

TOWARD BRIDGING ISLAMIC REVEALED KNOWLEDGE AND MODERN SCIENCES IN INSTITUTION OF HIGHER LEARNING A PRELIMINARY STUDY

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Abstract

The process of bridging the Islamic revealed knowledge and modern sciences by proper educational method is a very important aspect in higher learning institution. In Islam, the idea of harmony and unity of religion and science is very much cherished. The harmony between religion and science is a major characteristic of Islamic civilization which develops and generates the human knowledge. In Islamic civilization, science was born in the cradle of religion. More precisely, it was born in the cradle of monotheism – belief in the one true God – or what Muslims traditionally love to call al-tawhīd, which literally means unity. Islamic science grew and developed to become the most creative and the most advanced in the world for centuries until the seventeenth century, thanks to its nourishment by the teachings of monotheism or al-tawhīd, which is at the heart of religion. This paper will focus on the religious sciences of the revealed knowledge which gives birth to the scientific spirit in its most comprehensive sense as we know it today. The origin and development of the scientific spirit in Islam differs from that in the West. Therefore, this paper is trying to give the answers from the Institution of higher learning approach which caters introduction, the Concept of bridging of knowledge, science and Islamic revealed knowledge: rational approach, bridging between Islamic revealed knowledge and modern science, history: classical science in the Muslim world, arrival of modern science in the Muslim world and conclusion.

Keywords: revealed knowledge, bridging, religion and modern science, higher learning

1. Introduction

Early Muslim scholars in the history of Islamic civilization have developed a spectrum of viewpoints on science within the context of Islam.¹ In fact, Al-Qur'ān allows for much interpretation when it comes to science. Scientists of medieval Muslim civilization (e.g. Ibn al-Haytham) contributed to the new discoveries of science from the eighth to fifteenth century, Muslim astronomers and mathematicians such as Al-Khawarizmi furthered the development of almost all areas of mathematics, and Ibnu Sina invented surgical instruments for various medical applications. However, concerns have been raised about the lack of scientific literacy in parts of the modern Muslim world.²

Muslim scholars have claimed that the Qur'ān made prescient statements about scientific phenomena that were later confirmed by scientific research, for instance the structure of the embryo, our solar system, and the creation of the universe. Science in Islam makes the Qur'ān as the basis of evidence and Islamic scientists often use one another as sources. Zaghoul El-Naggar said "Unlike early Christians who used science to explain scripture, Muslims pursued science with an underlying assumption of confirming the Qur'ān".³ Science is often defined as the pursuit of knowledge and understanding of the natural and social world following a systematic methodology based on evidence. It is a system of acquiring knowledge based on empiricism, experimentation and methodological naturalism, as well as to the organized body of knowledge human beings have gained by such research. Scientists maintain that scientific investigation needed to adhere the scientific method; a process for evaluating empirical knowledge that explains observable events without recourse to supernatural notions.

2. The Concept of bridging of knowledge

The process of bridging of knowledge in Islam in order to develop and generate holistic knowledge by proper educational method is an important aspect in modern Muslim world. The revealed knowledge is, "relating the

¹. Haq, Syed (2009). "Science in Islam". Oxford Dictionary of the Middle Ages. ISSN 1703-7603. Retrieved 2014-10-22.

². Huff, Toby (2007). *Islam and Science*. Armonk, Ny: M.E. Sharpe, Inc. pp. 26–36. ISBN 978-0-7656-8064-8.

³. Egyptian Muslim geologist Zaghoul El-Naggar quoted in Science and Islam in Conflict Discover magazine| 06.21.2007| quote: "Modern Europe's industrial culture did not originate in Europe but in the Islamic universities of Andalusia and of the East. The principle of the experimental method was an offshoot of the Islamic concept and its explanation of the physical world, its phenomena, its forces and its secrets." From: Qutb, Sayyid, *Milestones*, p. 111. https://archive.org/stream/SayyidQutb/Milestones%20Special%20Edition_djvu.txt

verses of the al-Qur'ān al-Karīm to the situation with regard to the occasions of revelation of the verses (*asbab al-nuzul*)”.⁴ Verses were often linked to particular historical and situational events by reference to the hadith literature and the sayings, doings and approvals of the Prophet. In our own Age owing to the dominance of the western worldview, its aim is to critique, analyze and reformulate western academic disciplines in such a manner that revelation is reinstated in man's intellectual life and in fact becomes a basic source of knowledge. As for the discipline known as Islamic studies, the aim is to critically analyze the Islamic contributions to knowledge in their historical context and to make Islam relevant to the contemporary times. This endeavor is alternatively known as “contextualization” to differentiate it from the overall bridging process, which is specifically related to modern sciences. Context was not discounted entirely, but it was only applied to cases where two issues appeared to contradict one another. In such a case, the contradicted issue from modern sciences will be integrated or Islamized based on the supposition of Islamic principles and values. However, on the whole, context should only be utilized when there appeared to be a contradiction between religious sciences and modern sciences in order to resolve the crisis of the Muslim mind. This can be done by addressing the problem of establishing a proper relationship between western knowledge and Muslim intellectual tradition. Therefore, the aim of the bridging of knowledge is to provide a Muslim guidance and a methodology to confront the contemporary challenges. Another goal is to restructure Islam's glorious civilization which had been lost. This reflects an atomistic approach to the bridging of knowledge, which is an important feature of classical Muslim scholars. The process of bridging was influenced by the customs of the conquered lands. Today, a number of scholars argue that the bridging process should be implemented social and human sciences in line with the revealed knowledge in such a way that sheds light not only on the relevance to the current situation, but also in a way that defines universal principles. Those who participate in the movement for bridging of knowledge can be

