Qur’anic Worldview and the Natural Sciences: An Ülū Al-Albāb Integration Framework for Islamic Secondary Schools

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Abstract

For the Muslim ummah, the issue of integration in education has been a major concern since the post-colonial period, as the events that transpired during this period left Muslims with the legacy of a dichotomous education. In turn, this type of education results in disharmonies in the person, family, society and the environment. Yet post-modern trends are opening up opportunities for non-conventional alternatives as solutions. This article presents the major rationales for integrating the Qur’anic worldview and the natural sciences. It touches upon the fundamental elements of the Qur’anic worldview in relation to the studies of nature, specifically the notion of “reading” the two Books of Allah (i.e. al-Qur’ān and the Open Book of the Cosmos) as well as humanity’s relation with Allah, with itself and with the cosmos. This article briefly discusses the worldviews that have brought about the natural sciences to their current pedestal, the ensuing environmental and humanitarian crises of the contemporary world, and experts’ responses in the face of these crises. It puts forward an integrated model for the study of the natural sciences based on a synthesis of al-Ghazālī’s methodology of integration and discourse on the qalb, and the Ülū al-Albāb notion of the Qur’an. The integrated model is for use in Islamic secondary education, where certain aspects of the natural sciences undergo a discreet but holistic reposition, reinterpretation and reorientation from the framework of, and organically infused with the Qur’anic worldview. It is believed that such integration is able to address the conflicts and disharmonies, and in the long run restore the equilibrium, not just within the Muslim person and the ummah but also to bring about sustained goodness for humanity in general and the environments in which they reside.

Keywords

Tawḥīd • Qur’anic worldview • Integration • Natural science • Western modern science • Ülū’l-albāb • Qalb

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The place of science and technology in nation building is indisputable. A nation without a sound scientific culture and understanding, wanting in the proliferation of science, and lacking original and competitive developments in technology will forever remain a consumer, thereby jeopardizing the sovereignty of her mind, spirit, culture, education, ethics, economy, politics, governance and territory and leaving her at the mercy of manipulations by the world’s powers that be. Beyond nationhood and on a wider ummatic scale, a sound scientific culture must be the ethos of a God conscious and dynamic Muslim ummah [global community], vis-à-vis the culture inherent among those that al-Qur’an addresses as Ülū al-Albāb, without which, the ummah may forever subject herself to “colonisabilité” (Malik Bennabi, 2003). The annals of humanity are witnesses to the impacts that science and technology have had on humanity. An examination of the Islamic, the modern and the post-modern eras illustrates the magnitude that the philosophical premises on which science and technology are pursued, the impact of the type of science education and the technological savoir-faire have on the young. It is vital that Muslims develop vigorous scientific young minds and consciences based on the Qur’anic worldview, as the future lies in their hands. If Islamic education is to be key in securing a future Muslim ummah that is Islamically vibrant, then it is this factor that is most crucial. Such is the ummah that is well-equipped to not only sustain herself, but also to rise above the challenges of globalisation, capable of upholding her responsibility as the bearer of the Qur’anic message and in presenting to the world workable alternatives and solutions based on the Qur’anic worldview that spreads mercy to all (Q. 21:106-107).

Despite the plethora of works deliberating on Islamic / Tawḥīdic / Qur’anic science and on the need for a more integrated education, our extensive review of available works has uncovered only a very small number of studies that specifically deliberate on actually integrating elements of the Qur’anic perspectives (or anything to this effect) into the curricula implemented in Islamic secondary schools. It is surprising that this very small number is particularly more wanting in integrating Qur’anic perspectives into secondary school curricula of the natural sciences notwithstanding the great number of Islamic secondary schools declaring themselves as integrated.

Our observations and interviews with teachers, board members, students and parents of the schools that we visited between 2010 and 2013 in Malaysia (12), Indonesia (12), Southern Thailand (5), and in Brunei, Singapore, Mindanao and Ontario, Canada; as well as our analyses of the large number of curricula, syllabi and textbooks (in Malay, Indonesian, Thai and English, published in the said countries and in the U.K. between 2002 and 2015) gathered from the schools show the following. There was very little integration happening, if any, (a) in the teaching and learning processes, and (b) in the curricula, syllabi and textbooks of natural science. Our findings may be described briefly as follows:
The lack of comprehensive knowledge on integration (why, what, when and how), time constraints, demands of the formal syllabi and examinations caused integration to be left to the devices of individual teachers or schools, or to be side-lined altogether.

School administrators, teachers and a portion of the public undertook integration based on respective awareness and understandings, instead of formal institutionalisation in the curricula.

Integration constituted the study of Islamic religious subjects and the natural sciences in parallel, with minimal intersection, if any.

Integrated curriculum was limited to commendable observances of daily prayers, Qur’anic recitation/memorization, supplications, etiquette, character development and co-curricular activities.

Lack of training for teachers. With little or no formal guidance or supervision, they were encouraged to improvise on their own, resulting in superficial patching-on of Qur’anic verses/ahādīth [Prophetic traditions] in the teaching and learning processes.

Stark lack of secondary school curricula, modules and textbooks of natural science used in the secondary schools visited written fully from the Qur’anic worldview.

There was a dire need for such materials voiced by almost all teachers, administrators and members of the schools’ boards.

By and large, the secondary school natural science curricula and textbooks in circulation were based on the conventional Western model of naturalism-mechanism-positivism, in which God and His attributes were left out from the study of nature, man and the universe. Some of the purported integrated materials found included a few Qur’anic verses and supplications in the opening, or at best, sparsely interspersed in the text, with little guidance or explained relevance.

This article presents an integration framework for the natural sciences, based on a synthesis of al-Ghazālī’s methodology of integration and discourse on the qalb [spiritual heart] and the Qur’anic notion of “Ülū al-Albāb” [those endued with refined intellect and insight]. Certain conventional aspects of the natural sciences undergo holistic reposition, reinterpretation and reorientation from the Qur’anic worldview, whereby humanity’s relationship with God, with itself and with the cosmos form the main constructs.
The Rationales

There are several rationales that call for integrating the Qur’anic Worldview with the natural sciences. The following are four main rationales.

Qur’anic Injunction

Al-Qur’an draws attention to “read” the revealed “Āyāt” [“Signs”] in the two Books of Allah: al-Qur’an and the cosmos. The cosmos is to be read, studied, pondered, contemplated, understood and reflected upon in the light of the Qur’an. This signifies the importance and rightful position of reason, in its subservience to Revelation. Reason is to submit to Allah, the Divine Intellect, Who authored both Āyāt.

Read! In the Name of thy Lord Who created. …. Read! And thy Lord is Most Bountiful. He Who taught (the use of) the pen. Taught man which he knew not…… bow down in adoration, and bring thyself the closer (to Allah)! (Q. al-‘Alaq, 96:1-19).

…Soon will We show them Our Signs in the (furthest) regions, and in their own souls, until it becomes manifest to them that this is the Truth. Is it not enough that thy Lord doth witness all things? (Q. Fuṣṣilat, 41:53).

