

Integrating Religion with Science and Technology for Islamic Education

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ABSTRACT

This research is aimed to obtain an overview of the concept of integration between Islamic religious with science and technology through Islamic education. The method used in this research was literature research. To study the data and information collected, we used deductive thinking descriptive qualitative method to present the results of the study. Based on the research data, some information about Islamic concepts related to science, such as Isra' Mi'raj phenomenon that can be explained through the concept of modern physics.

Keywords: *Science and technology, integration, Islamic education*

1. INTRODUCTION

One of the four abilities that must be mastered by individuals in the era of digitalization, or the era of the Industrial Revolution 4.0 is collaboration[1][2][3][4][5]. Collaboration is the process of two or more people who work together on long-term projects to achieve complex goals[6]. In education, a form of collaboration that is often happened is the integration of a concept into another science in order to create a new scientific concepts[7][8][9][10][11]. Such as the integration of natural sciences and technology which later became a solution to help for medical sciences[12].

The modern era tends to emphasize the specialization of science, whereas in the postmodern era (Gen. Z era) it emphasizes integralism which can eliminate boundary barriers not only in the physical territorial, but also in a broader sense, such as the loss of scientific disciplinary boundaries which during this is strictly guarded and maintained[13][14]. In this case, in order to maintain the results of integration of science so it can provide more benefits and minimize negative impacts, it is necessary to have the concept of integration between religious education with science and technology[15]. This integration is intended to connect and integrate religious education with science and technology, rather than integrating or mixing those three sciences.

Islamic Education Learning is a science that is believed to be able to minimize the negative impacts of the development of Science and Technology. The expected integration between Islamic education and science and technology does not mean providing Islamic religious education material added with science and technology material[16]. But integration is to explain about an Islamic educational material supported by the facts of science and

technology. Because, in this postmodern world, students do not want to merely accept dogmatic lessons. Critically, they question about the religious education material that we convey in accordance with its rationality and reality in daily life.

Therefore, studying the concept of integration of Islamic Education and Science and Technology is very important to do. In addition to opening up an understanding of the concept of Islamic education as a whole, the results of this study also provide a new science concept of integration.

2. METHOD

A literature research was used to find and collect data needed in this research. Before it was processed, research data was validated through expert judgment, then the data was reviewed in a deductive pattern and analyzed with content analysis techniques describing the meaning of the concepts and examples of integration between Islamic religious education with science and technology (IPTEK). Furthermore, the results of this study were presented in a descriptive qualitative form. There were two sources of data in this study, primary data sources that present important information related to the integration of science, technology and religion and secondary data sources that provide additional insights on the integration of science and technology. This research was conducted in one year, starting from November 2017 to November 2018. The process of this research is illustrated in the following chart:

