

Stephen Hawking's Atheist View on Science; A Critics from Philosophy of Islamic Education

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Abstract

Religions, for most western scientists, do not develop linearly with science. Because since the beginning, religion has been removed from the world of scientific research. Efforts to approach nature are freed from metaphysical elements, which according to al-Attas, Nature is no longer considered sacred. As a result, it is permissible to act freely against nature. Nature is only limited to the framework of mechanistic philosophy which furthermore becomes the philosophical foundation for the development of modern science. This study examines the implications of Stephen Hawking's Atheist View on Science for the modern education in Indonesia according to The Philosophy of Islamic Education. This research begins with data reduction, data presentation, and drawing conclusions based on a combination of information about the object of research after analyzing Hawking's atheist view on science and its implications for the modern education in Indonesia according to The Philosophy of Islamic Education. This research shows that, according to Hawking, the only instrument that can explain the nature of the universe is science. And in the creation of the universe, there was no need for an entity called God. Consequently, Stephen Hawking's atheist view towards science has profound implications for 1) the purpose of education. With the concept of nature based on atheism, the purpose of education will also potentially remove the element of God from the equation. 2) the curriculum. An education system built on reduced epistemological concepts will end up with the marginalization of metaphysics. 3) the educational approaches. Approaches to science that are based on atheism do not touch the moral-religious aspects. 4) evaluation system. An evaluation system that is based on atheism will also result in an assessment that emphasizes more on cognitive aspects and tends to ignore aspects of morals and manners.

Keywords: *Stephen Hawking; Atheist View on Science; Education; Philosophy of Islamic Education.*

Abstrak

Agama, bagi kebanyakan ilmuwan barat tidak berkembang linear dengan ilmu pengetahuan. Sebab sejak awal, Agama sudah disingkirkan dalam dunia penelitian ilmiah. Usaha untuk mendekati alam dibebaskan dari unsur metafisika, yang menurut al-Attas, alam dianggap bukan lagi sesuatu yang kudus. Akibatnya, dibolehkan bertindak secara bebas terhadap alam *tabi'i*. Alam hanya dibatasi pada kerangka filsafat mekanistik yang kemudian menjadi fondasi filosofis perkembangan sains modern. Penelitian ini mengkaji tentang Implikasi Pemikiran Sains Ateis Stephen Hawking terhadap pendidikan modern di Indonesia ditinjau dari Filsafat Pendidikan Islam. Penelitian ini dimulai dengan Reduksi data, Penyajian data, dan Penarikan Kesimpulan berdasarkan gabungan informasi mengenai obyek penelitian setelah menganalisis pemikiran sains ateis Stephen Hawking dan implikasinya terhadap pendidikan modern di Indonesia menurut perspektif Filsafat Pendidikan Islam. Penelitian ini menunjukkan bahwa Hawking beranggapan bahwa satu-satunya instrumen yang dapat menjelaskan hakikat alam semesta adalah sains. Dan bahwa dalam penciptaan alam semesta tidak membutuhkan unsur Tuhan. Pandangan sains ateis Stephen Hawking demikian berimplikasi pada : 1) Tujuan pendidikan. Dengan konsep alam berbasis ateisme, maka pemaknaan terhadap tujuan pendidikan juga mengarah kepada peniadaan unsur Tuhan. 2) Dalam kurikulum, pendidikan yang dibangun dari konsep epistemologi yang telah tereduksi, mengakibatkan terjadinya marginalisasi terhadap ilmu metafisika. 3) Pada metode, pendidikan sains yang berbasis ateisme, tidak menyentuh aspek moral-religius. 4). Pada Aspek Evaluasi, pendidikan lebih menekankan aspek kognitif dan cenderung mengabaikan aspek akhlak dan adab.

Kata Kunci: *Stephen Hawking; Pemikiran Sains Ateis; Pendidikan; Filsafat Pendidikan Islam*

Introduction

The modern age is considered the pinnacle of scientific advancement. Since modern science has been presented and artficed among to the nature and humans. Inventions in the form of technological tools established human life more practically and efficiently. By advancing technology, humans can move faster, explore natural resources easily, to create and solve various of medical problems that plague humanity.¹

¹ Lihat: Humaidi, *Paradigma Sains Integratif al-Farabi; Pendasaran Filosofis Bagi Relasi Sains, Filsafat dan Agama*, (Jakarta: Sadra Press, 2015), 15

However, Marvin Perry revealed something different, that the advancement of civilization led by the West caused a paradox. He said that although the Modern West has uncovered the intricacies of the mysteries of nature, it has been less successful in finding solutions to social disease and conflicts between nations. Science and Technology, being the achievements of the Western intellect, although improving living conditions, have also produced weapons of mass destruction.²

It was depth reviewed by R. D. K. Herman and explained the cause of those were the elimination of the enchantment of nature and the apotheosis of reason. He wrote the disenchantment of the world and the apotheosis of reason work together in the separation of humanity from integration with nature, and human nature. With the physical world thus set apart, it then became the object of control³.

The disenchantment of the world and the apotheosis of reason established the spirit of science goes far away from God and Religion. By the evidence, in a survey of American Scientists who are members of the Association for the Advancement of Science, conducted by the Pew Research Center in May and June 2009. In this research, it was found that most of the members of this group were very less religious than the general public. The survey also found that four out of ten scientists (41%) said they did not believe in God or a "higher power", while the general public was only 4%, as the following diagram shows,

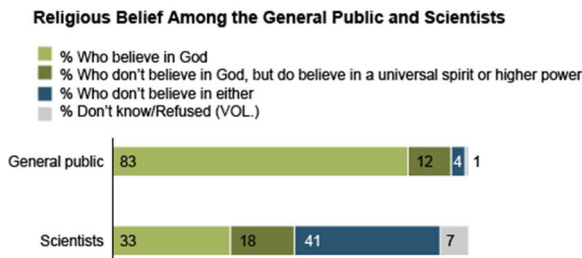


Fig. 1.1. Religious Beliefs among the American Public and Scientists⁴

² Marvin Perry, *Peradaban Barat; dari Zaman Kuno Hingga Zaman Pencerahan*, Terj. Saut Pasaribu, (Bantul: Kreasi Wacana, 2012), v

³ R. D. K. Herman, *Traditional Knowledge In A Time Of Crisis: Climate Change, Culture and Communication*, Vol. 10, No. 2 April (Swiss : Sustainability Science, 2015), 5-6

⁴ Sumber: <http://www.pewforum.org/2009/11/05/scientists-and-belief/> (diakses Selasa, 12 Januari 2016, Pukul 11.20 WIB)

