guide people to read, study, and consider natural occurrences as proof of Allah's omnipotence and power [36]. The success of science in uncovering the secrets of God is supported by increasingly sophisticated technology. Science and technology are two of the benchmarks of the modern era; the modern era is now called the era of the Industrial Revolution. The Industrial Revolution was introduced by Friedrich Engels and Louis Auguste Blanqui in the mid-19th century [37]. The Industrial Revolution runs from time to time. The fourth (4.0) phase of it is now underway. Science and technology have become symbols of progress and success in the era of the Industrial Revolution 4.0. The phase change provides a difference in articulation in terms of its use [38].

The first stage (1.0) deals with the invention of machines that emphasize the mechanization of production. The second stage (2.0) has moved to the integrated mass production stage with quality control and standardization. The third stage (3.0) is the stage of mass uniformity that relies on computerized integration. The fourth phase (4.0) has brought digitization and automation of internet integration with manufacturing. The Industrial Revolution 4.0 is characterized by five key technologies: artificial intelligence, the Internet of Things, advanced robotics, wearables, augmented reality, virtual reality, and 3D printing [39]. The Industrial Revolution 4.0 increases not only the value of a product but also the value of individuals (new skills, becoming technology-driven operators), society (accelerating sustainable production), industry (productivity and efficiency, new growth and added value, digitization), enterprises (innovation and intelligent engineering, digital orchestration of supply chains, intelligent and personalized products, new business models), and factories (intelligent processes, machine-operator productivity, intelligent structures, locations, and scale). The result of the Industrial Revolution 4.0 has emerged as the phenomenon of innovation disruption. All facets of life have been affected by this phenomenon. It begins with the economy, politics, industry, and education. This phenomenon has also succeeded in shifting the lifestyle and mindset of the global community [40]. Disruptive innovation can be interpreted as the phenomenon of the disruption of incumbent industry players by new industry players because of the ease of information and technology. The 4.0 Industrial Revolution is characterized by the use of intelligent robots and autopilot. The aircraft is now being developed with automatic pilot or autopilot. Autopilot makes the once very arduous and painstaking work of a pilot much simpler. Smart robots will make it easier for humans to work; for example, servant robots. Servant robots can operate semi-automatically or fully automatically to perform services beneficial to human well-being. Servant robots assist humans in everyday life and are deployed in various fields [41].

B. Development of Quran Interpretation Learning Curriculum

In this contemporary era, the Ministry of Education and Culture's modifications to the national curriculum and the role of teachers both play a significant role in how students develop their morality. Any changes that occur will continuously affect the development of students. Therefore, the fundamentals must be instilled so that students remain in the values and norms that apply in today's life until the next life [42].

The development of science and technology, mainly through national educational initiatives, positively influences fostering a character-building mindset at all societal

levels, including among students at the Universitas Muhammadiyah Surakarta as a religious, moral, and high-quality successor [43]. Learning Quran Interpretation among students is one of the lessons that must be pursued so that it does not merely become a program. Learning Quran Interpretation becomes one of the supports for facilitating students to have noble character. Paying attention to appropriate learning management will help educators achieve goals in the Quran Interpretation. The Quran Interpretation means preserving the holy book, reading it, and focusing on its contents to guide and learn for people worldwide. Humans must have religion to habitually acquire a peaceful life [44]. However, with the development of the era, there are significant changes in the strategy of learning and teaching the Quran. The current era that encourages students to meet face-to-face virtually has a negative impact. Of course, the purpose of learning the science of the Quran is to meet a teacher to find knowledge as a whole and seek the blessing of Allah by coming to the science council.

Meeting a student with a teacher is crucial because morality and ethics cannot be acquired through indirect contact. The disappearance of this student-teacher relationship will only have an impact on the Islamic values that have been built by Islamic studies lecturers. Moreover, people tend to believe that anything can be done to expedite the learning process without realizing that learning also entails transmitting high moral principles. Therefore, the Islamic *aqidah* (creed) is not in line with the ODL (Online Distance Learning) education system, driven by the Industry 4.0 movement. In contrast, the teacher-student relationship strongly emphasizes the concepts of *barokatologi* (understanding blessing) and *suhbatu ustadzin* (respect for teachers).

To preserve and transmit knowledge in Islamic education, scientific objectivity is required. It is possible to question the legitimacy and credibility of Quranic science if it is solely based on digital materials like files, e-books, and other digital content that lacks a clear past or history. Additionally, there is currently no cyberspace technology that can take the place of teachers in their capacities as *Mu'allim* (teaching), *Mudabbir* (mentors), and *Mudarris* (educators). The role of the teacher in the Islamic educational system is crucial because the effectiveness of the teacher's instruction of students affects how successful the education will be. Education in character must be emphasized and instilled in every student in addition to the transmission of information. The most crucial factor is how people use the infrastructures at present, i.e., whether they can improve and make it easier or, on the contrary, make it worse and more destructive Islamic education should thus be able to rebuild the mental structures that have been damaged by technical progress and serve as the foundation for the framework of human existence at present [45].

