

The Unity of Science Paradigm for Sustainable Education in The Disruption Era

Dwi Wulan Sari¹

¹Islamic Education, Faculty of Education, UIN Sunan Kalijaga,
Jl. Marsda Adisucipto No 1 Yogyakarta 55281, Indonesia. Tel. +62-274-540971, Fax. +62-274-519739.

Corresponding author

¹dwiwulansari76@gmail.com

Abstract: With the development of science towards modern civilization, education is faced with many problems that accompany it. Such as the separation between science and religion. The lack of implementation of the integration model of science and religion can lead to stagnancy and degradation of Sustainable education in Indonesia. The development of an increasingly global world civilization makes various problems complicated that cannot be solved with one discipline alone so the unity of science is needed. The concept of learning that integrates the value of science and religion in an era of disruption will create great changes in the ecosystem and the way of life. The era of disruption is believed to be able to improve the teaching process (Cyber System) by utilizing digital technology so that the inheritance of science can run continuously without the need for face-to-face. The purpose of this article is to analyze how the paradigm of unity of science plays a role in continuing education both adaptively and comprehensively in an era of disruption. The method used in this study is a descriptive qualitative method with a literature review. The results of the research analysis show that creating sustainable education requires good collaboration in religion and science to be able to solve challenges in the era of disruption. It does not dictate between science and Islam in scientific development and can correlate religious learning with science as the foundation of the era of disruption. Develop integration-interconnection or multidisciplinary, interdisciplinary, and transdisciplinary models at the institutional level and during learning so that it is expected to be applied by Islamic education with the principle of relevance and problem-solving in social life.

Keywords: Unity of Science, Sustainable Education, Disruption Era.

Introduction

The era of disruption is a term commonly used to denote a technological development accompanied by its sophistication. If you trace the course of technological development, there is the term industrial revolution, an era that has experienced four changes. The revolution in the first phase was marked by the existence of a steam engine in the industrial field which was able to replace a human job. Over time, in the 19th century, industrial travel replaced with electricity. If previously using machine power to assist human work, in this phase human work can already be replaced by the sophistication of electric power in all industrial sectors. The second revolution became the forerunner of sophistication in the field of

electricity-focused industry. The third phase is the era of the manufacturing sector and computerization. Then the fourth revolution, in this phase there is interconnection, sensor technology and data analysis which has become an industrial world development that is integrated in various fields of science.

Technological developments accompanied by changing times are so fast, can provide easy and comfortable dishes for humans. Characterized by the ease in carrying out various activities and the development of knowledge that can be spread easily. However, along with the development of western culture, in fact, it has had an influence on the erosion of the values contained in Islam. Many young people are more focused on technological developments rather than practicing Islamic

religious values. Religion as a person's foundation, should be a regulator and direction for humans to regulate their lives and make them more civilized and good. The need for knowledge that provides knowledge about the unification of science with Islamic scholarship. This scientific unification plays a very important role in preventing a value-free view of secularism in science. If scientific knowledge is always based on the Islamic religion, it will bring progress to the people and give glory and glory both in this world and the hereafter.

A growing understanding of science and religion are two different things that are still often encountered (Muhammad Amin, 2020). This distinction can be seen from educational institutions, which separate science and religious schools. two things that are like hard to find and the existence of different entities. As seen, between religion and science have no concern for one another. If this dichotomy continues to experience a continuation, it will have a bad influence on Islamic educational institutions and will be increasingly underdeveloped. Especially with easy access to technology, information can be disseminated quickly and can provide setbacks for the world of Islamic education in the future. Therefore, the need for unity between Islamic knowledge and science in order to provide a view that religion is the source of all knowledge. The emergence of unity between science and religion is expected to provide a harmonious, comprehensive, and holistic understanding.

Another opinion says that the difference between science and religion lies in their respective scientific fields. If science relies more on empirical data collection and states on empirical and real data. Conversely, religion will accept things that are not real or uncertain. In this case what plays in it are the variables of faith and belief. This mistake will always be exhaled if Islamic educational institutions do not provide a solution to the unification of science and religion. In fact, if one sticks to Islamic scholars such as Nashir Al-din Thusi, Ibn Sina and Qutb al-Din Shirazi there is no dichotomy of science and religion presented. This study aims to analyze how the unification of science and religion is influenced by the era of disruption.

Materials and Methods

In this research, the focus of the research is to use a qualitative method with a literature study approach. The goal is to get a description regarding the model of unification of science and religion. The study was conducted to find out the implications of the unification of science and religion in Islamic education in the era of disruption. The main source of this research is several literature reviews that come from online articles that already contain meta-analysis of data. All data obtained is then collected and then analyzed by reviewing and adjusting to the focus of the research.