Those data are in line with the views of a Modern Physicist such as Stephen Hawking. A scientist who was born in Oxford, United Kingdom, on January 8th, 1942. Hawking is also a Lucasian Professor in mathematics at the University of Cambridge and a member of Gonville and Caius College, Cambridge. Stephen William Hawking is known for his contributions in the field of Quantum Physics, especially for his theories on cosmology, quantum gravity, black holes, and Hawking's Radiation.⁵

Stephen Hawking studied the general laws that govern the universe (law of nature). Together with Roger Penrose, he showed that Einstein's General Theory of Relativity, Space, and Time have a beginning in the *Big Bang* and end up in a black hole. Hawking thinks that the only instrument that can explain the nature of the universe is science.⁶

From that perspective, his analysis of the initial state of the universe led him to conclude that the universe must begin, and with his skeptical attitude as a scientist, he considered that the intended action was the result of the work of God who created man. However, the expression was changed after his further research into the universe. In the last book he released with Leonard Mlodinow, *The Grand Design*, Hawking rejected the existence of God in the creation of the universe. After explaining Feynman's theory and the Black Hole, he said "We claim, however, that is question possible to answer purely within the realm of science alone, without invoking any divine beings."⁷

This was interesting to study theoretically. What are the implications of Stephen Hawking's thought on modern education in Indonesia. Because that conclusion of the scientific research developed by Stephen Hawking leads to atheism.

Atheism is a phenomenon in the present day, which develops along with the development of science. According to Syed Muhammad Naquib al-Attas, this is a serious problem facing the Muslim community nowadays. The dominance of Western secular science leads to Atheism.

⁵ <http://www.fisikanet.lipi.go.id/utama.cgi?cetakartikel&1388895766> (Diakses 13 Desember 2015, Pkl. 14.47 WIB)

⁶ According to Hawking, The ultimate goal of science is to provide a single theory to explain the entire universe. Lihat: Stephen Hawking, *a Brief History of Time; Sejarah Singkat waktu*, Terj. Zia Anshor, (Jakarta: Gramedia Pustaka Utama, 2013), 11

⁷ Stephen Hawking, *The Grand Design*, (United States of America: Bantam Book, 1996), 182

This is caused by the confusion about the scientific system for the Muslim community which beliefs in fundamental truths that come from Religion. While according to al-Attas, the fundamental truth of Religion is seen as merely theoretical by Western scientists, in general. Absolute truth is negated and relative values are accepted. The consequence is the affirmation of God and the Hereafter and places humans as the only ones who have the right to govern the world. Man was deified and god was humanized.⁸

Without revelation, Science is considered by Western scientists the only authentic knowledge. Empty from revelation, this Science is only concerned with phenomena. As a result, conclusions regarding this phenomenon will always change according to the times. Without revelation, the reality that is understood is only limited to this real world. The atheist view on science that underlies the scientific system and modern educational tradition will in turn produce the concept of nature and a reductionistic worldview. Materialist reduction led Hawking to at least become an atheist. Where he considers that the Universe is the only existence that can be accepted for its existence.⁹

The restriction of Nature into such a physical world will eventually produce materialist humans with *split personalities*. The birth of such a split personality stems from confusion regarding the nature and scope of science, as well as errors regarding the meaning of religion, key terms, and aspects of Islam, as well as errors regarding the concept of the Soul and the conception of 'science' itself. Therefore, al-Attas argues that the way out of this problem is through the educational process.¹⁰

In contrast to the Western view, in Islamic education, an understanding of the true universe has strong relevance to the enhancement of knowledge and faith for students. If the Qur'an can be seen as signs of God's greatness written in the form of divine revelations, *Qauliyah verses*, then the Universe can be considered as signs of God's greatness that stretches out in front of humans (*the verses of Kauniyah*). Thus, 'reading' the Universe can be seen as a complement to reading the Qur'an, both of which are expected to increase the

⁸ Adian Husaini, *Wajah Peradaban Barat*, (Jakarta: GIP, 2005), 3

⁹ Syamsuar Hamka, Studi Kritis Pemikiran Fisika Modern Stephen Hawking Menurut Filsafat Pendidikan Islam, *Tawazun*, Vol. 12, No. 1, (Bogor : UIKA, 2019), 8

¹⁰ Wan Moh. Nor Wan Daud, *Filsafat dan Praktik Pendidikan Islam Syed Muhammad Naquib al-Attas*, Terj. Hamid Fahmy Z. et al, (Bandung: Mizan Pustaka, 2003), 77

reader's faith and submission to God. In this sense, the universe is a large book that is spread out before humans, as a source of knowledge that must be taken from it. Thus, the Universe is an inseparable part of education.¹¹

Philosophy and Practice of Science Education in Islam

In particular, science education in Islam is different to science education in the West. This distinction is possible to be seen from the key concepts that underlie the implementation of philosophical science education which continues in its implementation such as the concept of nature which is the object of science itself.

Conceptually, *Tafseer* of Ibn Kathir explains, the word '*âlam*' as everything that exists other than Allah. '*âlam* is plural (*jama'*) which has no singular form (*mufrad*). *Al-'awâlim* means various kinds of creatures that exist in the sky, earth, land, and sea. And every single generation in a time are also referred to as '*âlam*. According to Ibn Kathir himself, the word "الم" comes from the word "العلامة" (*sign*), since nature is evidence that shows the existence of a Creator and His oneness. Meanwhile, Muslim philosophers define it as a collection of *Jauhar* composed of *maddat* (matter) and *shurat* (form) that exist on earth and in the sky. Thus this word indicates the number of natures created and maintained by Allah, and some of them are not known by humans according to the explanation of the Q.S. al-Nahl [16]: 8.¹²

Quoting the opinion of the Ikhwan as-Safa', '*alam*' (universe) is *all the spiritual and material beings who populate the immensity of the skies, who constitute the reign of multiplicity which extends to the spheres, the stars, the elements, their products and to man*. Furthermore, He explained that the '*âlam* is often referred to as a city or creature (animal), but it is always different from the divine unity in relation to God with his existence (form), his immortality (*baqa'*), his flawless (*tamam*), and its perfection (*kamal*).¹³

¹¹ Sirajuddin Zar, *Konsep Penciptaan Alam dalam Pemikiran Islam, Sains dan Al Qur'an* dalam Moh. Ali, "Konsep Alam Semesta Menurut Al-Qur'an dan Implikasinya bagi Pendidikan Islam", dalam *Fikruna*, Vol. 1, No. 1, (Palu: Sulteng Center, 2012), 173