Al-Qur’an repetitiously commands one to apply and bring to bear all the sensory and intellective faculties to comprehend both categories of Āyāt with humility, gratitude, acknowledgement, awe and absolute reverence, obedience and servitude toward Allah – the One God, Who is also the Creator (Al-Khāliq), the Owner (Al-Mālik) and the Lord Sustainer of everything that exists (Al-Rabb al-‘Ālamīn). A compelling example is al-Rūm, 30:11-27, where Allah decrees upon humanity to awaken the senses and engage in a rational understanding of His Āyāt as do the Ülū al-Albāb, addressed 16 times in the Qur’an (e.g. in Āli-’Imrān, 3:189-190).

The necessity for integrating the rational sciences with revelation has been expressed by many, notably Imām al-Ghazālī (1058-1111), who managed to reconcile the three disparate post-Qur’anic thoughts of fiqh [jurisprudence], kalām [scholasticism] and taṣawwuf [the esoteric dimension] into one cohesive whole. Through classifying knowledge and its acquisition, al-Ghazālī reinstated the rightful position of human intellect with respect to the primacy of Revelation. Bediuzzaman Sa‘id Nursi (1877-1963) gives a beautiful analogy:

The religious sciences are the light of the conscience, and the modern sciences are the light of the reason. The truth becomes manifest through the combining of the two. The students’ endeavour will take flight on these two wings. When they are separated it gives rise to bigotry in the one, and wiles and scepticism in the other (as cited in Şükran Vahide, 2011, p. 53).
Fazl-ul-Rahman Ansari (2008, p. 180) describes:

[T]he Holy Qur’an chartered a new course for the pursuers of science; and in that its function was to stimulate the scientific outlook and the quest for scientific knowledge, and to promote the cultivation of the physical sciences;—and that to an extent that the Scientific Quest has been made a part of the Worship of God, having been affirmed as an inseparable complimentary of the Religious Quest…. 

Ismā’il Rājī Al Fārūqi’s (1921-1986) message on Tawḥīd [the absolute Oneness of God] has been articulated distinctively throughout his work. He stresses,

Islam called everyone to be a scientist investigating every field and aspect of nature; a historian examining every chapter of human and group behavior through the centuries (Al Fārūqī, 1986, p. 321).

He adds, nature “was not created in vain or sport” but with a “divine purpose”, not for man “to possess or to destroy” but as a “ni’mah” and “āyah”. It is “God’s work”, an “instrument of His purpose”, thus its “tremendous dignity”, requiring our “respect and awe” (al Fārūqī, 1986, pp. 321–323).

The Reality

“What is the problem with [modern] science?” “What is so ‘un-Islamic’ about [modern] science?” “There is not such a thing as Islamic science or un-Islamic science!” “Science is science, it is objective and it is already ‘Islamic’ ” “Don’t tell me that what we are doing in science is not Islamic!” These are usually the responses, whenever discussions on Islamicising science or the integration of science and Tawḥīd are brought up. These responses shrewdly summarise the thinking of many Muslims, irrespective of their education and social backgrounds. This thinking results from the indoctrination of the purported objectivity of science in education and scientific practise. Furthermore, the deficiency of exposure to the history and the philosophy of science has led to the above misunderstanding’s becoming so widespread. An examination of the history and philosophy of the Western modern science clearly shows that science is far from being objective. It is laden with the pre-suppositions of the worldview that lays out the discipline. Fundamental questions such as “Who am I?”; “Where do I come from?”; “Why am I here?”; “What is the meaning of life?” all bear their weight in the foundation and trajectory of any system or discipline.

Western Voices on Modern (Naturalistic, Mechanistic and Positivistic) Science

Naturalism assumes that “nature is governed by objective laws”, “understood through observation and experimentation without recourse to super-natural or extra-natural reality”. It “implies that all knowledge of the universe can be arrived at through scientific investigation”. Anything with the label “supernatural […]is[…] either non-existent,
unknowable, or not inherently different from natural phenomena or hypotheses” (The New World Encyclopedia, December 2014). Mechanistic philosophy is attributable to materialism. It holds that the universe “is best understood as a completely mechanical system”, i.e. “a system composed entirely of matter in motion under a complete and regular system of laws of nature”. Mechanists strive to explain “every phenomenon in the universe […] in terms of mechanical laws”. It is “often criticised for overlooking the organic interdependent relationships […], its incompatibility with free will, and oversimplification of complex phenomena” (The New World Encyclopedia, n.d.).

Positivism describes a system as a set of experiential data, with the repudiation and exclusion of any metaphysical presupposition. It refutes transcendence and is “antitheological”, where “[m]ost positivists have been utilitarians” with the “object of worship not the deity of the monotheistic faiths but humanity”, rendering it “anthropomorphic” (The Academic Edition of Encyclopaedia Britannica, n.d.).

Western modern science as we know it today, has developed on the premises of all three philosophies, which exude from the fundamentals of secularism. Karl R. Popper (1994, pp. 82–83) explains,

The history of science, even of modern science since the Renaissance, and especially since Francis Bacon [1561-1626], may be taken as an illustration. [...] Bacon was the prophet of the secularized religion of science. He replaced ‘God’ by the name ‘Nature’ [...]. Theology, the science of God, was replaced by the science of Nature. The laws of God were replaced by the laws of Nature. God’s power was replaced by the forces of Nature. And at a later date, God’s design and God’s judgements were replaced by natural selection. Theological determinism was replaced by scientific determinism, and the book of fate by the predictability of Nature. In short, God’s omnipotence and omniscience were replaced by the omnipotence and omniscience of nature and by the virtual omniscience of natural science.

In Novum Organum Scientiarum (The New Organon) first published in 1620, Bacon prescribes the “purging” (Bacon, 2000, p. 12) of the mind of all prejudices and theories, which he calls as the “idols” of religion, history, philosophy, education and tradition (Bacon, 2000, pp. 18–23). He prescribes that “Man is Nature’s agent and interpreter” and that “Human knowledge and human power come to the same thing” (Bacon, 2000, p. 33). He insists,

We can only count three periods which were high points of learning: one among the Greeks, the second among the Romans, and the last among us, that is to say, the western nations of Europe [...]. There is no reason to mention the Arabs or the scholastics, whose numerous treatises [...] wore the sciences down than increased their weight (Bacon, 2000, p. 64).
Richard Tarnas (1991, pp. 282–283) accounts,

This emergence of the modern mind, rooted in the rebellion against the medieval Church and the ancient authorities, and yet dependent upon and developing from both these matrices, took the three distinct and dialectically related forms of the Renaissance, the Reformation, and the Scientific Revolution. These collectively ended the cultural hegemony of the Catholic Church in Europe and established the more individualistic, sceptical, and secular spirit of the modern age. Out of that profound cultural transformation, [modern] science emerged as the West’s new faith […] Science ennobled that [modern] mind, showing it to be capable of directly comprehending the rational order of nature […] No […] such authority needed, for every individual possessed within himself the means for attaining certain knowledge—his own reason and his observation of the empirical world.

This rootedness, rebellion and dependence upon the medieval Church and ancient Hellenistic authorities are referred to as the “hidden continuities” of the Western mind (Tarnas, 1991, pp. 320–323).