⁴. The main themes of *Revealed knowledge* are *tawhid*, worship, *khilafah*, world and *Akhirah*, man and universe and their relationship, man's position and the purpose of his creation on earth, freedom of religion, expression and fundamental human rights, enhancement of man's material and spiritual and moral aspects and criteria that guide him for achieving his happiness in this world and Hereafter, no hopelessness and despair, but the desire and enthusiasm to work continuously for the success of this world and Hereafter, education reforms and integration of knowledge between revealed knowledge and human knowledge, reformation of mind, body and society, and socio-cultural-political change and struggle for self-dependent. See, Savage-Smith, Emilie (1995), "Attitudes toward Dissection in Medieval Islam", *Journal of the History of Medicine and Allied Sciences*, Oxford University Press, 50 (1): 67–110, doi:10.1093/jhmas/50.1.67, PMID 7876530.

classified into two broad categories: the theoreticians usually provide the definition, concept and principles of bridging of knowledge and describe the various steps required. The practitioners who face the challenging task for integrating their respective disciplines by following the concepts provided by the theoreticians. This approach was heralded by one of the original Islamic thinkers of the twentieth century. Muslim scholar argues that “the barriers between religious (revealed knowledge) and modern sciences must be broken down, and the ancient philosophy and religious science must be taught fully in secular schools”. Abu Ya’qub al-Kindi could be considered as one of those rare individuals who was active in postulating ideas that provide the theoretical bases for bridging of knowledge and for producing works that represent bridging in practice⁵.

2.1 Islamic revealed knowledge and Modern Science: rational approach

“The early Muslims not only adopted the rational approach but set out with enthusiasm to explain their own beliefs in rational terms. Questions related to the nature of man, his relationship to creation, his obligations and responsibilities, as well as the nature of Divine attributes were tackled”⁶. No Muslim scholar would embark on an intellectual effort unless his approach had a basis in the al-Qur’ān al-Karīm. The rationalists saw a justification for their approach in Qur’anic verses (eg: “Behold! In the creation of the heavens and the earth, there are indeed signs for a people who have wisdom”, (al-Qur’ān al-Karīm: 2,164) and in the Sunnah of the Prophet. Indeed, the Qur’an invites human reason to witness the greatness of creation and to reflect on its meaning and understand the transcendence that suffuses it. The philosophical sciences that evolved as a result of this effort are referred to as *kalam* (discourse, usually a religious discourse). Sometimes, *kalam* is vaguely translated as theology, but theology as a science never caught on Islamic learning as it did in Christianity, because the Muslims strove and succeeded in preserving the transcendence of God. Christianity adopted the position that God is knowable in person and accessible to human perception. The Muslims, despite the philosophical challenges of the Greeks, succeeded in maintaining the position that God is knowable by His names, attributes and through the majesty of His creation, whereas His transcendence is hidden by His light. Muslim scientists and technologists have for centuries pursued their scientific and technological

⁵. Moose, M. (1967). ‘Al-Kindi’s Role in the Transmission of Greek Knowledge to the Arabs’, Journal of the Pakistan Historical Society 15 (1): 3–18. Also, Incorporated from the Magazine “Islam: A Global Civilization”, prepared by Islamic Affairs Department, The Embassy of Saudi Arabia, Washington, D.C. 1999

⁶. Osman, Bakar. (2008). “Tawhid and Science Islamic Perspective on Religion and Science”, Second Edition. Arah Pendidikan, Shah Alam, Malaysia. P. 12-14

activities within a spiritual and ethical framework. There was a profound reason for their insistence on such a framework. They believed in an epistemology in which unity of science and technology and spiritual knowledge is maintained. They defended this belief by appealing to both revelation (*wahy*) and reason (*'aql*) or to both religious (*naqliy*) and intellectual (*'aqliy*) arguments. Naqliy arguments are the arguments drawn from al-Qur'ān al-Karīm, al-Hadiths and other transmitted sources. "The 'aqliy arguments, on the other hand, are the philosophical and scientific arguments obtained from measurements and reasoning. In Islamic intellectual tradition, these two types of arguments are not considered as opposed to each other but rather complementary and collaborative"⁷.

Traditional Muslim scientists and technologists generally embraced the essentially God-centric world-view dictated by the al-Qur'ān al-Karīm. "This world-view argues that reality is not limited to the world of sensory experience. Beyond the world perceptible to our physical senses there is another reality encompassing it, which is what the al-Qur'ān al-Karīm calls the 'unseen world' (*al-ghayb*)"⁸. Subtle and spiritual creatures populate this world. This non-physical world is not unconnected to the physical world in which we human beings live. The existence of the physical world and its functioning in the cosmic system depend on it. There are many verses in the al-Qur'ān al-Karīm that tell us about the connection between the sensory world and the unseen world. But it would be wrong to assume that, just because Muslim scientists believe in the unseen world on the authority of the Qur'anic revelation, they, therefore, lack a scientific spirit and a scientific frame of mind as we understand it today. For them, the unseen world is not just an object of faith. It is also an object of knowledge. Many traditional Muslim men of learning perceived that it is possible to arrive at a rational understanding of the unseen world on the basis of our knowledge of the physical world. Obviously, the traditional Islamic perception is opposite to the mainstream epistemology of science and technology in the modern world. Many contemporary scientists do not believe that there is a knowable reality beyond the physical world. Even when they do, for example, when they speak of the human mind they would argue that it has come into existence as a result of physical processes. There are contemporary scientists who believe in God, but then they look at the physical world as an autonomous reality that has no meaningful connection whatsoever

⁷. Osman Bakar. *Tawhid and Science*. P. 16. Also, Yahya, Ismail." *Integration of Religion and Science*" (www.metanexus.net).

⁸. Syed Muhammad Naquib Al-Attas, (1978). "*The Concept of Education in Islam*". (Kuala Lumpur): The International Institut of Islamic Thought and Civilization, 1991). *Aims and Objectives of Islamic Education in Islam and Secularism*, Kuala Lumpur: Muslim Youth Movement Malaysia.

with God. If the great majority of modern scientists have impoverished external reality through this kind of perceptions, it is because they have impoverished beforehand the inner reality of human cognitive powers by reducing trustworthy sources of knowledge to sensory experience and/or certain kinds of reasoning and thinking activities. It is this impoverished ontological and epistemological beliefs that have shaped the nature and characteristics of western science in the last few hundred years. “This particular kind of impoverishment has profound consequences on contemporary science and technology, many of which are with negative implications, and, through these two ‘idols’ of modern man, have affected our contemporary human civilization”⁹.