¹² Sirajuddin Zar, "Konsep Penciptaan Alam dalam Pemikiran Islam, Sains dan Al Qur'an dalam Moh. Ali, Konsep Alam Semesta Menurut Al-Qur'an Dan Implikasinya Bagi Pendidikan Islam", *Fikruna*, Vol. 1, No. 1, (Palu : Sulteng Center Press, 2012), 173

¹³ Seyyed Hossein Nasr, *an Introduction to Islamic Cosmological Doctrines*, (USA: Thames and Hudson, 1978), 53

Semantically in the view of Islam, there are a conceptual relation between science ('ilm), nature, and Allah as *al-Khaliq*. The word 'ilm which comes from the root word 'alima' contains the meaning of 'alamah, which means 'sign'. Rosenthal admits, that the general concept of science ('ilm) has succeeded in developing from a concrete process relating to the "way sign".¹⁴ Al-Raghib al-Ashfahani explains that 'âlam is *al-atsar alladzi yu'lamu bihi ash-shai'* (a trace by which something becomes known). Thus, Nature is a clue or sign. It is also a word used in Arabic to show the word 'flag'¹⁵. The flag is a symbol or emblem that shows a representation of what it represents, such as a country, group, army, and others. This also applies to nature. Where it is a sign that refers to the existence of an external power that is the designer.

Thus it becomes clear, the relationship between 'âlam and 'ilm, which in Bahasa was called the Universe or the Cosmos. The Universe not only includes objects outside of humans but also includes humans themselves. In Islam, the terms 'âlam *as-shagîr* (microcosmos) and 'âlam *al-kabiir* (macro cosmos) are known.¹⁶

Meanwhile, contemporary Muslim intellectual, Alparslan Acikgenc said that there are two types of nature in the Islamic worldview, namely the *shahadah* nature (visible) and the unseen realm (invisible).¹⁷ This division was often expressed in the Qur'an, to confirm the existence of these two worlds. Those can be seen in Q.S. Az-Zumar: 46, al-Mu'min: 92, al-Hashr: 22, and at-Taubah: 105. Nature of *Shahadah* (material realm or *Tabi'i*) is everything possible to be perceived by the senses such as humans, animals, plants, water, and other inanimate objects, as well as the whole of heaven and earth. This nature is known through human observation and investigation by using the means of reason and the faculty. The second type is a realm that is beyond the ability of the faculty to perceive it, such as angels, jinn, demons, devils, heaven, hell, and others. No one knows it except Allah SWT. There is no command of Allah to investigate this realm directly. Because its existence is only absolutely known through

¹⁴ Franz Rosenthal, *The Knowledge Triumphant; The Concept of Knowledge in Medieval Islam*, (Belanda: Brill, 2007), 10

¹⁵ 'Alam among means : banner ; flag ; standard, (Lihat: <http://www.almaany.com>, diakses Selasa, 26 Januari 2016, Pkl. 11.31 WIB)

¹⁶ Usep Mohammad Ishaq, *Menjadi Saintis Muslim...*, 21

¹⁷ Alparslan Acikgenc, *a Concept of Philosophy in the Qur'anic Context*, dalam Wendi Zarman, *Konsep Alam dan Sains dalam Pandangan Islam*, Bahan Kuliah Islamic Science Up to 1500 CE, (Jakarta: INSIST, 2016), 37

revelation.¹⁸ Rejection of that was a form of denial that results in the collapse of a personal faith system.

Although these two realms are different, they are inseparable. Both are closest connected. On the other hand, natural phenomena are not something that results from a chain of cause and effect that comes from the realm of the *shahada* alone, but also have a connection with the invisible world. For example, Allah sends down rain, angels bring sustenance, disasters come because of immorality, and so on. This shows how the world of *shahadah* cannot be separated from the aspect of the invisible world.¹⁹

As the basis for the philosophy of Islamic education, al-Toumy al-Syaibani explains the basic principles of the Islamic view of the Universe, one of which is that the universe and all of its contents are constantly changing according to Allah's willing.²⁰ Al-Faruqi said that in Islam, nature is a creation and grace. As a creation, it is teleological, perfect, and regular; as a grace, it is a sinless good made available to humans. Its purpose is to enable humans to do kindness and achieve happiness. These three assessments are the main features of the Islamic worldview.²¹

Furthermore, Al-Faruqi explained that the Tawhid that underlies the Muslim mind requires him to see God's actions in every object and event, he follows the divine initiative because it comes from God. For divine initiative in oneself or society means studying humanity and the social sciences. In the eyes of a Muslim, nature is a stage of life that is moved by God's commands and actions.²² The Tawhīdī worldview considers God to be the only eternal cause of everything, even the cause of causes (*musabbibul asbâb*). Whereas according to Nursi, *Tawhid-I Rububiyah* leaves no room for causes to play any role in the creation of beings. They are just the veil on which the Divine names are manifested. Giving causes any role beyond being a passive receptor of Divine manifestation is a form of partnership with God. Since Tawhīd denies all forms of partnership, including effective causation, it is

¹⁸ Wendi Zarman, *Konsep Alam dan Sains dalam Pandangan Islam...*, 37

¹⁹ Wendi Zarman, *Konsep Alam dan Sains dalam Pandangan Islam...*, 38

²⁰ A complete description of the ten principles can be seen in al-Toumy al-Syaibani, *Falsafah al-Tarbiyyah al-Islamiyyah* (Falsafah Pendidikan Islam), Terj. Hasan Langgulung, (Jakarta: Bulan Bintang, 1979), 55-100 dalam Moh. Ali, "Konsep Alam Semesta Menurut Al-Qur'an Dan Implikasinya ...", 176-177

²¹ Ismail R. al-Faruqi, *Tauhid*, Terj. Rahmani Astuti, (Bandung: Pustaka, 1995), 51

²² Ismail R. al-Faruqi, *Tauhid...*, 51

important to understand the role of causes at a phenomenal level. In the realm of *malakût* (transcendental realm), Divine power is the cause of everything.²³

From this *Tawhidi* worldview, the conception of nature was also seen in an integrative way. Whereas nature is not only composed of quantitative material, but also qualitative material. The universe is a symbol of a higher level of reality.²⁴ The structure of the Universe contains a spiritual message for humans. The Universe is a revelation whose origin is the same as knowledge itself. Both are manifestations of the *universal intellect*, the *logos*, and the universe is an integral part of the whole universe.²⁵ Therefore, the purpose of science in Islam is to show the unity of the Universe, namely the interconnectedness of all its parts and aspects. So science should endeavor to study all the various aspects of the Universe from a solid and unified point of view.²⁶