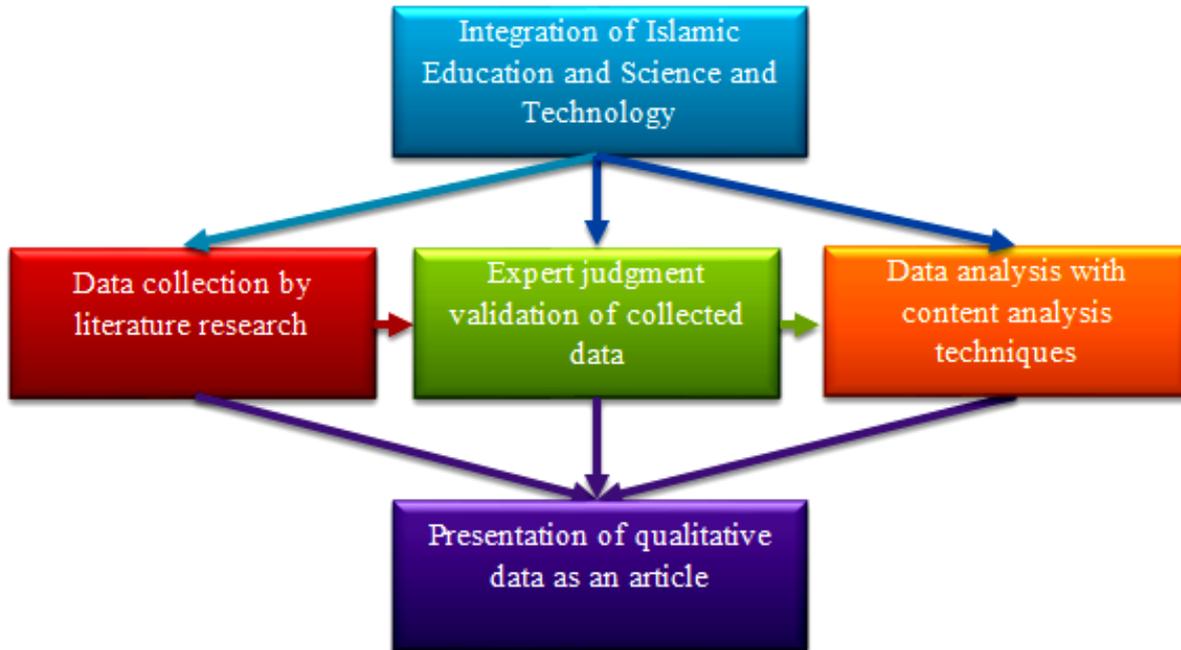


Fig 1. Research Process

3. RESULT AND DISCUSSION

There are two phenomena that often occur in Islamic education: First, what generally happens is the teaching of Islamic sciences which are normative-textual and free from the development of the social sciences, economics, law, humanities and religious studies in general. Second, the education of natural sciences (science and technology) is "forced" to merge with normative textual Islamic

religious sciences by attaching verses to the findings of science and technology. This phenomenon is also known as "cocoklogi" phenomena.

In fact, Islamic learning is very integralistic, because all knowledge comes from the creator (Allah) then Islamic science is closely related to other sciences. Here we present a chart of the concept of integration of Islamic Education with Science and Technology:

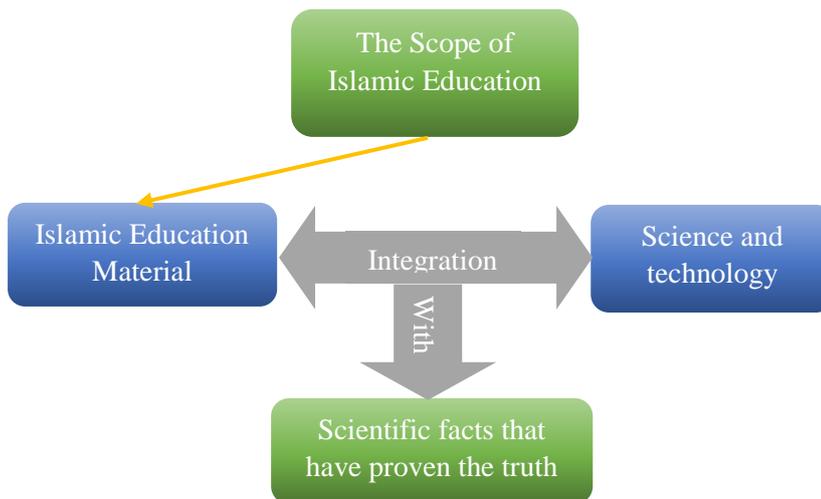


Fig 2. The concept of integration between Islamic education and science and technology

3.1. Integration of Islamic Education and Science: The Isra 'Mi'raj Phenomenon with Einstein's Theory of Relativity

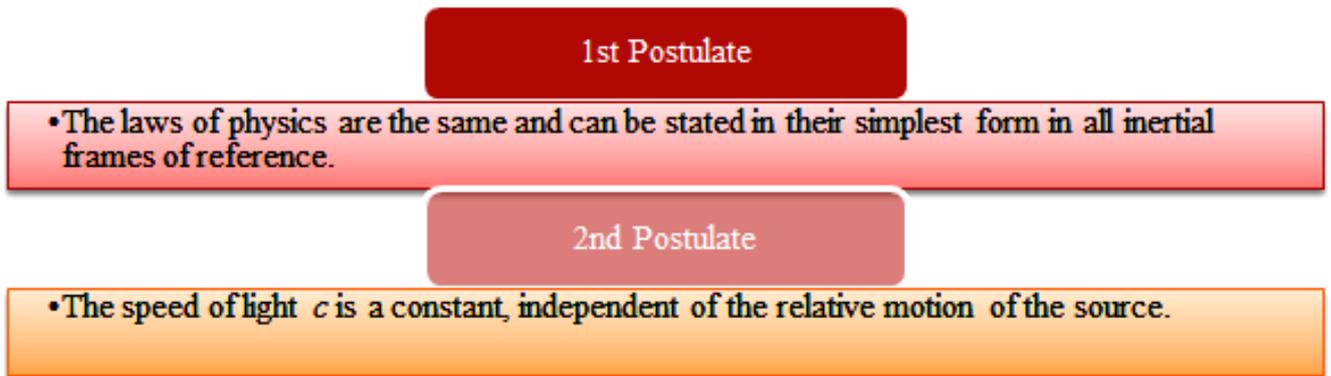


Fig 3. Einstein's Postulate

The Isra 'Mi'raj phenomenon is a phenomenon involving Prophet Muhammad SAW[17]. In the event, the prophet Muhammad SAW was taken by the Jibril to explore the earth from the Masjidil Haram in Mecca to the Masjidil Aqsa in Yarussalem (Palestine), then led through seven layers of sky until it reached a border above the seventh heaven called Sidratul Muntaha, with an incredible speed called mukjizat (miracle). In Q.S. Al-Isra ' : 1, Allah SWT explained the meaning of Isra':