Introducing historicism to modern science, Thomas S. Kuhn (1996, pp. 1–4) argues,

If science is the constellation of facts, theories, and methods collected […], then scientists are men who, successfully or not, have striven to contribute one or another element to that particular constellation […]. An apparently arbitrary element, compounded of personal and historical accident, is always a formative ingredient of the beliefs espoused by a given scientific community at a given time. That element of arbitrariness does not, however, indicate that any scientific group could practice its trade without some set of received beliefs.

On the “objectivity” of science, Tarnas (1991, p. 359) notes,

[B]ecause scientific knowledge is a product of human interpretive structures that are themselves relative, variable, and creatively employed […], the truths of science are neither absolute nor unequivocally objective. […] the modern mind was left free of absolutes, but also disconcertingly free of any solid ground.

In addition, Stephen Hawking declared the death of philosophy (2010, p. 5) and that

God… is not the answer of modern science […] just as Darwin and Wallace explained how the apparently miraculous design of living forms could appear without intervention by a supreme being, the multiverse concept can explain the fine-tuning of physical law without the need of a benevolent creator… (Hawking, 2010, pp. 164–165).

It has to be acknowledged that there is a small yet significant group of contemporary western scientists who subscribe to theistic science. A former atheist (Collins, 2006, p. 16) Collins (former head, U.S. National Human Genome Research Institute) became convinced of his faith in God through his involvement and leadership in the sequencing of the human genome project, which he describes as “both a stunning scientific achievement and an occasion of worship”. Collins (2006, p. 3) argues, “belief in God can be an entirely rational choice, and that the principles of faith are, in fact, complementary with the principles of science”.
The Environment and Humanity

It is agreed upon that since the modern period, humanity and the environment have been subjected to a record overabundance of crises. These result from human activities, related directly or indirectly to science and technology. Humans exploit, ravage and pollute the earth, and amass piles of garbage on its surface. The plastic garbage patch in the Pacific Ocean (Kaplan, 2016; Ocean Portal, 2015) twice the size of France (Grant, 2009) just shows that earth is suffocating from plastics, endangering and killing marine flora and fauna, and contaminating the food chain. For progress, show of status, economic advancement and political brute, humans pillage the earth and violate other humans, animals, plants and inanimate components of the earth without guilt. The widening ozone hole, global warming and extreme weather conditions are some of the outcomes of human induced climate change. Out of the glut, humans subject themselves to unparalleled miseries resulting from environmental, social, physical, intellectual, emotional and psychological pollutions, and the loss of humanity’s soul and spirit. Hans Küng (2007, pp. 649–650) writes,

The price that the West had to pay for the […] epoch-making change in values and norms […] of late-modernity […] was a high one: the other spheres of life were left with no religions and indeed largely also with no moral basis and ultimate horizon of meaning […]. From this follows a deep crisis of orientation and […] a desperate search for meaning, criteria and a shared basis for values. Like absolutized faith, so too absolutized reason can set free destructive energies, with devastating effects […]

He continues, “Here is a new task for Muslims and Christians together” (Küng, 2007, p. 650).

Western Modern Science: Some Aspects in Need of Correction, Reposition, Reinterpretation and Reorientation

The history and philosophy of Western modern science clearly shows that science is far from being objective, but is laden with the underlying presuppositions of the worldviews that construct the discipline (Bakar, 2008; Hassan, 1980, 1981; Kuhn, 1996; Nasr, 2003; Tarnas, 1991). These worldviews came about in response to historical circumstances – pre-modern, modern, and continue to contemporary post-modern era. The presuppositions seep through as “hidden continuities” of the Western mind (Tarnas, 1991, pp. 320–323), and can be detected from several glaring issues.

Of primacy is science’s detachment from God and the transcendent. Instead, reason, material and mathematical empiricism are put in His place, as human reason becomes the only authority. Losing all sensibility of the sacrosanct, everything else in the universe, including fellow humans, can become object of scientific investigation (Alexander & Numbers, 2010). Charles Darwin’s theory of evolution, natural selection and survival of the fittest are considered as trademarks of the ‘natural
history’ of human beings. No longer the slave-servants and vicegerents of Allah in Islam, or the children of God in the Judeo-Christian tradition, Darwinian men are a product of the random, mechanistic and purposeless process of nature. These are the highest form of *kufr* [denial], *khiyānah* [treason], *al-fasād* [corruptions] and *al-ẓulm* [injustices] towards Allah, all of which beget further transgressions.

Next, a number of notions held as contemporary scientific convention (“the Ten Dogmas of Modern Science” in Sheldrake, 2012, pp. 6–12) seem too familiar with ancient Hellenistic cosmology, some of which are inherent in the old Christian dogma (see Dewitt, 2004, pp. 4–9; Motley, n.d.). Everything in the universe – inclusive of humans, their inner workings and laws of nature – is *mechanically self-perpetuating and fixed* (vis-à-vis Aristotelian deistic notion of God). Matter and energy are neither created nor destroyed, with the total amount a constant since the beginning of time (re: Aristotelian notion of God Who formed the universe from *matter that is already in existence*, since nothing can come out *ex-nihilo*). There is no transcendental metaphysical value in human earthly life. The Aristotelian man is the “rational animal” of the geocentric earth. The Christianised Aristotelian notion of life is only to *escape* upon death **from the wretched hell at the core of earth** in order to ascend to higher geocentric celestial levels and toward heaven. In Darwinian terms, humans are a chance-product of natural selection, the purposeless mechanism of evolution. Hence with respect to the size of the cosmos, humans are utterly insignificant. Similarly, the earth has no transcendental significance. As the earth is irreversibly imperilled, the great scientific quest is to find other planets with signs of biological life as humans’ new abode (re: Christianized Aristotelian geocentricism – **the only significance of the earth is that of a place of punishment for sinners**, with no moral obligation of custodianship onto it.) This sophisticated-escapism is at the expense of billions of precious dollars that could have sufficiently alleviated the sufferings of the homeless and starvation afflicting millions.

Another issue is as Bernard E. Rollin (2006, p. 17) confides in his book Science and Ethics:

> The slogan that I in fact learned in my science courses in the 1960s, and which has persisted to the present, is that “science is value-free” in general, and “ethics-free” in particular.

He contends

Clearly, then, the component of scientific ideology that affirms that science is value-free and ethics-free is incorrect. We can also see that the more fundamental claim – that science rests only on facts and includes only what is testable – is also badly wrong. How, for example, can one scientifically prove (i.e., empirically test) the claim that only the verifiable may be admitted into science? (Rollin, 2006, p. 27)
Rollin (2006, p. 29) continues,

Another component of scientific ideology [...] is the ubiquitous belief that we best understand any phenomenon when we have understood it at the level of physics and chemistry, ideally, physics. [...] The language of physics is, after all, mathematics; yet ethical questions seem inexpressible in mathematical terms. [...] This reductionist approach further removes scientists from consideration of ethics. [...] Thus, many scientists lack a grasp of the way in which cultural factors, values, and even ethics shape the acceptance and rejection of whole fields of study (e.g., consciousness, [...] eugenics, intelligence, race, psychiatry as a medical discipline, and so on).