In Islam, the inseparable relationship between man and nature, as well as between the natural sciences and religion, can be found in the Qur'an itself. According to Hossein Nasr, the Divine Book is the 'Logos' or 'Word of God'. Thus, the Book is a source of revelation which is the basis of religion and it is also a piece of macrocosmic information (news) which is the universe. Both in the sense of 'al-Quran collections' (*al-Qur'an al-Tadwin*) and 'al-Quran creations' (*al-Qur'an al-Takwin*) which contain 'ideas' or basic patterns of everything. That's why the term used to denote verses of the Qur'an or *Ayah* also means events that occur in the human psyche and phenomena in the natural

²³ Necati Aydin, *Said Nursi and Science in Islam; Character Building Through Nursi's Mana-i Harfi*, (New York, Routledge, 2019), 171

²⁴ al-Attas provides the presupposition of the concept of nature in Islam in the view of Islam. That nature can be likened to a 'sign' or a guide. If we drive a car to get to the intended destination, then the way is to read the signs listed on the side of the road. If we recognize the signboard and know the purpose indicated by the sign, then we will then leave the board and move to the direction indicated by the road sign. The board is not important to beautify, what is important is the information from what the board shows can be conveyed properly. On the other hand, if the board is decorated with beautiful carvings, covered with gold and gems, but we do not know the meaning of the sign, then the sign is useless. This assumption is to show how the comparison between nature in Islamic and western concepts. Lihat: Syed Muhammad Naquib al-Attas, *Islam, Secularism and the Philosophy of Future*, dikutip dari Syed Muhammad Naquib al-Attas, *Islam dan Filsafat Sains*, Terj. Saiful Muzani, (Bandung: Mizan, 1995), 58-59

²⁵ Humaidi, *Paradigma Sains Integratif al-Farabi*,... 247

²⁶ Osman Bakar, *Tauhid dan Sains*, Terj. Yulianto Liputo dan LM Nasrullah, (Bandung: Pustaka Hidayah, 2008), 151

world.²⁷ For this reason, the Qur'an could become the foundation for the development of science. Since Qur'an contains acceptable statements for science because those are rational statements.²⁸

Even more, Mathematics which is dubbed the *Queen of Science*, in the view of Islam, is both quantitative and qualitative science.²⁹ That is why Ikhwan as-Safa confirms that the final aim of geometry is to permit the faculties of the soul to reflect and meditate independently of the external world so that finally it wishes to separate itself from this world to join, thanks to its celestial ascension, the world of the spirits and eternal life³⁰.

When viewed as related to spiritual knowledge, the numbers are not merely quantitative entities that can perform arithmetic operations in the form of addition, subtraction, multiplication, and division itself. The numbers in their qualitative aspect are spiritual images in the human soul as a result of the repetition of unity. Even Islamic scientists, such as al-Faraby, Ikhwan as-Safa, and Qutbuddin as-Sirazi view that mastery of mathematics cannot be ruled out to have proper knowledge of spiritual truth.³¹ That is why Osman Bakar believe that the Muslim aware of their approach to nature to do research the forces, energies, and wrote mathematical, and scientific, treatises to unlock the secrets of nature which they regarded as another form of divine revelation. The laws of nature were, to them, divine laws.³²

Furthermore, al-Kailani mentions that the science of natural laws begins with the right application of devices such as hearing, sight, and reason. And this commandment is mentioned in the Qur'an Surah al-Isra verse 36 : *And do not follow whatever you do not know of. Verily, hearing, sight, and heart, all of which will be held accountable.* Al-Kailani

²⁷ *In Islam the inseparable link between man and nature, and also between the sciences of nature and religion, is to be found in the Quran itself, the Divine Book which is the Logos or the Word of God. As such it is both the source of the revelation which is the basis of religion and that macrocosmic revelation which is the universe. It is both the recorded Quran (al-Qur'an al-tadwin) and the 'Quran of Creation (al-Qur'an al-takwin) which contains the 'ideas' or aschetypes of all things. that is why the term used to signify the verses of the Quran or ayah also means events occurring within the soul of men and phenomena in the world of nature.* (Seyyed Hossein Nasr, *Man and Nature*, (London: Unwind Paperbacks, 1990), 94-95)

²⁸ Tisna Amidjaja, *Ilmu, Iman dan Amal*, (Bandung: Pustaka ITB, 1983), 75

²⁹ Osman Bakar, *Tauhid dan Sains...*, 151

³⁰ Seyyed Hossein Nasr, *Introduction to The Cosmological Doctrines in Islam...*, 49

³¹ Osman Bakar, *Tauhid dan Sains...*, 153

³² Syed Khairudin Aljunied, *Osman Bakar And Epistemological Renewal In The Muslim World*, Volume 27, Number 1 Al-Shajarah, (Malaysia : ISTAC IUM Press, 2022), 3

relates this verse to the science that,

وكما يجب علي كل فرد أن يستعمل هذه الأجهزة الثلاثة لنجاته في الآخرة فإنه
يجب علي البشرية و علي الدوام ان تتدرب علي حسن استخدام هذه الأجهزة
لنجاتها في الحياة الدنيا. والتدريب علي حسن هذه الإ استخدام هو وظيفة التربية
الصحيحة³³

And just as every individual must use these three tools for success in the hereafter, it is also obligatory for humans to hone and use them with good application to gain success in the life of this world. And the honing of these devices is the duty and responsibility of true education.

Thus the purpose of *at-Taskhir* is for humans to understand the provisions of Allah, knowledge, and the Absolute Grace of Allah. And the results of the *at-Taskhir* are none other than technology products.³⁴ From these philosophical bases, in implementation, science education in Islam is distinctive. Thus, from in Islamic perspective, teaching science is not only about discussing the phenomenal world from the cause-effect perspective and how to make it beneficial for human life, but also, which is the most important one, inculcating the values of religion. Furthermore, for realizing this purpose, the science teaching method will be slightly different from current practice. In this sense, teaching science should not be separated from teaching God's revelation (al-Qur'an and Hadits) since both science and revelation are complementary to each other.³⁵

Hence, it is understandable that science education is at least directed at the following three things. First, inculcating faith in students by explaining the pillars of faith. Cultivating faith in Allah SWT by explaining the existence of God as creator (Q.S. Al-Nur: 45). Second, introducing some Islamic jurisprudence relate to nature. Third, introducing Islamic manners and instructions relate to nature, both general and specific.³⁶