Lecturers are now able to maximize teaching and learning activities as a result of the numerous learning models that are available and that have been developed by learning experts. The jigsaw method is one of these methods, a form of group learning in which some participants are in charge of comprehending particular aspects of the lesson content and are qualified to train other group members in their use [46]. Today's lecturers must be able to communicate with their students and adapt their teaching strategies to meet their needs [47]. The specialty or quality of the student, in this case, intelligence and cognitive growth, is the basis for integrating various learning models to maximize the optimal potential of abilities [48].

According to Arend (2018: 111), there is no preferred teaching style for all educational purposes. The learning model must be modified by the lecturer to meet the demands of the students. They should collaborate and use creativity to design learning models depending on the needs of students, in addition to applying current learning models [49]. One factor that affects how well students learn is the instructional model, particularly in the Quran Interpretation course [50]. It is clear from the emergence of various *Tafsir* models of the Quran that interpretation is not something static, sacred, or impervious to criticism. It is especially true when considering the study of the Quran and science, which are both developing rapidly. Moreover, it has the personality. Writing is frequently influenced by the dimensions of space and time as well as the author because interpretation attempts to describe God's plan based on the interpreter's skill.

The subject of this interpretation is a complex fusion of interests, subjectivity, and the individual, whether or not it is realized. In Indonesia, the field of interpretation studies has grown and developed quite rapidly. From its character, direction, and intricacies to its methods and results, the learning of Quran Interpretation sometimes gets faster and is never static. Since the Quran is read, studied, and interpreted to understand the instructions of God in it at all times, the creation of such interpretations does not concern only one era. People will constantly require this guidance, mainly concerning fundamental survival needs. People are constantly looking for direction. Human adheres to the Quran's guidance, and the closer he gets to it, the more challenging his problems become. The Quran is regarded as the foundation of Islam and is regularly referenced when attempting to resolve issues that arise in daily life. Achieving the skill of dealing with challenges in daily life requires mastering the art of understanding the Quran.

Learning Objective	Studying Quran Interpretation aims to improve the abilities of students, namely hard skills and soft skills, at the level of primary, secondary, and advanced education as well as in institutions of higher education.
Curriculum	The purpose of learning Quran Interpretation in the 21st century, which includes a scientific approach, character reconstruction, and original skills in the school environment and community service in the college environment, has been incorporated into the curriculum of learning Quran Interpretation.
Material	The focus of material design is on application and usability.

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Learning Methods	The teaching approach was directed and changed from methodological traditionalism to methodological modernization. For example, translation, qawaid, and lecture methods are replaced by techniques that can engage the classroom and foster student creativity, such as discussion, practice, demonstration, problem-based learning, cooperative learning, quantum teaching, active learning, discovery learning, brain-based learning, etc.
Learning Media	Quran Interpretation Learning Media is changing from adequate to more adequate, for example, in consideration of instructor resources such as books and media as well as audio-visual tools such as projectors and laptops, e-learning tools such as Google Classroom, and applications such as Android applications and digital dictionaries on the internet.
Teaching Staff	It is suggested to renew the educator's abilities, the integrity of science, academic credentials on the right path, and social skills
Learning Evaluation	The three areas of emotional, cognitive, and psychomotor functioning are the focus of the evaluation. The evaluation is transformed from a written exam using a pencil into an actual exam (product, portfolio, self-assessment, journal, personality assessment, etc.).
Development of Educational Institutions	Education uses the basis of bilingualism in teaching the interpretation of the Quran as a habit in reading and speaking so as not to be unfamiliar with Arabic literature and facilitate the memorization of the Quran and the study of its interpretation.

Table of Learning Change Directions
Quran Interpretation Era of Industrial Revolution 4.0

C. The Role of Parents in Educating

Teaching children to read both Latin letters and the letters of the Quran is one of the activities parents do to accustom their kids to religious education. It is expected that with the development of technology in the 4.0 era, the existence of Quran learning will not lessen. Currently, we can see religion-based learning collaborating with the technology that is developing at this time. Similarly, *tahfidz* learning has been in much demand in all circles. The development of science and technology should, of course, be positive for the formation of the mentality and character of the nation's future students who are

religious, of high caliber, and moral, primarily through national education programs, as long as attention is paid to contemporary students, especially at the primary level.

4 Conclusion

Even though times will inevitably change, Islam will always be relevant and consistent. The Quran is a *hudan* that can be used by anyone indefinitely. The verses of the Quran have not changed, but modern science has been able to learn the Quran's teachings and understand Allah's mysteries. Without science, the Quran would be only a collection of texts that cannot explain natural phenomena in detail and contain universal teachings that are still subject to debate. The existence of science can make the Quran more alive and meaningful because science has proven the truth of the Quran. The development of science requires technology. Science and technology have become symbols of progress and success in the era of the Industrial Revolution 4.0.

It is crucial to learn the Quran's interpretation using e-learning to enhance learning motivation. The progress that occurs has both positive and negative impacts. It is necessary to understand the Quran to deal with the negative impact of science in the era of the industrial revolution. Muslims are expected to conduct research to discover the greatness of God and need to choose the right technology to develop.

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