2.2 The bridging between Islamic revealed knowledge and Modern science

“In Islam, the idea of harmony and unity of religion and science is very much cherished. As we have earlier emphasized, harmony between religion and science is a major characteristic of Islamic civilization”¹⁰. In Islamic civilization, science was born in the cradle of religion. More precisely, it was born in the cradle of monotheism – belief in the one true God – or what Muslims traditionally love to call *al-tawhīd*, which literally means unity. Islamic science grew and developed to become the most creative and the most advanced in the world for centuries until the seventeenth century, thanks to its nourishment by the teachings of monotheism or *al-tawhīd*, which is at the heart of religion. In the finest moments of its history, Islamic science also owed its success to its nourishment and guide by the essential teachings of the Islamic Divine Law or the Sharī’ah. Monotheism and Divine Law, or *Tawhīd* and *Sharī’ah*, were the twin forces of scientific and technological progress, which the religion of Islam gave to the world. Insofar as *al-tawhīd* (unity) is a universal idea, we can easily find its believers outside the Islamic civilization. Sir Isaac Newton and Einstein in the West are good examples of scientists whose philosophical and scientific thinking and inquiries have been inspired by the idea of unity of reality. As for the Sharī’ah, given its negative image in the minds of many contemporary men and women, we could easily be laughed at for claiming that it has been a source of scientific and technological progress in Islam. But modern scholarship supports the claim, studies by such noted historians of Islamic science as David King and George Saliba provide ample evidence to demonstrate the creative role of the Sharī’ah in spearheading practically-oriented scientific research, particularly in the field of astronomy.

⁹. Osman, Bakar. “*Tawhid and Science*”. Op cit, p. 129.

¹⁰. Osman Bakar, *Tawhid and Science*”. p 132. Also. Yahya, Ismail. “*Integration of Religion and Science*”. P 2-4

These studies also demonstrate the unity of religion and science at the level of law and ethics. More generally, it could be maintained that the revealed teachings of the Sharī'ah contributed to the origin, development and progress of science in Islam in at least three main respects¹¹. First, the religious sciences of the Sharī'ah helped to give birth to the scientific spirit in its most comprehensive sense as we know it today. The origin and development of the scientific spirit in Islam differs from that in the West. In Islam this spirit was first demonstrated in the religious sciences. In the modern West it was conceived in rebellion against religion. Many modern scholars attributed the origin of Islam's scientific spirit to the foreign sciences it inherited especially from the Greeks. A study of the early Islamic religious sciences, however, would reveal that by the time Muslims became deeply interested in the Greek philosophical and scientific heritage in the ninth century CE/third century AH, they were already in possession of a scientific attitude and a scientific frame of mind, which they had inherited from the religious sciences.

Second, the Qur'ānic idea of God as the Law- or Sharī'ah-Giver helps to create a scientific culture in which there is no cleavage between the "laws of nature" and the "laws of God" as to be found in the modern West. On the contrary, there is unity of laws of nature and the revealed Law of religion. This is because the "laws of nature" too are divine laws. God manifests His Will both in the cosmos and in human societies through laws. In the human domain God has prescribed a Sharī'ah for every people. The Islamic Sharī'ah is only the last to be revealed. Some Muslim scholars in the past have referred the different Divine Laws revealed to different branches of mankind at different points of time in human history as *nawamis al-anbiya'* ('Laws of the Prophets'). As for the Divine Law governing the whole of creation they refer to it as *namus al-khilqah* ("Law of Creation").

Third, there is creative role of the specific injunctions of the Sharī'ah such as the canonical daily prayers, fasting in the month of Ramadhan, payment of religious tax (zakat), and the pilgrimage to Mecca in motivating scientific studies and research. The practical need of the new and fast expanding Muslim community to follow these injunctions of the Sharī'ah necessitated the determination of the times of daily prayers and fasting, and the qiblah, the direction of prayer toward Mecca, which vary from place to place. "It is an established historical fact that the early Muslim concern with the revealed law of inheritance and the zakat institution helped to give birth to a new branch of mathematics, namely algebra. In Islam, the closely related disciplines of

¹¹. Three main respects are taken from, Osman, Bakar. Op cit. P. 189-192. See also, Osman, Bakar. (1991). "The Unity of Science and Spiritual Knowledge: The Islamic Experience," in R. Ravindra (ed.), Science and Spirit, International Cultural Foundation, New York, pp. 87-101.

astronomy, mathematics and geography have been well nourished by the various injunctions of the Shari'ah".¹²

With guidance from a higher kind of knowledge made available by divine revelation and from a higher spiritual and moral authority – which religion in fact is – science would know that its real purpose in civilized society is to complement religion in the task of helping man to fulfill his intellectual, rational and material needs in his life on earth. It is also to help man overcome social problems – which arise as a consequence of both natural disasters and human moral choice – that are within its capability and power to solve. It is not for science to compete with religion, let alone to revolt against it and replace it as it was to happen in the modern West. On the other hand, what religion needs most from science is its well tested knowledge of the natural world, which could help the spiritual teachings of religion to be more enlightened and to become better understood. According to the Muslim scholars we have mentioned, science can even contribute to our better knowledge of God. The positive views of these scholars on the harmony and unity of religion and science have no doubt been inspired by the al-Qur'an al-Karim.