Therefore, Science Education in Islam sees an integration

³³ Majid Irsan al-Kailani, *Falsafatu at-Tarbiyah al-Islamiyah...*, 116

³⁴ Majid Irsan al-Kailani, *Falsafatu at-Tarbiyah al-Islamiyah...*, 116

³⁵ Wendi Zarman, *The Concept of Nature in Islamic Science Teaching*, AIP Conference Proceedings, (International Seminar on Mathematics, Science, and Computer Science Education, 08 February 2016), 3

³⁶ Wildan Faroz *et al*, *Bahan Ajar Sains Berbasis Nilai-nilai Islam (Studi Kasus Buku Tematik Terpadu Kelas 2 SD Tema 6)*, Vol. 14, No. 2, *Tawazun*, (Bogor : UIKA, 2021, 114)

between *dhikr* and thinking so that learning is charged with inculcating good values and manners. On the one hand, *dhikr* towards the Creator combined with thinking about His creatures can lead students to become servants of God who are grateful and admire the verses of *Kauniyah* that are spreading in nature widely. This is a continuation of the paradigm of the relationship between science and religion from an Islamic perspective. Where science has the same metaphysical basis as religion, namely to reveal God's verses. The impetus behind the investigation of the universe is an inseparable part of the experience of faith and science.³⁷

It was also agreed by Zaidi,

The various objects in the World of Nature which it seeks to study and investigate are not to be tread as mere things to which one may do as one wishes because such objects, being the various signs of God, they are never existentially and epistemologically independent from him.

The other implication concerns science as an epistemic act, as a disciplined act of reading and thinking with method(s) suitable to the cosmos conceived as such. In the Islamic intellectual and scientific tradition, the Cosmos is often regarded as the Created Book, somewhat analogous to the Qur'an as the revealed book.³⁸

This is based on the cues of the holy book al-Qur'an which contains many suggestions for studying, such as the command that we read (*iqra'*), make observations, (*afala yarawna*), exploration (*afala yandhuruna*) and expeditions (*siiru fi-al ardi*), conduct 'inference to the best explanation' - in terms of contemporary philosophy of science - and rational scientific thinking (*li qawmin ya'qilun, yatafakkarun*). In short, similar messages essentially condemn dogmatic attitudes or 'acceptance'. On a practical level, this doctrine has a very positive impact. He encourages and accelerates the creation of a knowledge society and a knowledge culture. That Islam places emphasis on the importance of knowledge to achieve true happiness ('here' and 'there'), and not just to fulfill socio-economic needs (self-aggrandizement or

³⁷ Chanifudin *et. all*, Integrasi sains dan islam dalam Pembelajaran, *Asatiza*, Vol 1, No. 2, (Bengkalis: STAIN, 2020), 226

³⁸ Mohd. Zaidi b. Ismail, "The Nature of The Cosmos and Its Implications On Science Education", *Educational Awakening*, Volume 5 Number 1, (Malaysia: IIUM, 2008), 115

personal gain).³⁹

Basically, aspects of epistemology; objects of knowledge, and sources of knowledge, have direct or indirect implications for the whole building of educational philosophy.

Next, the author will describe the implications of Stephen Hawking's atheist view on science theoretically in this research on modern education in Indonesia, or philosophical discourse on the education component, starting from implications to aim of education, curriculum, methods, and evaluation.

The Implications of Stephen Hawking's Atheis View on Science to The Modern Education

1. Implication to Aim of Education

The main purpose of science, including physics, is generally considered to be an attempt to find order in human observations of the natural surroundings.⁴⁰ While Hawking said that the ultimate goal of science is to describe the entire universe.⁴¹ The short-term goal of Physics is the formulation and discovery of a complete, consistent, integrated theory in which all physical interactions are described in a set of equations.⁴²

If we look at a reductionist view of science, the purpose of learning, especially science is oriented to the development of science itself. In Latin *scientia gratia scientia*. That is, the philosophical foundation of Science has been removed from its original intention as an attempt to understand reality (truth) and is only aimed at satisfying curiosity.⁴³ Western scientific methods of inquiry depend entirely on empirical, rational, and perceive principles, and tend to be materialistic. He also ignores and despises the way of obtaining knowledge through revelation and scriptures.⁴⁴

³⁹ Syamsuddin Arif, "Sains dalam Perspektif Islam", *Tawazun*, Vol 1 No. 1, (Bogor: PPs UIKA, 2008), 40

⁴⁰ Douglas C. Giancoli, *Fisika*, Terj. Yuhilza Hanum, (Jakarta: Erlangga, 1998), 2

⁴¹ Stephen Hawking, *a Brief History of Time; Sejarah Singkat Waktu*, Terj. Zia Anshor, (Jakarta: Gramedia Pustaka Utama, 2013), 11

⁴² *The immediate goal of physics is a complete, consistent, unified theory in which all physical interactions are described by one set of equations*. Lihat: Michael White dan John Gribbin, *Stephen Hawking; A Life In Science*, (Washington D.C.: The Joseph Henry Press, 2010), 253

⁴³ Usep Mohammad Ishaq, *Menjadi Saintis Muslim*, (Depok: Indie Publishing, 2014), 2

⁴⁴ Rosnani Hashim, "Gagasan Islamisasi Ilmu Pengetahuan Kontemporer; Sejarah, Perkembangan, Arah dan Tujuan", *Islamia*, Tahun 1 No. 6, (Jakarta : INSISTS, 2005), 34

Finally, the religion-free of the scientific method has shown how Western scientists are knowledgeable and do not have qualities linearly to their religion. In a survey of members of the National Academy of Sciences in the United States, only 7% expressed “personal belief” in “God in human intellectual and affective communication.” Surveys conducted by Leuba in 1913 and 1933, showed that the level of belief in God and the immortality of the soul among top scientists had declined significantly during the 20th century. Some of the world’s most prominent public intellectuals and scientists have rejected traditional religious beliefs: Albert Einstein, Richard Feynman, Carl Sagan, James Watson, Francis Crick, Steven Weinberg, Murray Gell-Mann, Andrei Sakharov, Richard Dawkins, E.O. Wilson, Stephen Jay Gould, Steven Pinker, Donald Johanson, Richard Leakey, and others.⁴⁵

This is different to Islam totally, since the purpose of education is directed to realization of the perfect human (*insan kamil*), namely humans whose feelings and intentions are based on Islamic teachings.⁴⁶ In line with that, al-Attas claims that the “Purpose of Seeking Knowledge in Islam is to inculcate goodness in man as man and individual self”. Furthermore, al-Attas explained that “the end of education in Islam is to Produce a good man, and not – as in the case of Western Civilization – to produce a good citizen”.⁴⁷