The defects in Western modern science as they exist today, developed on the premises of secularism, agnosticism, naturalism, mechanism, positivism, reductionism and capitalism (Bakar, 2008; Hassan, 1980, 1981; Küng, 2007; Nasr, 2003; Tarnas, 1991). We believe that reconciling truncated scientific concepts to Islamic creed, tenets and norms to be an apologetic approach that potentially will only deepen conflicts, imbalance and disharmony. Rather, a critical approach should include the deconstruction of the Western epistemology, and the reconstruction of an Islamic epistemology through a critical re-cultivation of the Islamic scientific tradition. Thus the curricula of the natural sciences should also include the assumption that science is not neutral and value-free. The ultimate purpose of science in Islam is to “read” God’s signs so as to be able to arrive at their true meanings, ultimately to increase one’s faith and closeness to Him (Bakar, 2008; Golshani, 1989; Hassan, 2017; Kartanegara, 2008). The pursuit of science not for the sake of fame, fortune or merely for the sake of science as conventionally defined, as Yūsuf ‘Alī (1992, p. 313) comments, “who did not stop short at the wonders of nature”, but penetrated “from nature up to nature’s God”. Science from the worldview of al-Qur’an is therefore in line with the holistic reality - spiritual, psychological, physical, emotional, intellectual and social - of the innate, uncorrupted human nature and the fundamental tenets of Islam, and should wholeheartedly reinforce Tawḥīdic principles (al-Attas, 1989; Al Fārūqī, 1982; Al Fārūqī & Al Fārūqī, 1986; Bakar, 2008; Hassan, 2017; Iqbal, 2009).

A Qur’anic Integration Framework

Throughout history, science went through a number of important interconnected processes. “Naturalisation” of science is the “adaptation or acculturation” of a foreign science to a particular new culture, resulting in the full assimilation of the discipline in the new society as part of its indigenous culture and philosophical system. This explains the nature of science, which is “culturally and ideologically laden”, instead of neutral and value-free. “Secularization” of science happens when its views, activities, theories and methods are stripped from any spiritual-metaphysical dimensions, as happened in the post-Renaissance, modern Western world. “Islamisation” of science is a naturalisation of the Western modern science into the Islamic value system and
foundation of civilisation (Kartanegara, 2008, pp. 149–163). It is the contemporary effort at reconstructing and reviving science in accordance to the Qur’anic worldview, as was also the case on the onset of Islamic civilisation. The bearing of Ya’qūb ibn Ishāq al-Kindī, the 9th century Muslim philosopher-scientist can be taken to illustrate.

Although Al-Kindi was influenced by the work of Aristotle […], he put the Greek’s ideas in a new context and laid the foundations of a new philosophy. He first elaborated a system of thought based on the logic of Greek philosophy, hence developed logic and systematic explanations for some of the debated theological issues of his time, such as creation, immortality, God’s knowledge, and prophecy (as cited in Atiyeh, 1966, p. 127).

S.A. Ashraf (1990:2) asserts,

The philosophy of the Islamic past must be studied in order to see how Muslim philosophers tried to Islamise Greek philosophy, how far they succeeded and how far they failed and why. What was the problem which compelled Ghazali to write […] Tḥafut al Falasifa?

While modern Western science serves the utilitarian - medical, economic and technological - needs of human life, the role of science in Islam must cover these – and more. It is to discover and study the Signs of Allah in nature and to utilise all the resultant knowledge in serving His cause with gratitude, for the benefit of humanity’s wellbeing in this world – and in the hereafter. The cosmos is to be observed, studied and contemplated upon, as a means to know the Creator and gain closeness to Him. Pursuing science is an ‘ubūdiyyah [servitude] toward Him, an aspect of khilāfah [vicegerency] (Bakar, 2008; Golshani, 1989) that advocates ‘imārat al-kawn [environmental prosperity] (see Q. 11:61). Al-Qur’an does not neglect anything relevant for the functioning of human life, which includes all the tools necessary for the cognition of nature (Golshani, 1989). These are hearing, sight and the heart; the perception of Divine Signs in nature through intellections and reflections, and prescriptions for studying nature through a careful study of the Book. The Qur’anic culture of knowledge acquisition had mobilised early believers to a myriad of activities that studied His creations, meant to facilitate people in their vicegerency and servitude toward God. Theirs was a Qur’anic scientific culture that enabled them to pinnacles of scientific advancements during the golden period of Islamic civilisation.

Science from the worldview of al-Qur’an is to be understood in the all-embracing Tawḥῑdic spirit with its comprehensive perspective of reality (Bakar, 2008). It is not simply attaching Qur’anic verses or aḥādīth [Prophetic traditions] to certain scientific concepts. Although popular, this “piece-meal validation” (Kartanegara, 2008, pp. 149–163) is not only inaccurate, but may risk contravening the very objectives of integration. We consider the “piece-meal” approach as faulty because it deconsecrates the Qur’an, subjecting Qur’anic Revelation to criterion set by empirical scientific data. As a product of human effort, science is contingent and not infallible. On the contrary, al-Qur’an as the
Final Revelation from Allah is objective, with no faults and contains the absolute Truth at all times. Associating verses of al-Qur’an or aḥādīth to current scientific findings places the sacred truth of Revelation at the scrutiny of shifting contingencies of science. It must be noted that the Medieval Church’s staunch dogma on geocentricism, caused a row with Nicholai Copernicus (1543), *On the Revolutions of the Heavenly Bodies*. The Church decreed the Inquisition against Galileo Galilei (1632), which incriminated him for his position in favour of heliocentricism in *Dialogue on the Two Chief Systems of the World, Ptolemaic and Copernican* (Leveillee, 2011). The Church’s dogmatic hold on geocentricism (once a valid position prior to further discoveries) resulted in the schism of Western science from religion, which has remained for almost four centuries. Muslim educators must be informed and take precautions against the above risk, and practice sharp acumen and probity in their integration efforts.

Natural science is a study of the ‘ālam al-shahādah [physical universe] that Allah created, as part of His faḍā’il [bounties] and nī’ām [blessings] to humans. It is necessary that this is conducted in subservience with the Creator’s Words (e.g. Q. Āl ‘Imrān, 3:190-191; al-Jāthiyah, 45:2-6). This epistemological unity is inherent in al-Qur’an, which is replete with mentions that Allah is the Ever-Aware Owner, the Creator that originates creation and then repeats it, the Sustainer, the Mighty, the Wise. These are followed or preceded by verses pointing to the wonders of His creations in the cosmos that serve as Āyāt [Signs] for those who use their faculties to reflect and understand. Al-Qur’an insists on the engagement of all the sensory and intellective faculties in comprehending both categories of Āyāt—in the Qur’an and in the cosmos. Another gripping Qur’anic injunction is the notion of “taskhīr”, which is the subjection of “all that is in the heavens and all that is in the earth” (Q. al-Jāthiyah, 45:2-6) for humans to harness, manage, safeguard and benefit from, in carrying out their duties as ‘ibād Allāh [slave-servants of Allah] and as His khulafā’ Allah fī al-arḍ [vicegerents on earth] (Q. al-Baqarah, 2:30-34)—a “cosmic” vocation, in Al Fārūqi’s (1986, p. 317) words, despite human’s infinitesimal physical size.