The key to a genuine understanding of the unity of religion and science in the Islamic perspective is the idea of *tawhīd*. Islamic history was the proof to the pervasive role of this idea in the promotion of progress in many branches of knowledge. It is most unfortunate that such an important idea is little understood by the majority of Muslim scientists today. Equally distressing to observe is the fact that many graduates in Islamic studies have little grasp of the intimate connection between *tawhīd* and progress in knowledge, particularly science, in the history of Islamic civilization. This distressing situation among Muslims today needs to be corrected. A correct understanding of *tawhīd* and its role in the progress of scientific ideas and other kinds of knowledge need to be presented in contemporary language to our students and younger generation of scientists. In particular, we Muslims today need to know how Muslim scholars and scientists in the past applied the principle of *tawhīd* to their scientific thinking and research to the point of being able to create a healthy and balanced scientific culture. We need to learn lessons from our past history.

Understanding Islam's core teachings on knowledge and their implications for science and technology, Islam is at once a religion (*din*), a community (*ummah*), and a civilization (*hadarah; tamaddun*). In all three

¹². Faruqi, Ismail R, (1986). *The Cultural Atlas of Islam*, McMillan Publishing Company. Osman, Bakar. (1991). "The Unity of Science and Spiritual Knowledge: The Islamic Experience," in R. Ravindra (ed.), *Science and Spirit*, International Cultural Foundation, New York, pp. 87-101.

senses, Islam is a source of unique perspectives on bridging the science, technology, spirituality, and ethics. As a religion, Islam upholds knowledge as the key to both individual and societal salvation. With the idea of unity of reality and knowledge as a guiding principle it refuses to entertain any distinction between the religious and the secular in the realm of knowledge. “Science and technology are as relevant as the so-called religious sciences to the human pursuit of the divine”¹³.

As a community founded on the idea of the Prophet Muhammad Shallalāhu ‘alaihi wasallam, Islam stresses on the Divine Law (al-Sharī’ah) contained in the al-Qur’ān al-Karīm as the most important source of ethics to guide human actions in all sectors of personal and public life. This Law is generally viewed as not only all-embracing in the scope of its applications but also as dynamic enough to be adaptable to the changing needs of space and time. Science and technology are to be regulated by ethics embodied in this Law. As a civilization, Islam seeks to promote the interests of all humanity by standing up for the perspectives of universalism, the common good and inter-faith understanding. As so many of Islam’s thinkers have asserted over the centuries, science and technology are the most powerful and the most enduring universal elements in human civilization and should be pursued for the sake of our common good and inter-faith peace. “Given Islam’s emphasis on universalism, the common good and inter-faith understanding, it is not surprising that it was in the Islamic civilization that we first find a multi-religious and multi-cultural collaborative research in science and technology”.¹⁴

We now proceed to discuss each of these three dimensions of Islam in detail. Much has been discussing about the religion of Islam as a “complete way of life” and as a way of doing things. But relatively little has been talking about Islam as a religion of knowledge. It is this dimension of Islam that needs to be presented in its breadths and depths to the contemporary world. Through a correct understanding of this dimension of Islam we would be able to understand better Islam’s attitudes toward science and technology. The term for ‘religion of knowledge’ is not found in the al-Qur’ān al-Karīm. However, there is a verse in which the al-Qur’ān al-Karīm describes Islam as ‘the religion of truth’ (*din al-haqq*). Says the al-Qur’ān al-Karīm: “It is He who has sent His messenger with guidance and the religion of truth (*din al-haqq*) that he may proclaim it over all religion even though the pagans may detest it.” The position of Islam as the religion of truth implies that it is also a religion of

¹³. La’li, Mahdi (2007). *A Comprehensive Exploration of the Scientific Miracles in Holy Qur’ān*. Trafford Publishing. p. 17. ISBN 978-1-4120-1443-4. Retrieved 18 April 2019. Osman, Bakar. *Tawhid and Science*. p. 123-124

¹⁴. Osman Bakar, 1986. “*The Meaning and Significance of Doubt in al-Ghazzali’s Philosophy*,” *The Islamic Quarterly*, 30:1 (1986), pp. 20-31.

knowledge. Philosophically speaking, truth implies knowledge. Human knowledge is possible because there are objective truths and realities that man can know through his cognitive powers. Otherwise, no human knowledge would be possible. To be in possession of truths is to have knowledge of all kinds of things. We may advance many other arguments in support of the idea of Islam as the religion of knowledge. Here below we mention only eight more of these arguments¹⁵:

[1] The al-Qur'ān al-Karīm makes knowledge the criterion of superiority of man over all other creatures, including the angels. In the passage on God's appointment of Adam as His vicegerent (*khalifah*) on the planet Earth, it is stated that the angels were told of the fact that God has taught Adam the names of all things, which many commentators of the al-Qur'ān al-Karīm have understood as meaning 'the natures of all things.' It was upon their realization of the superiority of Adam in knowledge that the angels bowed down to him.

[2] The five verses contained in the maiden revelation to the Prophet Muhammad in Mecca concern knowledge. One could say that these verses sum up the traditional Islamic view of reality and knowledge. Man should pursue knowledge (through reading) in the Name of God, which we understand to mean in its profoundest sense as 'seeking knowledge with a full awareness of the Divine Reality.' We human beings should always be conscious of God when pursuing knowledge. It is on the basis of our knowledge of God that we should acquire knowledge of everything else. From the Islamic point of view, therefore, science needs a context. The ontological context of science in Islam is the affirmation of Divine Reality, which is contrary to the ontological belief of modern science. Two types of knowledge are specifically mentioned in these verses. One is knowledge of God, the other knowledge of man. God is introduced in the verses as Lord (*rabb*) who created (*khalaqa*) man and taught (*'allama*) him knowledge and as the Most Bountiful (*al-akram*). Through these Divine Attributes and Acts revelation introduced us to knowledge of Divine Reality. Man is depicted as a creature of lowly origin as he was created from a clot of congealed blood, but who emerged to become a sentient being thanks to the intellect-reason (as symbolized by the Pen) God has given him. God is humanity's best teacher and the best human instrument of knowledge is the

¹⁵. The points are taken from, Osman, Bakar. (1994). "*Knowledge of Divine Unity (tawhid) on the Basis of Scientific Knowledge*". See, Ismail Ibrahim & Mohd Sahri Abdul Rahman (eds.), *Knowledge and Excellence in Islamic Perspective*, Institute of Islamic Understanding (IKIM), Kuala Lumpur, pp. 1-9.

intellect. Clearly we see in these verses the Qur'an's first illustration of the unity of science and spiritual knowledge.