Meanwhile, according to Mohammad Natsir, “The purpose of education is an effort to devote oneself only to Allah. The purpose of education is the purpose of life”.⁴⁸ An-Namiry al-Qurthuby (463 H./1070 M.) explains the purpose of education with the phrase: Seek knowledge, because science is a helper in religion (religious purposes), sharpens the brain (scientific purposes), friends when alone (society), is useful in assemblies (society) and attracts property (material purposes).⁴⁹ The same thing was explained by al-Ghazali⁵⁰ as quoted

⁴⁵ Austin Dacey, *Evolution Education and the Science-Religion Conflict: Dispatch from a Philosophical Correspondent* dalam Ariela Keysar and Barry A. Kosmin, *Secularism & Science In The 21st Century*, (Hartford: Institute for the Study of Secularism in Society and Culture, Trinity College, 2008) 54-55

⁴⁶ Lihat : Abuddin Nata, *Pemikiran Pendidikan Islam dan Barat*, (Depok: Raja Grafindo Persada, 2012), 209-210

⁴⁷ Lihat: S.M.N. al-Attas, *The Concept of Education in Islam*, (Kuala Lumpur: ISTAC, 1999), 22

⁴⁸ M. Natsir, *Capita Selecta I*, Cet. IV, (Jakarta: Yayasan Bulan Bintang Abadi, 2008), 86

⁴⁹ Mahmud Yunud, *Sejarah Pendidikan Islam*, (Jakarta: Mahmud Yunus Wadzurriyah, 2008), 48

⁵⁰ At the times of al-Ghazali, the developers of science were categorized into three

from Hannan Hasan,

For al Ghazzali, the purpose of all learning is to pave a way to knowledge and love of God... Therefore, the first step of education is to awaked the soul's consciousness that forms a source of power and happines, the consciousness that he is weak and inferior before the greatness of the Supreme Being-Only, an only, Him.⁵¹

Wendi Zarman explained that the results of contemplation and research on nature have at least two main objectives. First, spiritual goals (*ruhaniyah*), to ensure natural patterns could be understood as humans affordable to maintain their lives from any difficulties. Second, cultivating benefits from nature. both goals are an inseparable unity and must go together, because the second goal serves to perfect the first goal, and vice versa. When humans research nature to explore the benefits of nature, then it would be the way to be more grateful to Allah, because of all of the benefits he has obtained through His helping. Likewise, when researching nature, humans use it as a means to get closer to God, so that the right attitude would be conducted in utilizing nature.⁵²

Therefore, al-Kailani emphasizes the relationship between nature and humans which is out of the true orientation of Islamic Philosophy of Islamic Education which will cause the *taskhir* concept to reverse from the use of nature by humans, to become a disaster for humans.

وتحذر فلسفة التربية السلامية تحذيرا شديدا من الخروج علي علاقة التسخير مع الكون والخروج بها عن أهدافها وغاياتها. لأن الخروج علي الغاية والأهداف يجعل علاقة التسخير تنقلب (علي) الإنسان بعد أن كانت (له).⁵³

And the Philosophy of Islamic Education gives a stern warning about "at-Taskhir's" relationship with nature and disorientation from its true goals and achievements. Because of the disorientation of goals and actual achievements, the "at-Taskhir" relationship (exploration, utilization) turns into exploitation (extortion).

groups, namely: Materialists, Naturalists, and Theists. Philosophers who are classified as materialists do not believe in God the Creator, and consider this nature to exist by itself. Naturalist philosophers, still believe in God the Wise Creator, but do not believe in the existence of the afterlife. Lihat: Ahmad Baiquni, *Al-Qur'an dan Ilmu Pengetahuan Kealaman*, Cetakan I, (Yogyakarta : PT Dana Bhakti Prima Yasa, 1996), 77

⁵¹ Mohammad Hannan Hasan, "Educating Man: A Sketch On the Aims of Islamic Education", *Educational Awakening*, Volume 4, Number 2W, (Malaysia: IIUM, 2007), 190

⁵² Wendi Zarman, *Konsep Alam dan Sains Menurut Pandangan Islam*, Bahan Kuliah Islamic Science Up to 1500, *Makalah*, Jakarta: INSISTS, 2016, 45

⁵³ Majid Irsan al-Kailani, *Falsafatu at-Tarbiyah ...*, 164

Therefore, research and investigation of the nature must be *Bismi Rabbik*, or in other words, it must be of *Rabbany* value. So that knowledge – which in reality today is “value free”, must be given *Rabbany* values by Muslim scientists.⁵⁴ As a result, the development of science is possible to be carried out without having an impact on epistemological anarchism. Even further, philosophy is considered no longer able to answer the challenges of modern science. Stephen Hawking mentions, “... but philosophy is dead. Philosophy has not kept up with modern developments in science, particularly physics. Scientists have become the bearers of the torch of discovery in our quest for knowledge.”⁵⁵

Although assessed by an Oxford Mathematician, John C. Lennox that the expression is very shallow. He states,

The very first thing I notice is that Hawking’s statement about philosophy is itself a philosophical statement. It is manifestly not a statement of science: it is a metaphysical statement about science. Therefore, his statement that philosophy is dead contradicts itself. It is a classic example of logical incoherence.⁵⁶

This description shows that science has ability to provide information about the intricacies of organisms, but no ability to answer the purpose and meaning of human existence. Science can tell humans how to get to where we are in this present as biological organisms, and it can predict where we are going later in the biological sense. But science cannot tell humans if there is a purpose to our existence and where we might be going in that sense.⁵⁷

2. Implications to Education Curriculum

According to Ibn Sina, the hierarchy of knowledge was arranged based on two points of view. First, in terms of the essence and object of discussion, which are further divided into three groups, namely *al-‘ilm al-ilahi* (Divinity), *al-‘ilm al-riyadhi* (Mathematics), *al-‘ilm al-thabi’i* (Natural Science). The essence of the study and the object of the study of divinity is a revelation, the essence of the study of mathematics

⁵⁴ Quraish Shihab, *Wawasan Al-Qur’an*, (Bandung: Mizan, 2003), 440

⁵⁵ Stephen Hawking, *The Grand Design...*, 1

⁵⁶ John C. Lennox, *God and Stephen Hawking*, (Oxford: Lion Hudson, 2011), 12

⁵⁷ William Reville, *Is Science Replacing Religion?* (http://undersci.ucc.ie/wp-content/uploads/sites/12/2014/11/science_replacing_religion.pdf) (Diakes 5 Maret 2016, Pukul. 12.45 WIB)

and natural science is rationality and natural phenomena. The second category is according to the urgency of mastery. Ibn Sina divides into three groups, namely *al-'ilm a'la* (Highest Science), *al-'ilm awsat* (Middle Science), *al-'ilm al-asfal* (Bottom Science). The highest science is the science of divinity, the middle science is mathematics and the lowest science is the natural science, which deals with empirical objects.⁵⁸