Allah’s administration of the cosmos (Tadbīr al-kawn, from “yudabbiru”, Q. Yūnus, 10:3, 31; al-Ra’d, 13:2; al-Sajdah, 32:5) and His premeasurement, predetermination and decree (“Taqdīr” from “qaddara”, Q. Yūnus, 10:2, 5; al-Furqān, 25:2; Fusṣilat, 41:10; al-Muzammil, 73:20; ‘Abasa, 80:19 & al-A’lā, 87:3) set the regularities, constancies and predictability of nature. In this regard, scientific laws are scientific statements that attempt to describe, insofar as science has reached, particular fixed patterns in nature in accordance to Allah’s Tadbīr [Regulation] and His Taqdīr [Laws, predetermination] as He has decreed to operate in the physical universe. However, due to the contingency of science, certain established scientific theories (or perhaps even scientific laws) may be proven null in the future. Moreover, Allah, by His Absolute Power and Dominion, is capable to decree upon miracles (mostly as al-mu’jizāt al-nabawiyyah or prophetic miracles) that are totally out of the norm or the expected
regularity in nature, and is thus scientifically inexplicable. Outside the domain of
science also is the ‘ālam al-ghayb [unseen realm] of the cosmos, such as the nature of rūḥ [spirit], nafs [self], ‘aqīl [intelligence] and qalb [spiritual heart].

The cosmos must be studied with humility, gratitude, acknowledgement, awe and
utmost reverence, obedience and servitude toward Allah, the God, the Creator, the Owner
and the Lord of everything that exists. The endeavour must be pursued in the Light of the
Qur’ān as al-Hudā [the Guidance] and al-Furqān [the Criterion]. Excluding God from
the disciplines of the natural sciences and pursuing them with attitudes contrary to the
above constitute as grave injustices and transgressions against the innate nature of the
human self, the cosmos – the environment, floras and faunas, the inanimate constituents,
and the outer space – and are the gravest crimes against Allah, the Most Gracious.

Al-Ghazālī and the Importance of the Qalb

Al-Ghazālī considered knowledge of the natural sciences a necessity in
comprehending the Qur’ān. His re-emphasis on Theo-centricity integrates all matters
of human existence—reconciling and re-integrating fiqh [jurisprudence], kalām
[scholasticism] and ṭasawwuf [the esoteric dimension], the three disparate post-
Qur’ānic thoughts, into an organic cohesion. Another significant aspect of his work
vis-à-vis integration was his mastery of Hellenistic philosophy, which at the time
had prevailed so much that its influence had affected Muslim intellectual figures,
such as al-Farābī and Ibn Sinā. In Tahāfut al-Falāsifah, Al-Ghazālī filtered through
and casted off the un-Islamic elements of Greek thought (al-Ghazālī, 1963, p. 3),
purifying kalām from “heresy”. The notion of the “everlasting nature of the world,
time and motion”; that God “does not know the non-particulars”; the “impossibility
of a departure from the natural cause of events”; and the “denial of the resurrection of
bodies” (al-Ghazālī, 1963, pp. 11–12) are among the twenty philosophical problems
that he had identified and refuted. These arguments fundamentally disproved some of
the conventional dogmas of modern science (see Rupert Sheldrake, 2013, pp. 6–27).

Al-Ghazālī’s emphasis on the state of the qalb [spiritual heart] in valuing human
actions was a stark evidence of his careful attention on the integrated and holistic
nature of humans. He realigned the spirit of ethics in line with humans’ raison d’être.
His classification of knowledge and its acquisition reallocates the key position of
reason in relation to the absolute ascendancy of uncorrupted Divine Revelation.
Through all these, he brought to wakefulness, the transitory nature of earthly life
and the eternal destiny; thus providing spiritual insights into the transcendence of the
afterlife—giving a larger cosmological perspective to things.

Al-Ghazālī stressed on tazkiyah [purification] and riyāḍīyyah [exercising
discipline] of the qalb (see Q. al-Shams, 91:7-10). In his terms, qalb (heart), rūḥ
(spirit), *nafs* (soul) and *’aql* (intelligence) represent the four intrinsic faculties of the spiritual heart. Though each differs in meaning and is capable of bearing apparent outward expressions, all are intimately interrelated, constituting an organic whole (al-Ghazālī, 2009). To al-Ghazālī, intelligences (*’uqūl*, “minds”, or “reasons”) are cognitive faculties of the spiritual heart, rather than solely of the brain. This can be traced to the Qur’an, e.g.

Do they not think deeply (earnestly seek to understand) the Qur’an, or are their hearts locked up by them? (Q. *Muḥammad*, 47:24)

Or do those in whose hearts is a disease, think that Allah will not bring to light all their rancour? (Q. 47:29)

The heart is the seat of knowledge (“*al-mahall al-‘ilm*”)—a mirror that reflects signs that Allah placed in life (al-Ghazālī, 2009, pp. 39–40). So central is the heart that even in pursuing something intrinsically noble (“*mahmūdah*”) may end up being despicable (“*maẓmūmah*”) if the deed originates from a “defective” or “diseased” heart. These may fall into 5 general conditions: “imperfection” due to immaturity; “dullness due to disobedience” and “lust”; miss-direction due to distractions of worldly matters; veiling due to pre-conceptions and blind imitations; and “ignorance of the direction from which the knowledge sought must be obtained” (al-Ghazālī, 2009, pp. 39–58). Hence, purity and clarity of the heart are necessary requisites for the unveiling of true knowledge.

Humanity is endowed with tools to derive awareness and knowledge. These are (i) *ḥawāss* [faculties of senses] and *’aql* [reason], which despite their being deficient, allow humans to know the apparent universe that they reside in; and (ii) *naql* [Divine Revelation and inspiration], which enable them to discover what are not apparent by the former. The sources, methods or reliability of the two tools are by no means equal. The *qalb* [spiritual heart] has the “special properties of knowledge and will, which separates it from animals”. Spiritual maturity distinguishes it from immature inclinations (al-Ghazālī, 2009, pp. 23–24). The veils of true knowledge can only be lifted once the *qalb* has undergone *tazkiyat al-nafs* [purification of the soul] and has been self-cultivated through Qur’anic and Sunnatic *riyāḍiyyat* [learning and exercising]. The highest purpose of knowledge is to enable one to become closer to Allah and eventually to the ultimate bliss of being in His presence (“*Wajh Allah*”, Q. *al-Baqarah*, 2:115, 272; *al-Rūm*, 30:38-39; *al-Mursalāt*, 76:9). Al-Ghazālī related true knowledge with happiness as such:

Clear understanding and clear intellect are the highest attributes of man, because through the intellect, the responsibility of Allah’s trust is accepted, and through it man can enjoy closeness to Allah (al-Ghazālī, 2013, p. 49).