[3] In many verses of the al-Qur'an al-Karim, man is commanded to make use in the wisest manner of all the instruments of knowledge that God has given him, namely his five physical senses, intellect-reason (*'aql*), heart (*qalb*) and his faculty of understanding (*fu'ad*). Man is reminded to be thankful to God for all the instruments of knowledge in his possession.

[4] According to the Prophet Muhammad, knowledge (*'ilm*) is the lost property of a Muslim. Wherever he finds it, he should take it. In another hadith, the Prophet similarly speaks of wisdom (*hikmah*) as the lost property of a believer (*mu'min*). Likewise, wherever he finds it he should take it.

[5] The Prophet reminded the Muslims that seeking knowledge is obligatory upon them, both males and females.

[6] Of all the sacred scriptures of the world the al-Qur'an al-Karim mentions knowledge the most often. The word 'ilm (in its various derivative forms), which refers to both divine and human attributes, is mentioned more than 750 times in the Qur'an. Then there are words related to ma'rifah and hikmah which also convey the meaning of certain types or forms of knowledge. In short, the al-Qur'an al-Karim is impregnated with words pertaining to knowledge, thus emphasizing its importance in the teachings of the Book.

[7] The Prophet commanded the Muslims to seek knowledge from the cradle to the grave. He also commanded them to seek knowledge as far away as China.

[8] The Prophet reminded the Muslims that success in life in this world requires knowledge. Likewise, success in life in the hereafter requires knowledge as well.¹⁶

The above arguments also show that for Muslims, the al-Qur'an al-Karim is the most important source of guidance in the domain of knowledge. Muslims believe that the al-Qur'an al-Karim contains the principles of all sciences. They also believe that the al-Qur'an al-Karim affirms the supreme role of knowledge in ordering human life and thought and delivering success. In viewing knowledge as the key to human salvation and to human happiness in this world and in the afterlife, it is important to point to the kind of knowledge that plays this saving function. Obviously not just any kind of knowledge is efficacious enough to play this role. "In the view of many traditional Muslim scholars, a knowledge that saves must be sacred in nature. In Islam, however, sacredness

¹⁶. For more detail see, Osman, Bakar. "Tawhid and Science".p. 149-156. Al-Kindi, *Fi al-Falsafa al-ula* (On First Philosophy), ed. and trans. A. L. Ivry, *Al-Kindi's Metaphysics: A translation of Ya'qub ibn Ishaq al-Kindi's Treatise 'On First Philosophy'*, Albany, NY: State University of New York Press, 1974. P: 28-30.

of knowledge is not defined in terms of primacy of revelation over reason”¹⁷. Not just revealed knowledge is regarded as sacred. Among Muslim philosophers and scientists in particular there is the conviction that human knowledge acquired through the use of reason could be considered as sacred if it fulfills certain conditions. By “sacred knowledge” they mean knowledge that is related in some way to God, pursued in the Name of God, and used and applied in the Name of God. As Muslims generally see it, human knowledge, including science, possesses a sacred character since they see God as the ultimate source of all knowledge regardless of whether human beings acquire it empirically or otherwise. Their view finds support in the al-Qur’ān al-Karīm. The al-Qur’ān al-Karīm speaks of God as the All-Knower and the giver of knowledge to human beings through various avenues ranging from physical senses to intellectual reflection, the interpretation of dreams to divine revelation. The Muslim idea of sacred knowledge is also affirmed by the first revelation the Prophet Muhammad Shallalāhu ‘alaihi wasallam received discussed earlier. In the Islamic view, the core of spiritual knowledge is knowledge of the Divine Reality, which is what al-tawhīd is essentially all about. This means that it is knowledge of the Divine Reality that would serve as the spiritual foundation of scientific knowledge. But the question many people ask in connection to this is ‘can we know God?’¹⁸ Islam is emphatic in acknowledging that God is knowable. It maintains that the ultimate purpose of human knowledge is to know God. This objective is attainable since human knowledge of creation will lead to understand the Divine Reality, which is considered to be the highest form of knowledge possible. Muslims approach the study of different branches of knowledge, including science and technology, with this spiritual objective in mind. Scientists view their study of the natural world as a form of religious worship, but the lesser objectives of knowledge are duly recognized. Knowledge helps human beings to fulfill their rational and mental needs such as clarity of mind, certitude of thought, and rational explanations of both natural and social phenomena, as well as those material needs that can be met by technology. In the traditional Muslim pursuit of knowledge, the deepest theoretical understanding of things goes hand in hand with an earnest appreciation of their practical utility. It was the Prophet who inspired Muslims to pursue knowledge of things for both their theoretical and practical considerations. He encouraged his followers to reflect and contemplate natural phenomena pursuant to the al-Qur’ān al-Karīm with a view toward deepening the understanding of divine power and wisdom in creation.

¹⁷. Osman Bakar, (1986). “*The Meaning and Significance of Doubt in al-Ghazzali’s Philosophy*,” *The Islamic Quarterly*, 30:1 (1986), pp. 29-41.

¹⁸. Ahmad, Wahib (1990). *Pergolakan Pemikiran*. Tintamas. Surabaya. Pendahuluan

But the Prophet also compared knowledge that had no practical benefits to a tree without fruit. He often prayed to God seeking protection from “useless knowledge.” On the basis of this tradition, Muslim scholars progressively sought to articulate ideas, concepts, and theories on the broader issue of the ethics of knowledge as activities of knowledge production and applications in the new civilization expanded and became more complex. Major issues included clarifying the meanings of beneficial and harmful knowledge in the perspective of Islamic Law and determining the general criteria for each type of knowledge¹⁹.