“Exalted is He who took His Servant by night from Masjidil Haram to Masjidil Aqsa, whose surroundings. We have blessed, to show him of Our signs. Indeed, He is the Hearing, the Seeing.”[18]

And about Isra'-Mi'raj, Allah explained in Q.S. An-Najm: 13-18 :

“And he certainly saw him in another descent. At the Lote Tree of the Utmost Boundary. Near it is the Garden of Refuge. When there covered the Lote Tree that which covered (it). The sight (of the prophet) didn't swerve, nor did it transgress (its limit). He certainly saw of the greatest signs of his Lord.” [19][20]

In 1950, after Albert Einstein understood that ether was proven to be non-existent, Einstein announced the Special Theory of Relativity with 2 postulates as follows:

If the first postulate of the theory of Relativity explains that the laws of physics are the same for all observers in the entire intersia reference frame, then the second postulate of the theory of Relativity is about the speed of light. In the second postulate it gives the sense that the speed of light in a vacuum is fixed at 3×10^8 m/s with any reference frame, whether the reference frame moves or remains stationary at its position. [18]

Discussion of this theory is generally carried out for observers who move very fast near the speed of light. The relativity of time is stated in the Q S As-Sajdah: 5

“He arranges (each) matter from the heaven to the earth; then it will ascend to Him in a Day, the extent of which is a thousand years of those which you count”. [18]

A more extreme time difference will occur if the speed of travel is very close to the speed of light. Jibril and other *malaikah* (angels) are creatures of light that must move quickly so that they have a different time than humans on earth. If angels move quickly, their time calculations will be shorter than human time calculations on earth. If humans spend a year, the angels only use a few seconds. This statement is in accordance with the word of Allah in QS Al-Ma'arij: 4:

“The Angels and he spirit will ascend to Him during a Day the extent of which is fifty thousand years”.[18]

According to Abu Yusuf Bin Ashaq Al-Kindi that space, time, movement, and objects have a dependency between one another. Space, time, motion, and objects cannot stand alone or absolute. That is, space, time, motion, and objects are relative to other objects.

To make it easier to understand the event, an example can be taken of man's journey into space, also explained in the Qur'an Surah Ar-Rahman: 33 explains that humans can reach space with science:

“O Company of jinn and mankind, if you are able to pass beyond the regions of the heavens and the earth, then pass. You will not pass except by authority (from Allah SWT)” [12]

The power here is interpreted by science. So humans with knowledge will be able to penetrate outer space or the corners of heaven and earth.

This theory can be proven by traveling into space. Astronauts leave Earth using a space shuttle that glides at breakneck speed. If they make a journey for 1 year in space and then return to earth, they can find that the earth records their travel time reaching 10 years. This means that two people or objects moving at different speeds will experience different duration of time. And Albert Einstein added that if an object exceeds the speed of light ($v > c$) then the object will return to the past.

Based on the explanation of the theories, a conclusion can be drawn that the event of Isra 'Mi'raj is very possible to

occur, as explained by the theory of relativity conveyed by Einstein. With the thought that light can move with extraordinary speed and has an effect on the time of the object as in the previous explanation. According to researchers this is very possible to happen, if according to Einstein's theory that the speed of light can reach at speeds of 3×10^8 m/s then when calculated the speed of light is proportional to 300,000,000 m/s. It can be concluded that if the speed of light is able to reach a speed of 300,000,000 m/s, in the sense that in 1 second the speed of light is able to pass a distance of 300,000,000 meters. Angels are so high that speed not only affects the speed of movement, but also affects the short length of time, so that the relativity of time occurs.

Many science integrations have been made by many researchers. Such as the integration of natural sciences and technology which later became a solution to help for medical sciences [1]. It has been proved that integration brings a new knowledge that solve many problems. In this research, the integration is intended to connect and integrate religious education with science and technology, rather than integrating or mixing those three sciences. The role of science and technology becomes a rational explanation of Islamic education material. The integration of Islamic education with science and technology is carried out by linking Islamic education material based on the scope of Islamic education with scientific facts from science and technology. With the understanding that scientific facts from science and technology strengthen the truth of the material presented, so that the material can be rationalized by students.

4. CONCLUSION

The concept of integrating religion with science and technology for Islamic Education is as follows. Science and technology play their role as a rational explanation of Islamic education materials. The integration of Islamic education with science and technology is carried out by linking Islamic education materials based on the scope of Islamic education, with scientific facts from science and technology. With such understanding, science and technology strengthen the truth of the materials of Islamic education that is presented in the class, so that the materials can be rationalized by students.

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