Muslim scientists view the classification of knowledge as a road map and a world map that is on its way. Even further, the classification is the arrangement of the hierarchy of existence from the highest level, namely God, to the lowest level. Al-Farabi who believes in the existence of a hierarchy of existence, then science must be arranged based on that hierarchy. The higher the position of the object of knowledge, the higher the degree of glory. Therefore, the study of divinity concerning tawhid is the highest knowledge.⁵⁹

In this case, the Islamic scholar, Ibn al-Qayyim put the highest knowledge, as the knowledge of Allah. He mentions in *al-Fawa'id* that the glory of a scientific discipline depends on the glory of its object and the level of human need for that object. Such knowledge is none other than the knowledge of Allah and its branches. And the disaster of science is if a scientific discipline is not following the will of Allah in matters of religion, namely the will that He loves and is pleased with.⁶⁰

According to al-Attas, the basis of the preparation of the university curriculum should be the concept of the human self. Because in Islam, the purpose of seeking knowledge is fundamentally to be a good man, and not a 'good citizen' of a secular state. The education system must be in the reflection of Islam, not the reflection of the state. The highest and most perfect embodiment of the educational system is in the university; and because it is the highest and most perfect systematization of science to reflect the universe, it is also a reflection of not ordinary man, but universal and perfect man (*insan kamil*)⁶¹. Humans are considered as '*alam shagir* (micro cosmos) and '*alam kabir* (macro cosmos), reflecting good man (*insan kamil*) therefore the university must reflect the holy Prophet in terms of knowledge and right action.⁶²

⁵⁸ Kadar M. Yusuf, *Konstruksi Ilmu dan Pendidikan*, (Jakarta: Amzah, 2015), 62

⁵⁹ Lihat: Humaidi, *Paradigma Sains Integratif ...*, 70-74

⁶⁰ Ibn al-Qayyim, *Fawa'id al-Fawa'id*, (Jakarta: Pustaka Imam Syafi'i, 2013), 353

⁶¹ S. M. N. al-Attas, *The Concept of Education ...*, 38-39

⁶² S. M. N. al-Attas, *The Concept of Education ...*, 39

The secular education curriculum applied in various Islamic educational institutions causes the disintegration of knowledge. As a result, the sciences are divided without a unified relationship in the view of *Tawhidi*. Therefore, sometimes many Islamic Educational Institutions then freely adopt concepts and sciences without filtering them in the view of Islam. The next impact is the dis-orientation of educational aims, which in the end graduates from general science institutions do not have an adequate understanding of the Islamic religion. Meanwhile, graduates of Islamic boarding schools or madrasas tend to be left behind in mastering modern sciences such as applied science and technology.

The next impact is that prospective majors - to get a job - are more desirable than normative majors like revelation and religious studies. Medical sciences, engineering, and natural sciences are more in demand than majors in the Qur'an, Hadith, Sharia, and others.

Therefore, based on this statement, the sciences related to God should be placed in the highest and most obligatory position among the other sciences. Not a conception like *God of The Gaps*⁶³ as understood by the majority of secular scientists.

According to al-Attas, the concept of Science developed in the curriculum of Western universities departs from different epistemological definitions. The reason, is that the concept does not reflect a perfect human. He stated that the human being developed in the university no longer reflects the human personality which does not have a very important and fixed center. Likewise, its development is not guided by an ultimate principle and obvious goal, except for the relative principle that encourages the relentless pursuit of knowledge and an obvious goal.⁶⁴

What happens if such a hierarchical structure is ignored is what are occur in Hawking's science. He placed Mathematics as an instrument of natural science and removed the metaphysical view of the scientific framework in his cosmology. If so, there will be chaos in the order of knowledge in education, because knowledge of God is placed no more important and necessary than natural science and mathematics. In fact, if the curriculum structure applied in various educational institutions with the epistemological construction as above,

⁶³ *God of The Gaps* interpreted by John C. Lennox as a placeholder for human ignorance (*God and Stephen Hawking...*, 12)

⁶⁴ S. M. N. al-Attas, *Islam dan Sekulerisme*, (Bandung: PIMPIN, 2010), 195

then the naturalist-scientist-atheist does not need to be discompose. As in the western world, where the constitution 'prohibits' religious teaching in official schools.

Even though, science and religion should have inter-complementary. Good science is science that can support worship. If science separates between the heart and God, then it is a deviation. Likewise, religion is a force capable of propelling humans to reach dimensions not attained by science. Religion can act as a basic morality for the development of science and technology so as not to bring havoc.

However, as a result of differentiation, metaphysically science began to be separated from morals. Based on the object, the natural sciences and social sciences are distinguished. From this one branch of science, it is estimated that more than 650 branches of scientific disciplines will develop. This more detailed distinction gives rise to more specific skills. The shrinking plot of each scientific discipline does not cause problems, because, in real life, the problems faced are so many and complex. Therefore, according to Jujun S. Sumantri, an inter-disciplinary approach is needed, even a necessity, with a note without obscuring the autonomy of each scientific discipline that has developed based on its respective routes. He proposes creating a new paradigm.⁶⁵

This is in line with Thomas Kuhn's analysis. Where, Kuhn shows that the development of science is not linear, homogeneous, and rational. Kuhn sees that science develops through a scientific revolution by dismantling old paradigms and replacing them with new ones. Where the paradigm shift in the history of science does not fall within the logical realm of natural laws but occurs like the process of "metanoia" (repentance) in religion that occurs in the Western intellectual tradition.⁶⁶

3. Implications to Education Methods

As a result of the epistemological reduction, knowledge will be restricted to rational-empirical aspects. Therefore the education method will experience so many reductions. The educational process will be reduced to just a transfer of knowledge, not a transfer of value. The Teacher Center Oriented approach to learning is considered classic

⁶⁵ Jujun S. Sumatri, *Filsafat Umum*, (Jakarta: Pustaka Sinar Harapan, 2013), 102-103

⁶⁶ Lihat: Mohammad Muslih, "Problem Keilmuwan Kontemporer dan Pengaruhnya terhadap Dunia Pendidikan", *Tsaqafah*, Volume 8 Nomor 1, (Ponorogo: ISID Gontor, 2012), 40-41

learning, and is not in accordance with future educational needs. Because what is meant by education is the discovery of scientific ideas, scientific attitudes, and scientific methods, not doctrines and intuitive passages. Education with the *qudwah* method was never included in the RPP (Rencana Pelaksanaan Pembelajaran: Lesson Plan), because it stems from the assumption that what is taught is intellectually honing material, not moral lessons.