Muslim preoccupation with the knowledge culture took many different forms. One was classification of knowledge, which proved to be a good way of keeping track the state of knowledge at any given time. “Classification of knowledge divided the sciences into thematic groups of well-defined disciplines, and preserved their hierarchy. Traditional Muslim scholars dealt with several systems of classifications, the most popular of which were the classification of knowledge into the *naqliy* (transmitted) and *‘aqliy* (intellectual) categories, and into the *fard ‘ayn* (obligatory to everyone) and *fard kifayah* (obligatory to society as a whole) types”²⁰. We will discuss later these two types of obligatory knowledge in connection with scientific and technological knowledge. Sunni theologians, philosophers, scientists, historians, and jurists were represented in this unique enterprise. Such classifications had been particularly useful to the organization of educational curricula. Interestingly, there appeared to be a correlation between the rate of production of classifications of knowledge and the intensity of knowledge expansion. The interest in classifications was at its height during the era when Muslims were the most productive in terms of adding new scientific disciplines to the existing body of human knowledge. After the sixteenth century when intellectual and scientific innovations began to decline in most parts of the Islamic world, work on classifications dropped sharply. “The fact that hardly any work has appeared on the subject since the eighteenth century testifies to the reduced importance of the role of knowledge among Muslims in the last one century”²¹.

¹⁹. Fancy, Nahyan A. G. (2006), “*Pulmonary Transit and Bodily Resurrection: The Interaction of Medicine, Philosophy and Religion in the Works of Ibn al-Nafīs* (d. 1288)”, Electronic Theses and Dissertations, University of Notre Dame: 232–33. *Al-Kindi, Rasa’il al-Kindi al-falsafiyah* (Philosophical Treatises of al-Kindi), ed. M.A. Abu Ridah, 2 vols in 1, Cairo, 1953. P: 123

²⁰. Osman Bakar, (1999). *Classification of knowledge in Islam: a study in Islamic Philosophies of Science*. The Islamic Texts Society, Cambridge, United Kingdom. P: 134-135

²¹. Osman, Bakar. Op cit. p.134-136. Also, Osman Bakar, 1986. “*The Meaning and Significance of Doubt in al-Ghazzali’s Philosophy*,” *The Islamic Quarterly*, 30:1 (1986), pp. 20-31.

A Muslim classification of knowledge of any period reveals a great deal about the knowledge culture of the period in question, including its characteristics and achievements. Among the things it reveals is whether or not new branches of knowledge have been added since the last classification was written. It is also clear from past classifications that Muslims were concerned with the need for a balanced approach to both theoretical and practical knowledge. In addition, Muslims accord relative importance to each science in the context of human knowledge as a whole. Scholars generally use three criteria to determine the epistemic position of each science in what is traditionally called the hierarchy of knowledge. The criteria are defined in terms of the relative excellence of the objects of study, methods of study, and benefits of study. Some sciences may be viewed as more laudable than others on the basis of one or more of these criteria. The greatest science in light of the three criteria is the science of God or theology in the true sense of the word.

3. Examples from the Islamic perspective of science

3.1 Creation of the universe

The Qur'ān contains many verses describing creation of the universe; Muslims believe God created the heavens and earth in six days;[7:54] the earth was created in two days,[41:9] and in two other days (into a total of four) God furnished the creation of the earth with mountains, rivers and fruit-gardens[41:10]. The heavens and earth formed from one mass which had to be split [21:30], the heavens used to be smoke [41:11], and form layers, one above the other [67:3]. The angels inhabit the seven heavens. The lowest heaven is adorned with lights [41:12], the sun and the moon (which follow a regular path) [71:16][14:33], the stars[37:6] and the constellations of the Zodiac[15:16].

3.2 Modern medicine

An example of where earlier beliefs founded on interpretations of the Qur'ān changed following the introduction of modern technology/science to the Muslim world, is knowledge of the gender of an unborn baby, made possible by ultrasound technology. According to Nidhal Guessoum, "for a long time Muslims believed, on the basis on their literal understanding of some Qur'ānic verses, that the gender of an unborn baby is only known to God", i.e. *ghayb*. Ultrasound technology, "led many Muslims to realize that first-degree readings of the Qur'ān can lead to contradictions and predicaments".

3.3 Classical science in the Muslim world

Science in medieval Islam, Islamic cosmology, Astronomy in medieval Islam, Mathematics in medieval Islam, Physics in medieval Islam, and

Medicine in medieval Islam. According to many historians, science in the Muslim civilization flourished during the middle Ages, but began declining at some time around the 14th to 16th centuries. At least some scholars blame this on the "rise of a clerical faction which froze this same science and withered its progress." Examples of conflicts with prevailing interpretations of Islam and science – or at least the fruits of science – thereafter include the demolition of Taqi al-Din's great Constantinople observatory in Galata, "comparable in its technical equipment and its specialist personnel with that of his celebrated contemporary, the Danish astronomer Tycho Brahe." But while Brahe's observatory "opened the way to a vast new development of astronomical science," Taqi al-Din's was demolished by a squad of Janissaries, "by order of the sultan, on the recommendation of the Chief Mufti," sometime after 1577 CE.