Results and Discussion

The Nature of Science and Religion

Referring to Sulaiman Nordin's presentation, science is a result that can contribute to humans with the benefits it provides. Science is an understanding of science that is used to assist in the development of science, especially technology and the process of its creation using efficient rules (Isra B, Mas'ud Z, et al, 2020). The method used by science is rational, objective, and logical. The goal is to uncover the truth of an incident. There are four main functions of science, namely science as a process, science is used as a step to get to know the world better, science as a collection of values, and science as a science that is full of value and meaningful in the development of knowledge more broadly. Science apart from playing a role in the development of knowledge is also required to be able to guide humans to give meaning to life in its true essence. In general, science, in the Islamic view, has the same metaphysical basis, which aims to reveal Quranic verses to direct knowledge. The opinion of Arifudin (2016) explains that the integration between science and religion is very possible because it is based on the idea of one God or what is commonly called (Tawhid). This is because the expected integration at this time is integration based on the value of monotheism. Chanifudin and Nuriyati (2020) reveal that science and religion basically have a balance in studying

and applying life today. Science in the view of Islam is aimed at knowing the behavior of all God's creation and demonstrating natural laws. This opinion provides the truth of the fact, that nature cannot be separated from its creator. The truth of science can be proven by the Al-Quran and can be felt today by solving some of the problems faced. Science and religion can unite if they have the same theoretical basis, namely between (religious and secular), meaning they are able to work together. In the first verse of Al-Alaq, it has been explained that in order to gain knowledge, it is necessary to read, which is then continued in the name of God. It is very clear that science must be based on Tawhid. The meaning of the first verse which means 'read' in Surah Al-Alaq provides an understanding that everything, including science, must be based on 'God who created'. Thus, the nature of science and religion will be interrelated and have no gaps.

The Relationship between Science and Religion in an Era of Disruption According to G Barbour

The era of disruption is a change experienced by humans and can change the order of life from various aspects. The changes experienced can be gradual or look small first which then becomes a big change (Azhar S, 2018). The era of disruption can have an influence both in terms of environmental, social, cultural, economic, and technological. The influence that is felt at this time is that there are no obstacles between time and distance to have discussions and friendships. Social media that can provide space and can be accessed easily such as, *instagram, facebook, twitter, WhatsApp, zoom, google meet, and google duo*. G Barbour views that science, religion, and technology are closely related to each other. His views in discussing the relationship between the three are called the four typologies. These four typologies include Independence, conflict, dialogue, and integration.

1. Conflict

This first view explains that between science and religion are two different things and contradict each other. But in the era of disruption, it has been proven that science and religion have a connection and relationship with each other. Various discoveries that were later correlated with

Quranic verses proved that science is not a stand-alone science

2. Independence

The second view explains that between science and religion has a problem, which is in the form of

study of different methods. Different areas of study give rise to the view of the unnecessary relationships that are established. The era of disruption proves that religion and science have the same problem, namely that science conducts scientific studies to prove the greatness of God and it can be said that science and religion cannot stand alone.

3. Dialog

G Barbour on dialogue offers a more constructive one, in this type Barbour presses on comparisons or similarities between science and religion. The efforts made are to emphasize the methodical aspect conceptually between religion and science. If independence looks for the difference then the dialogue analyzes the equation. The era of disruption has sought concrete similarities and then adapted to studies on social media.

4. Integration

According to Barbour, integration is meaningful to produce theological reforms. Science and religion will be put together and then require an up-to-date scientific theory and then implicated with religion. The synergy of science and religion has proven that between science and religion are interrelated and can be assisted by technology as an effort to convey information.

The Unification of Islamic Science and Education in an Era of Disruption

The development of the times continues to lead to challenges in every aspect of life, especially the continuity of education and the existence of Islam. As a Muslim, it is appropriate to have a consistent attitude that is applied in oneself, community, and government. Islamic education plays a very important role in building quality character for the

younger generation. Have a good character attitude, uphold Islam and always seek knowledge wherever you are. The development of digital science that increasingly provides convenience, a Muslim should try and find out what is around him and learn every change experienced. From here, there will be an attitude to continue to be enthusiastic in facing various obstacles.

Islamic religious education in learning is directed to be more blended, meaning that it must be integrated. If understood carefully, chemistry, physics and biology learning is the result of the application of Islamic religious education and in the form of theories that have been explained long ago in the Quran (Suharji, 2014). Islamic education should not be monolithic, Islamic education and other sciences should be connected and integrated. Islamic education can synergize by having development programs with other sciences which are then relevant to social changes that occur in society. When referring to the Islamic journey, technology is not new. The ever-evolving technology will go a long way towards achieving a more complete quality of the hydra.

Explanations of Islamic religious education that are sometimes beyond human reason, such as students' questions about haram and halal food. Answering this question, it requires the role of science in providing a thorough explanation. Islamic science and education can support each other and provide understanding that is easy for students to understand. The integration that exists between science and religion must be able to run consistently so that it can produce reliable resources and can be strengthened with a solid spirituality. Islam is no longer seen as an anti-progress religion, but rather as a necessity in order to actualize itself to develop towards an advanced civilization as a facility for the development of science and technology (Turmudi, 2016).