In the West, this has become one of the problems of science teaching. David E. Henderson, in his article entitled *Implementing Methodological Secularism: The Teaching and Practice of Science in Contentious Times*, mention

A final problem with science teaching is that most science courses avoid the moral implications of the science they teach, and discourage students from asking questions about science and morality. As a result, science majors rarely encounter the larger issues of morality, ethics, or global responsibility.⁶⁷

Science education which dichotomizes the manner-moral aspect makes Science Education in the West only oriented to science itself. Even further, science that is reduced to secular epistemology can lead to scientism which limits knowledge to the logical-empirical aspect alone. It is a matter of great concern in science education in the West itself. Because scientism is considered to be a penetration of neo-liberal ideology that is permeated in the concepts of modern education. In its implementation, scientism applies scientific methods and practices to explain all elements of the human experience, including teaching and learning.⁶⁸

Whereas scientism itself was criticized by John C. Lennox himself. In his book, *God's Undertaker; Does Science Buried God ?*, He claims,

Scientism does not refuted by external argument: it self destructs. It suffers the same fate as in earlier times did the verification principle that was at the heart of the philosophy of logical-positivism. For the statement that only science can lead to truth is not itself deduced from science. It is not a scientific statement but rather a statement about science, that is, it is a metascientific statement.⁶⁹

⁶⁷ David E. Henderson, *Implementing Methodological Secularism: The Teaching and Practice of Science in Contentious Times*, Ariela Keysar and Barry A. Kosmin, *Secularism & Science ...*, 108

⁶⁸ Emery J. Hyslop-Margison dan M. Ayaz Naseem, *Scientism and Education; Empirical Research as Neo-Liberal Ideology*, (Canada: Springer, 2007), 105

⁶⁹ John C. Lennox, *God's Undertaker; Does Science Buried God ?*, England: Lion Hudson Plc, 2009, 42

Thus, according to the view of Islamic Education, in learning science, for example, it requires in-depth linking and explanations in teaching with the *Tawhid* paradigm that combines and integrates intellectual competence and develops morals. This is part of the competence in *tafakur*. Where *tafakur* is related to the ability to actualize the potential of reason in understanding the universe (*al-kawn*).⁷⁰

The association or integration of the verses of the Qur'an with scientific theories does not have to be limited to those of the material world, but must also involve supra-rational beliefs related to faith values. Although a verse of the Qur'an cannot be physically proven, but when it is confirmed in the revelation and is a definite *dilalah*, then the truth of it also becomes absolute. This will prevent students from being influenced by scientism, which believes that only something scientifically proven can be accepted as truth.⁷¹

4. Implications to Evaluation of Education

If Education adopts the atheist view on Science, the measure of student success is only quantitative. The development of students is only directed at the extent to which cognitive abilities marginalize competencies that are metaphysical and not following secular epistemology. So that, dualism is created between the aim of science education and moral education in the process of learning science. As a result, learning science does not contribute to the formation of a positive attitude morally, and socio-emotionally. Vice versa.

The role of education is to prepare humans to understand the relationship between life and exams and their phenomena and rules, as well as provide a deep understanding of the problems of life exams, to touch the emotional side of students so that they are manifested in their attitudes and orientations in every condition.⁷²

In Islam, education is not only *ta'lim* but *ta'dib*. Education does not only transfer knowledge but also renders a better personality. Ikhwan as-Safa said that when studying the universe, none other than to train the soul and improve morals, *al-mausumah bi al-sama' wa al-'alam fi islah*

⁷⁰ Meri Fitrah et. all, "Pemikiran Pendidikan Yusuf Al-Qardhawi dalam Kitab *Al-'Aql Wa al-'Ilm Fi Al-Qur'an*" dalam *Tawazun*, Vol. 15 No.1, (Bogor: UIKA, 2022), 13

⁷¹ Wendi Zarman, "Studi pengembangan Buku Teks Ilmu Pengetahuan Alam Sekolah Menengah Pertama Berbasis Nilai Keimanan", *Disertasi Doktotal*, (Bogor: PPS UIKA Bogor, 2012), 134

⁷² Majid Irsan Al Kilani, *Falsafatu At-Tarbiyah Al-Islamiyah...*, 199.

al-nafs wa tahdzib al-akhlaq.⁷³

Therefore, the teachings of creation are fundamental in the structure of Islamic believability. Islam interprets the universe as a gift created freely by a powerful, loving, and personal "Creator". In other words, this cosmos is not something that comes from itself, but a product of transcendent goodness that is created from nothing (*ex-nihilio*).⁷⁴

Conclusion

From the explanation of the implications of Stephen Hawking's atheist view on science in modern education, it can be concluded that some critical aspects need to be corrected according to the Philosophy of Islamic Education.

Stephen Hawking's atheist view of science has implications for several things in modern education in Indonesia. Among them, in the aim of education, with the wrong concept of nature, the vision of reality and truth in interpreting the aim of education will also be wrong. In Islam, the purpose of education is to form a good man. Meanwhile, in the curriculum, education which is built from reduced epistemological concepts overrides the hierarchy of knowledge and ontology. As a result, there is equalization and even marginalization of metaphysical or normative science.

Likewise, in the field of curriculum, it is necessary to design a curriculum based on the division of knowledge according to scholars and intellectuals which implies a hierarchy, so that there is no broad penetration that could adversely affect the concepts and scientific structures of students. The curriculum must be holistic and includes all aspects of the real human self.

Thus will be achieved what is mentioned by al-Kailani as *at-Taskhir*. Nature was subdued by God for man. And nature is recognized to open deeper and deeper confidence in the vastness of God's grace. Because nature is a means to worship Allah.

In the aspect of the method, the atheist view on science will prevent science education from touching the moral-religious side. So that according to the view of the Philosophy of Islamic Education, in-depth linking and explanations are needed in teaching with the *Tawhid*

⁷³ Lihat: Ikhwan as-Safa, *ar-Rassail*, dalam Humaidi, *Paradigma Sains Integratif al-Farabi*, 35

⁷⁴ John F. Fought, *Perjumpaan Sains dan Agama; dari Konflik ke Dialog*, 167

paradigm that integrates intellectual competence and develops morals in the fields of study of the natural sciences.

In addition, the next implication of the epistemological reduction is on the evaluation of education which emphasizes the cognitive aspect and tends to ignore the moral and *adab* aspects. Due to the complexity in the measurement or quantification of morality. After all, in Islamic Education Philosophy, implementation of the value is the key to the discipline.

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