4. Arrival of modern science in the Muslim world

At the beginning of the nineteenth century, modern science arrived in the Muslim world but it was not the science itself that affected Muslim scholars. Rather, it "was the transfer of various philosophical currents entangled with science that had a profound effect on the minds of Muslim scientists and intellectuals. Schools like Positivism and Darwinism penetrated the Muslim world and dominated its academic circles and had a noticeable impact on some Islamic theological doctrines."²² There were different responses to this among the Muslim scholars: These reactions, in words of Professor Mehdi Golshani, were the following: Some rejected modern science as corrupt foreign thought, considering it incompatible with Islamic teachings, and in their view, the only remedy for the stagnancy of Islamic societies would be the strict following of Islamic teachings. Other thinkers in the Muslim world saw science as the only source of real enlightenment and advocated the complete adoption of modern science. In their view, the only remedy for the stagnation of Muslim societies would be the mastery of modern science and the replacement of the religious world view by the scientific worldview. The majority of faithful Muslim scientists tried to adapt Islam to the findings of modern science; they can be categorized in the following subgroups: (a) Some Muslim thinkers attempted to justify modern science on religious grounds. Their motivation was to encourage Muslim societies to acquire modern knowledge and to safeguard their societies from the criticism of Orientalists and Muslim intellectuals. (b) Others tried to show that all important scientific discoveries had been predicted in the Qur'ān and Islamic tradition and appealed

²². Huff, Toby (2007). *Islam and Science*. Armonk, Ny: M.E. Sharpe, Inc. pp. 26–36. ISBN 978-0-7656-8064-8.

to modern science to explain various aspects of faith. (c) Yet other scholars advocated a re-interpretation of Islam. In their view, one must try to construct a new theology that can establish a viable relation between Islam and modern science.²³ The Indian scholar, Sayyid Ahmad Khan, sought a theology of nature through which one could re-interpret the basic principles of Islam in the light of modern science. (d) Then there were some Muslim scholars who believed that empirical science had reached the same conclusions that prophets had been advocating several thousand years ago. The revelation had only the privilege of prophecy.

During the twentieth century, the Islamic world was introduced to modern science. This was able to occur due to the expansion of educational systems, for example, 1900 in Istanbul and 1925 Cairo opened universities. Unlike some of the discords between science and Islam in the past, the concerns for some of the modern students were different. This discord for Islam was naturalism and social Darwinism, which challenged some beliefs. On the other hand, there was a new light into thinking of the harmony between science and Islam. An example is the study of Kudsî of Baku, looking at astronomy with religious implications, this occurred in the mid-nineteenth century. This allowed him to connect he discovers from what he knew from the Qur'an. These included "the creation of the universe and the beginning of like; in the second part, with doomsday and the end of the world; and the third was the resurrection after death" here is a passage in the Qur'an that is made by God about modern science, that they should be congruent with the truth attained by modern science, "hence they should be both in agreement and concordant with the findings of modern science". This passage however, was used more often during the time where 'modern science' was full of different discoveries. However, many scientist thinkers through the Islamic word still take this passage to heart when it come to their work. However, many scientist thinkers through the Islamic word still take this passage to heart when it come to their work. However, there are also some strong believers that with modern viewpoints such as social Darwinism challenged all medieval world views, including that of Islam. Some didn't even want to be affiliated with modern science, and thought it was just an outside look into Islam. Many followers who tend to see the problems with the bridging of Islam and science, there are many that still stand by the viewpoints of Ibn Hanbal (855). That the meaning of science is also knowledge, that of many different aspects. There is a sense of

²³. Savage-Smith, Emilie (1995), "*Attitudes Toward Dissection in Medieval Islam*", *Journal of the History of Medicine and Allied Sciences*, Oxford University Press, 50 (1): 67–110, doi:10.1093/jhmas/50.1.67, PMID

7876530https://archive.org/stream/SayyidQutb/Milestones%20Special%20Edition_djvu.txt

wonder, an open mind that allows for people to have both religious values and scientific thought. Along with positive outlooks on modern science is the Islamic world, there are many negative ones as well. It has become the idea for some that the practice of modern science, is that of studying Western science. A large issue that concerns those who don't believe in the study of Western science, is where the knowledge originated. For Muslims the knowledge comes from God, not from human definition of forms of knowledge. An example of this in the Islamic world is that of modern physics. Modern physics is considered to be Western instead of an international study. Islam values claim "knowledge of reality based not on reason alone, but also on revelation and inspiration"²⁴. The ideals of modern science contradict these views and many criticisms of modern science come from the value systems that some modern scientists up hold.

5. Science and religious practice

“Scientific methods have been historically applied to find solutions to the technical exigencies of Islamic religious rituals, which is a characteristic of Islam that sets it apart from other religions”.²⁵ These ritual considerations include a lunar calendar, definition of prayer times based on the position of the sun, and a direction of prayer set at a specific location. Scientific methods have also been applied to Islamic laws governing the distribution of inheritances and to Islamic decorative arts. Some of these problems were tackled by both medieval scientists of the Islamic world and scholars of Islamic law. Though these two groups generally used different methods, there is little evidence of serious controversy between them on these subjects, with the exception of the criticism leveled by religious scholars at the methods of astronomy due to its association with astrology. In recent years, the lagging of the Muslim world in science is manifest in the disproportionately small amount of scientific output as measured by citations of articles published in internationally circulating science journals, annual expenditures on research and development, and numbers of research scientists and engineers. Concern has been raised that the contemporary Muslim world suffers from scientific illiteracy. Skepticism of science among some Muslims is reflected in issues such as resistance in Muslim northern Nigeria to polio inoculation, which some believe is "an imaginary thing created in the West or it is a ploy to get us to submit to this evil agenda." Also, in Pakistan, a small number of post-graduate physics students have been known to blame earthquakes on "sinfulness, moral laxity, deviation

²⁴. Nidhal Guessoum (2010). *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*. I.B.Tauris. p. 174. ISBN 978-1848855175.

²⁵. Ali, Shamsheer. "Science and the Qur'an" (PDF). In Oliver Leaman (ed). (2018). *The Qur'an: An Encyclopedia*. p. 572.

from the Islamic true path," while "only a couple of muffled voices supported the scientific view that earthquakes are a natural phenomenon unaffected by human activity." Muslim scientists and scholars have subsequently developed a spectrum of viewpoints on the place of scientific learning within the context of Islam.

The conflicts between these two ideas can become quite complicated. On argument is, "Muslims must be able to maintain the traditional Islamic intellectual space for the legitimate continuation of the Islamic view of the nature of reality to which Islamic ethics corresponds, without denying the legitimacy of modern science within their own confines". With the large conflicting ideas coming into the light, that helped to continue the decline of Islam and science. While science in the modern Islamic world, is quite popular there are still many Western values that are associated with it. Engineering is one of the most popular career choices of Middle Eastern students. With this huge popularity with engineering, which could be argued as one science that would work in conjunction to religion, the Natural sciences have not been fully institutionalized in predominately Islamic countries.