Islamic education is to train and instill discipline to the sensory faculties (*al-ḥawāss*) and to develop the intellects (*al-’uqūl*) to acquire the capacity to accumulate
knowledge through experiences. The ultimate is to enable the self to subdue the lower nafs (al-ammarah bi al-sū’) for the higher (lawwāmah, al-muṭmainnah). Training of al-‘uqūl thus consists of disciplining both the physical and the spiritual faculties of senses (i.e. senses and sensibilities), which are inlets to the qalb. Al-Ghazālī’s emphasis on exercising the faculties of al-ḥawāss and al-‘uqūl is clear when he criticised against “taqlīd” [blind faith] rather than to investigation and personal observation (cited in Nofal, 1993, pp. 228–231).

The Qur’an states that the acceptance of worship is conditional upon purity of the nafs (Q. al-Tawbah, 9:19), soundness of the qalb (Q. al-Tawbah, 9:19) and humility of the spirit (Q. al-Baqarah, 2:45). These are attained through purifying the physical body and the nafs, rūḥ, qalb and ‘aqīl from any diseases that cast veils causing them to be bolted—blind, deaf, dumb—and dead. Likewise, a person is unable to unveil true knowledge without attending to his spiritual heart, purifying it and exercising his faculties in accordance to al-Qur’an and al-Sunnah. A person in the possession of al-nafs al-ammārah bi al-sū’ may be skilled in scientific empiricals; but with a qalb that is blind, deaf, and dumb, he cannot reach into the true meaning of things. At best, his knowledge is good only for utilitarian disposes. The Qur’anic scientific attitude in the pursuit of true knowledge is characterised by the synergic equilibrium between purifying the self, exercising one’s faculties and in engaging both the spiritual and the physical aspects of the self with iqra’ (read[ings]), dhikr (remembrance) and fikr (thought).

Ülū al-Albāb

A contextual study on all the sixteen verses of al-Qur’an referring to Ülū al-Albāb shows the following.

1. Ülū al-Albāb are those with profound faculties of senses (al-ḥawāss) and intellects (al-‘uqūl), so refined through riyādiyyah and tazkiyah, that their purified hearts receive impressions and colouration by Allah (ṣibghat Allāh, Q. al-Baqarah, 2:138).

2. This may be understood, as God is “his hearing with which he hears, his seeing with which he sees, his hands with which he strikes, and his foot with which he walks” (ḥadīth qudsy related by Bukhārī, on the authority of Abū Hurayrah r. ‘a., Hadīth 38, An-Nawawī’s Forty Hadīth, 1976, p. 118).

3. Their hearts (qulūb) are epitomes of illumined reason and understanding, intelligent and discerning wisdom, and with insights that are able to draw conclusions through unveiling truth and correct guidance.

4. Al-Qur’an typifies them as wholly devoted in sincere and humble servitude (‘ubūdiyyah) toward Allah, with lofty and refined Qur’anic-Prophetic spiritual ethics as exemplified by Muḥammad ṣ. ‘a.w.
5. They exert their faculties in listening to, seeing, observing, thinking, pondering and contemplating upon Signs of Allah in al-Qur’an and in the cosmos to arrive at deep understanding of them both inductively and deductively.

6. They are steadfast in verifying their understanding through further empirical proofs and observations without superstition, baseless assumption and speculation or blind imitation.

7. With a deep sense of taqwā [awareness of God], shukr [gratitude], tawāḍu’, [humility] and execution of the highest form of ‘ubūdiyyah to Allah, they ceaselessly strive (jihād) in bringing themselves and others nearer to understanding His Signs, in knowing the Lord of the Universe (ma’rifah) and in becoming closer (taqarrub) to Him.

8. They exert themselves in selfless service to humanity through their responsibilities, profession, trade and craft to the best of their ability (iḥsān) and in the best manner possible (iḥsān).

9. In so doing, they may emerge as scholars (‘ulamā’) who, through a life of vicegerency (khilāfah), promote prosperity in nature (‘imārat al-kawn) while safeguarding its sanctity of balance and spread mercy and goodness to all (raḥmatan lī al-‘ālamīn). They are as what al-Qur’an addresses, “Innamā yakhsha Allāha min ‘ibādihī al-‘ulamā’ – Those truly fear Allah among His servants who have knowledge” (Q. Fāṭir, 35:28).

In a very tight nutshell, constant dhikr [awareness and remembrance of] Allah and unfailing fikr [engagement of the mind in intellection], while continuously engaging in iqra’ [reading, observing and contemplating] of God’s creations – in the cosmos, in society, in human history and in the body – are the traits of the integrated personalities that al-Qur’an addresses favourably as Īlū Al-Albāb.

Seest thou not that Allah sends down rain from the sky, and leads it through springs in the earth? Then He causes to grow, therewith, produce of various colours: then it withers; thou wilt see it grow yellow; then He makes it dry up and crumble away. Truly, in this, is a Message of remembrance to men of understanding (Q. al-Zumar, 39:21).

An Īlū Al-Albāb Framework for Integrating the Qur’anic Worldview and the Natural Sciences for Islamic Secondary Schools

With a three-step methodology of (i) identification, (ii) purification, and (iii) beautification and enrichment, this framework comprises a three-dimensional construction:

I. Al-Taṣawwur al-Qur’ānī [the Worldview of the Qur’an],

II. Al-Turāth al-‘Ilm fī al-Islām [Islamic Civilisational Legacy and Knowledge Tradition] and

III. Al-Mulā’imah [Relevance].
**Al-Taṣawwur al-Qur’ānī [The Worldview of The Qur’an]**

The Qur’anic worldview forms the fundamental premise and fashions the underlying spirit, through which the curricula

i. View Allah’s cosmos with the servitude, humility, acknowledgement, appreciation, gratitude, literacy, awareness, responsibility, activism, ethicality, accountability and the qalb of Īlū al-Albāb.

ii. Endeavour to “read” cosmic phenomena, which are Āyāt Allāh in His Open Book of nature, and to engage actively toward a deeper and holistic understanding of the cosmos, guided by the study of Āyāt Allāh in the Qur’an.

iii. Identify, and then weed out or reposition, realign, redefine and correct any concept conventional in Western modern science that is injurious or detrimental to the Qur’anic theology, ontology, cosmology, epistemology, anthropology, axiology and eschatology.

iv. Focus on the threefold relationship, whilst placing realities in the balance of criterion of the ideals:

![Figure 1. A simplified schematic representation of an integrated framework toward the construction of the natural sciences curricula and textbooks for Islamic secondary schools. The model is based on a synthesis of al-Ghazālī’s discourse on the qalb and the Īlū al-Albāb notion of the Qur’an.](image-url)
a. Ḥabl min Allāh [humanity with Allah] comprising ‘ubūdiyyah [servitude] and khilāfah [vicegerency],

b. Ḥabl min al-nās [humanity with itself] comprising muḥāsabah [self accountability], tazkiyyah [purification], al-amr bi al-ma’rūf wa al-nahy ‘an al-munkar [promotion of virtue and prevention of vice], ummah wasaṭ [a global Muslim society that upholds excellence, rightful balance and justice], and

c. Ḥabl min al-kawn [humanity with the Cosmos] comprising raḥmatan li al-‘ālamīn [mercy to all the worlds].

v. Enrich the subject matter of the natural sciences with relevant Qur’anic verses and concepts that pertain to the above elements of the Qur’anic worldview (as detailed in iii) and supplement them with relevant aḥādīth, in line with the above spirit.