The unification of science with Islamic education and the sophistication of technology today can be started from learning methods. Interesting teaching methods will have a positive influence on students' understanding. Through the convenience that has been provided today with technology, educators can use it as a learning method. In learning Islamic religious education

and science, it can be integrated during learning, such as discussions about the size of nisab zakat, weighing zakat and so on which can be synergized with physics lessons. Thus, *jiga* in the learning of Biology related to living things. In the subject of Biology, there is a subject matter that explains the process of meeting the ovum with spermatozoa which then becomes blood, then in the form of flesh and then bone to fetus.

If explained in Islamic religious education, it can be correlated with Quranic verses such as Surat Al-Mu'minin verses 12-14 about the process of human events starting from spermatozoa to becoming a fetus and Surat Al-Mu'minin verses 18-22 which are about the development of living things. The provision of these examples can be an integration between science and the implementation of PAI learning. Students are expected to be able to understand knowledge thoroughly and completely according to and based on verses from the Quran. The form of a thematic-integrative learning model is needed by students, so that it is not separated and boxed between religion and science but rather intersects with each other. The introduction and utilization of technology can begin with the manufacture of interesting teaching materials. Educators can use animations or short videos to be accepted by the digital generation. The creativity of educators in packaging learning applications will increase students' interest in learning.

Implementation of Science and Religion Models in Educational Development

The strategy to achieve educational goals is to develop itself and consider all the processes that run as a whole and then evaluate them (Respati, 2018). PAI science and curriculum must be evaluated and reconstructed in order to create quality outcomes. There are several ways that can be done in integrating general science and religion, *first* based on concepts based on the Quran and Hadith. *Second*, learning general concepts and theories is then combined with learning the PAI curriculum (Firman Mansir, 2020). The implementation of science and religion must be

built because of principle and developed according to the needs of its participants with a scientific approach in order to achieve perfection (Assegaf, 2010). Some things are considered in PAI learning and can be divided into several materials;

1. The scientific approach is a systematic step in order to get objective answers and learning
2. The importance of integrating themes and their truth is scientific
3. Re-describing the competency standards to be achieved
4. Educators' creativity and innovation in developing learning

The scientific approach to learning is an important innovation used by educators.

The implementation of learning using a scientific approach in the curriculum must be carried out as a step to prevent dynamic things in the world of education (Mohtar, 2017).

Conclusions

The process of implementing education must be able to balance with science and implementation to noble morals. The unification of science between science and religion in education can consider several aspects, namely the scientific approach, integrating themes during learning, describing the goals to be achieved and innovations from educators. In this case, educators are allowed to use technology in learning as an effort to realize

advanced learning and give birth to the suitability of activities in the world of education.

References

- Akhamd Saihu. 2022. Sinergisitas Sains Dan Agama Dalam Menghadapi Era Disrupsi. *An-Nahdhah* 15: 1-20
- Azhar S. 2018. *Disruption Era*. Pt Asuransi Tugu Pratama Indonesia
- Arifudin, I. 2016. Integrasi Sains Dan Agama Serta Implikasinya Terhadap Pendidikan Islam. *Edukasi Islamika*, 1: 161-179
- Chanifudin, Nuriyati T. 2020. Integrasi Sains Dan Islam Dalam Pembelajaran. *Jurnal Pendidikan* 1: 212-229
- Firman M. 2020. Diskursus Sains dalam Kurikulum Pendidikan Agama Islam di Sekolah dan Madrasah Era Digital. *Jayapangus Press* 3: 144-157
- Isra B, Mas'ud Z, Rian V. 2020. Beberapa Model Integrasi Sains dan Islam serta Implikasinya terhadap Pendidikan Islam. *Bedelau* 1: 33-42
- Muhammad AS. 2022. The Integration Of Science And Religion Its Implications For Islamic Religious Education. *Book Chapter Of Proceedings Journey-Liaison Academia And Society*. 1: 249-256
- Mulyana R. 2011. *Mengartikulasikan Pendidikan Nilai*. Bandung, Alfabeta
- Muhammad A. 2020. Hakikat Dan Model Integrasi Sains Dan Islam Serta Relevansinya Pada Rekonstruksi Pendidikan Islam. *IndraTech* 1: 47-56
- Respati YA. 2018. Collaborative Learning Dalam Upaya Peningkatan Keaktifan Mahasiswa Pada Proses Pembelajaran. *Jurnal Efisiensi - Kajian Ilmu Administrasi* 15: 15-23
- Safira FN, Nur Fitriati R, Isti F, Elina L. 2022. Sains Agama Dan Paradigma Manusia Di Era Disrupsi Digital: Analisis Tipologi Ian G Barbour. *Prosiding Konferensi Integrasi Interkoneksi Islam dan Sains*, 4: 286-29
- Siti AN. 2019. Analisis Kompetensi Abad-21 Dalam Bidang Komunikasi Pendidikan. *Kebumasan* 2: 387-403