Al-Turāth al-‘Ilm fī al-Islām [The Knowledge Legacy in Islam]
The curricula serve to revive and resume the civilisational legacy and knowledge tradition in Islam:

i. The study and pursuit of the natural sciences as a revival and continuation of the Islamic knowledge tradition.

ii. An obligatory endeavour that helps humanity in becoming closer to Allah and earning His pleasure.

iii. Identifying errors in historical facts associated with certain scientific theories, laws and notable scientific figures.

iv. Correcting the above with proven data and relevant Islamic civilizational legacy (turāth al-ḥaḍārat al-Islāmiyyah).

v. Enriching the body of knowledge with contributions and legacies of great Muslim scientists of the past.

vi. Creating awareness of the place held by the natural sciences in the greater civilizational scheme of things.

Al-Mulā’imah [Relevance]
The curricula aim to:

i. Provide relevance of the natural sciences to students’ daily life as Muslims.

ii. Spark interest and a better appreciation of the natural sciences, so that students may become self-initiated learners.
iii. Bring contemporaneous relevance (muʿāṣarah) of al-Qur’an to students of science

iv. Make the verses of al-Qur’an ‘come alive’ in the hearts of students through constant reflections on the cosmos and remembrance of Allah.

v. Motivate Muslim students to build an affinity with the natural sciences and to become future scientists to develop the Muslim ummah.

vi. Create awareness for learning science as a personal religious obligation (farḍ) and its endeavour in society as a communal religious obligation (farḍ kifāyah).


viii. To empower Islamic religious schools in producing Muslim students with Tawḥīdic inspired scientific minds, and Qur’anic attitude and activism.

Figure 1 represents, in a very simplified fashion, the framework described.

**Conclusion**

Project *N.S.W.V.Q.* (Natural Science from the Worldview of the Qur’an) has managed to publish its first and most important product, *Natural Science from the Worldview of the Qur’an: An Introduction.* The three-volume work is a reference or a supplementary textbook for biology, chemistry and physics, intended for use in Islamic secondary schools, as well as by science educators and the public. The science subject matter is based on the commonality of Malaysian, Indonesian, Cambridge, Bruneian, Singaporean, Filipino, Canadian and American middle and high-school curricula and syllabi. *N.S.W.V.Q.* is written in a fashion that veers away from the conventional. It presents the subject matter of biology, chemistry and physics in integrated themes. Throughout the three volumes, the subject matters of science are discreetly presented from Qur’anic theology, epistemology, cosmology, ontology, anthropology, axiology and eschatology. This involves holistic repositioning, reinterpreting and reorienting certain conventional aspects of Western modern science, whereby humanity’s relationship with God, with itself and with the cosmos form the main constructs. Interwoven into the text are corrections of historical facts on scientific and technological developments, based on verified findings on the legacies of Muslim scholars, thinkers and scientists of the golden Islamic age. There are many instances whereby pressing issues of cosmological, ontological and axiological significances are juxtaposed with the current state of the environment to prompt readers into tracing the sources of the problems and to find sustainable solutions based on Qur’anic premises. Despite the limitations of our study, the model supplementary reference textbook, which is written based on the ʻUlū al-
Albāb three-dimensional integration framework is suitable for Islamic secondary education not only in Malaysia, but also in other countries, as long as English is a medium of instruction.

The Īlū al-Albāb three-dimensional integration framework itself is designed from an ummatic and Islamic civilisational stance. As it is based on the knowledge and scientific culture of the Qur’ān, the framework is deemed suitable and useful for any Islamic secondary school in the Muslim world, transcending language barriers, provided that the framework is accurately translated into the respective languages. It is our vision and hope that the framework and its Islamically integrated model reference textbook for the natural sciences shall fill the void that is so distinctly felt and witnessed in Islamic secondary education of the countries that we visited. Moreover, they shall be an impetus for further research and works that address the need for real, correct, accurate and substantive integration of the Qur’ānic worldview and the natural sciences for use at all education levels throughout the Muslim world. This is a small step toward re-establishing the natural sciences as a field of study that is truly based on the Tawhīdic worldview of the Qur’ān as was the case during the Golden Age of Islam.

In truth, al-Qur’ān prescribes the very scientific attitude and worldview that the world of today needs, in lieu of global humanitarian crises, decaying sustainability of the environment and the collapse of civilisational integrity resulting from fundamental systemic failures of modern and post-modern premises and structures. The ummah must move away from her current trajectory of mimicking worldviews alien to the holistic and integrative nature of the Qur’ān, of the humankind and of all creations. For it is this trajectory that is tearing the ummah apart into shards that cannot even manage to sustain its survival, let alone allow it to stand as al-ummatan wasaṭa [the most justly balanced] (Q. al-Baqarah, 2:143) and as khaira ummah [the best community] (Q. Āl ‘Imrān, 3:110), offering the world solutions that are rahmatan li al-‘ālamīn [a mercy to the Universe] (Q. al-Anbiyā’, 21:107). It is indeed a religious obligation and responsibility of Muslims, being those with direct faithful and intimate access to the Qur’ānic criterion and guidance, to provide an answer. The Īlū al-Albāb framework toward integrating the Qur’ānic worldview and the natural sciences for Islamic secondary school is our humble attempt at addressing the long wait for fully integrated science curricula and literature for use in formal instructions. This is a small step toward the Qur’ānic and Sunnatic ideals. Our future plans include the production of a N.S.W.V.Q. teachers’ guide, teachers’ training programs, workshops and talks to secondary school students, as well as the production of subject and grade-level specific N.S.W.V.Q. textbooks; in shā’Allāh [God willing].
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النظرة القرآنية العالمية وعلوم الطبيعة: إطار عمل أولو الألباب المتكامل للمدارس الثانوية الإسلامية

Nur Jannah Hassan

الملخص

تضع هذه المقالة مفاهيم أولي الألباب ونقاء القلب معًا في إطار واحد محورًا مع علوم الطبيعة من النظرة القرآنية العالمية. وهذا الإطار يطبق بطريقة من ثلاث خطوات وهي (أ) التعرف (ج) التجميل والإثراء. تتكون هذه الطريقة من بناء ثلاثي الأبعاد يشمل: (1) التصور القرآني الذي يشكل المبدأ الشامل، (2) إحياء التراد العلمي في الإسلام، (3) تحقيق الملائمة لتطبيق القرآن في دراسة علوم الطبيعة والعكس صحيح. كما يرتكز هذا الإطار كذلك على علاقات إنسانية ثالثية الجوانب وهي: العلاقة مع الله والعلاقة مع الناس والعلاقة مع الكون. وهذا الدمج سيكون قادرًا على معالجة الصراعات والخلافات واستعادة التوازن على المدى الطويل، ليس في داخل الشخص المسلم والأمة المسلمة فقط ولكنه سيجلب كذلك الخير الدائم للإنسانية بشكل عام والمناطق التي يعيشون فيها. لقد انتهى المقالة بذكر مشروع علوم الطبيعة من النظرة القرآنية العالمية والذي يشر ثلاثة أعداد بنصوص مرجعية في علم الأحياء والكيمياء والفيزياء للمدارس الإسلامية الثانوية ألا وهي: محمد كمال حسن (مدير التحرير) علوم الطبيعة من النظرة القرآنية العالمية: مقدمة، (كوالالمبور: المعهد العالي للترجمة والكتب بماليزيا، ٢٠١٨) لتقدم كتابات كاملة عن الموضوعات المذكورة.

الكلمات المفتاحية

التوحيد • النظرة القرآنية العالمية • الدمج، العلم الغربي الحديث • أولو الألباب
إن مشكلة الاندماج في تعليم المسلمين كان أحد المشاكل الكبرى منذ فترة ما بعد الاستعمار مما ترك الأمية الإسلامية تعاني من أربى من التعليم الضعيف. لقد أدرك العلماء والدعاة الإصلاحيين أهمية النظرة العالمية في بناء اللغة، حيث كان الوضع في الإناث مثيراً للقلق. ولكن دون نظرة علمية عليها وفهم ونشر وإعداد طرق فعالة وتنافسية في التكنولوجيا فإن الدور الحيوي في نشر العلمية وسكتة استمرار الملاحة أخرى موجودة في العالم. وعلى نطاق أوسع فإن الثقافة العالمية يجب أن تكون هي وجهة نظر مكملة وفعالة.

ويقف التاريخ شاهدًا على التأثيرات التي يحدثها العلم والتكنولوجيا وخاصة في الأسس الفلسفية الراقية التي أحدثها على الإنسانية. إن تربية هذا الشباب المسلم وتطوير وعيهم وعقولهم العلمية القوية على النظرة العالمية للقرآن تعتبر أمرًا بالغ الأهمية لأن مستقبل الأمة الإسلامية سيقع على عاتق هؤلاء الشباب.

ووعلى الرغم من كثرة المؤلفات التي تركز الحاجة إلى توفير أكثر تكاملاً للتعليم الإسلامي فقد اكتشفنا من خلال مراجعتنا المستفزة للمؤلفات المتاحة عدم وجود دراسات كبيرة في مجال تعليم التكنولوجيا في المناهج التعليمية النبوية. وفي خلال الفترة من عام 2010 وحتى عام 2012 فقد قمنا بزيارة اثني عشر مدرسة ثانوية إسلامية في ماليزيا واثني عشر مدرسة في إندونيسيا وخمسة مدارس في جنوب تايلاند ومدرسة واحدة على الأقل في كل من بروني وسنغافورة ومكسيكو وأوراطيبورو على الغرب. وقد وجدنا من خلال ملاحظاتنا ومقابلاتنا مع المعلمين وأعضاء مجلس الإدارة والمعلمين والطلاب من خلال تحليلاتنا لعدد كبير من المناهج والمقرر والمراجع.

والآباء في المدارس التي قمنا بزيارتها وكذلك من خلال تحليلنا لعدد كبير من المناهج والمقررات والمراجع (اللغة الماليزية والأدبية واللغوية والأدبية) ويشير النشط الي البحرين في المجتمعات المختلفة. في الفترة من 2002 وحتى 2006 والتي قمنا بجمعها من المناهج التي زارناها فقد أظهر كل ذلك نسبة ضئيلة جدًا من دمج المفهوم العالمي القرآني في عملية تدريس علوم الطبيعة أو في المناهج والمقررات والبرامج الخاصة بتعليم علوم الطبيعة وإن كانت المدارس الثانوية بيئة تعليمية في مدارس الأمة الإسلامية في علم الطبيعة.

تعتبر المقالة باختصار أربعة أسس رئيسية لأهمية نظرية الله في علوم الطبيعة وهو: (أ) التعاليم الموجودة في القرآن (ب) تجاهل الكثير من الآباء المتأخرة في المنهج الحديث (ج) النظرة الطبيعية والفلسفية والمكانيكية للعلم الحديث والمنتديات الغربية عليها، (د) السياق المعاصر للإنسانية والبيئة التي تنتمي بطريقة مباشرة أو غير مباشرة من مثل هذه العلوم. توضح هذه المقالة العناصر الأساسية للنظرة العالمية للقرآن فيما يتعلق بدراسات الطبيعة وعلم قراءة آيات الله في كل من ذلك في ذلك المنتج المثير للإجابة على المناقشات في العالم والعالم في هذين البابين. وأخيرًا، الرغبة في ذلك فقد تميز الأعلام في المناقشات إلى كل من - ليس على سبيل التحديد - علم وما رواة الطبيعة القرآن، وعلوم الإلهيات، والكون والإنسان، ونظرية المعرفة والغائب، والعلم، وعلم الأخرويات، وهذه هي مفاهيم العبودية والخلافة الإنسانية وتدبير الله وتكبيره وتفسيره في الكون.

ونقد أكد عدد من العلماء والشخصيات العامة المعاصرة من المسلمين وغير المسلمين على الحاجة إلى أباد حل إيماني وتحيز. ومن بين هؤلاء مثال هانس كونغ الذي أكد أن هذا الأمر هو مهم للمسلمين والمسيحيين. ولهذا النهاية حول العلم العربي المعاصر فقد واجه المقالة باختصار العديد من المشاكل التي تحتاج إلى تصحيح وإعادة تفسير أو إعادة توجيه. ولذا، أثرت هذه المقالة على الفهم العالمي للقرآن، وهو ما يعكس سبب جمع المدخلات المتعددة على ذلك مثل أفكار الطبيعة غير المخولة وغير القابلة للنافذ المادي والطائفة والطبيعة الخلقية والطبيعة الإنسانية. ومن بين الأمور التي تم مناقشتها هي الأهمية ذات الأهمية.
This article presents a model for teaching and learning natural sciences based on the Quranic concept. This model is intended for secondary education schools where specific aspects of natural sciences are re-interpreted, re-taught, and guided in a wise and comprehensive manner, which is naturally consistent with the Quranic worldview. Despite the material limitations faced by this article, which prevent a comprehensive coverage of the above aspects, we briefly discussed some of them. The article refers to the practice of this approach not being completely new compared to what Muslims did before; it is merely a new way of re-composing, interpreting, and guiding the first when they studied ancient authors based on Quranic characteristics and successfully developed a great cultural atmosphere of sciences which is one of the main signs of Islamic civilization. The article warns against the partial methods commonly tried to combine this model, which are incorrect approaches. We used, in building this model, the method of Imam Ghazali and his discussion on the heart. Ghazali stated that the heart is a spiritual matter, a harmonious synthesis between the spirit, soul, and mind within itself. Therefore, the heart needs to be purified.

Kayıntılar/References


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