6. Toward bridging between Islamic Revealed knowledge and Modern sciences: Institution of higher learning's approach

Some points to be highlighted in order to know the bridging between Islamic Revealed knowledge and Modern sciences, namely are:

1. To examine the reasons for the divergence and differences between various branches of educational system in order to constitute true civilization.
2. To analyze critically madrasah education (traditional religious schools) and restructure completely its curriculum in order to integrate the modern education into the corpus of Islamic legacy by amending, reinterpreting and adapting its components on the basis of the Islamic worldview and its characteristics.
3. To merge the three main branches of the educational systems: The madaris/ma'ahid or traditional religious schools, the maktabah or new secular schools and Sufi schools for making one stream of education.
4. To incorporate the three dimensional elements into curriculum of educational institutions, which are material dimension, spiritual dimension and moral dimension.
5. To use three languages as the medium of instruction of education, called "tri-lingual", Arabic, English and Malay with Arabic being compulsory and emphasis given on native language.
6. To value Islam as the master and guide of sciences and the father of all true knowledge in order to make closer Ulama (Islamic scholars) with Europeans who believe that there is a clash and contradiction between externals of Islam and certain matters of science.

7. To emphasize on establishing the universities in Institution of higher learning where the religious sciences (Revealed Knowledge) and modern sciences would be taught side by side and “combined them”.

8. To formulate new measures to meet the demands of the times, and to remove the false ideas, which caused feelings of hopelessness and despair and shutting the door of progress and civilization.

Emphasizing on religion and science, Islam urged critical evaluation and assessment of both the religious and science education. He also argued that the traditional Muslim scholarship should be modified if it is inadequate from the vantage point of the al-Qur’ān al-Karīm and Sunnah and their relevance to the problems of the current age. For strengthening his argument, he explained that “The religious sciences are the light of the conscience and modern sciences are the light of the reason”.²⁶ His emphasis was to make one stream of educational system that leads to the real progress of the nation and community. For the Bridging of knowledge, Islam emphasized on assessment of religious sciences as well as modern sciences. The purpose of such review is to ingrate the modern sciences into the corpus of the Islamic legacy by amending, modifying, reinterpreting and adapting its components on the basis of the Islamic worldview and its characteristics. Wholesale rejection of modern science and wholesale glorification of traditional Islamic scholarship both are wrong perception because rationally educated scholars consider traditionally trained-scholars as an ignorant, unreliable and unable to discover the relevance of this heritage to the current problem. The traditionally trained-scholars accused the farmer weakness in beliefs and incapability to understand the classical literatures. His reformation aims to facilitate the restructuring of life and institutions of the provinces, which serve to strengthen the unity of Empire as well as the unity of the ummah. It also saves Islam from the bigotry, racism, prejudice, superstitions, and false beliefs, which have encrusted part of them over the centuries. It would also be a way towards understanding the relationship and purpose between science and religion. He assumed that this bridging would “open the door to spreading the beneficial aspects of constitutionalism.”²⁷ On a wider scale, the Islamic High Institutions (IHI) would unite the three traditions in the educational system by representing “the

²⁶. Ahmed, Nazeer, (2003). *Islam in Global History*, Vol.1, Suhail Academy, Lahore, Pakistan. See also, Adi Setia (2004), "Fakhr Al-Din Al-Razi on Physics and the Nature of the Physical World: A preliminary Survey", *Islam & Science*, 2, archived from the original on 2012-07-10, retrieved 2010-03-02.

²⁷. *Integration of Knowledge in Theory and Practice: The Contribution of Bediuzzaman Said Nursi*. (2010). Journal, Department of General Studies, Faculty of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

28. Ibid

most superior maktabah by the reason, the very best madrasah by the heart, and the most sacred philosopher/sufi by the conscience”. As a result of its unique value for the Islamic world, it would in time gain financial independence by reason of the donations and pious bequests, it would receive by religion. Both will produce high qualitative intellectuals. During his time, there were three main branches of educational institutions, namely, the Islamic schools or traditional religious schools, the makatib or new secular schools, and the ways (*taraiq*) or Sufi disciplines, existed in the society. The heart of revealed knowledge’s proposals lay in reconciling the three main branches into one. The embodiment of this rapprochement was the *Dar al-Hikmah*. Islam attached the greatest importance in establishing this university where the religious sciences and modern sciences would be taught side by side and “combined”, and pursued it till the end of his days. The role of the *Islamic High Institutions* was to secure the unity of the Empire and it acts as the center of the eastern Islamic world. The general principles of it represented were applicable to all madaris. In another work, *Münâzarat*, Islam wished for Islam to function like a consultative council, that is to say, through the mutual consultation (*munadharah*) of “the three divisions of the army of Islamic education”, those of the madaris/ma’ahid (pesantren), the makatibs, and the philosopher, so that “each would complete the deficiencies of the other”. His aim was for the Islamic High Institutions to be an embodiment of this. Another proposal was given by him is to restructure completely madaris education in line with the demand of times and necessity of the society. These consisted of what might be described as the democratization of the madaris system, and its diversification so that “the rule of the division of labor” could be applied²⁸.

For preventing a blind imitation and exchanging public ideas and opinions, Islam observed that there were Muslims who had a blind imitation towards the previous scholars and teachings of Islam without knowing the relevantness of the issues, while another groups accepted and followed blindly the Western values and ideologies such as secularism and materialism without verification. In order to overcome from this turmoil situation, Islam proposed to have a discussion between students and Ulama and exchange their ideas and opinions in accordance with the needs of the society. He believed that there was “scholastic despotism”, and “an offspring of political despotism”, which has opened the way to blind imitation (*taqlid*), and barred the way to searching for the truth. In order to solve the problems of the modern age, he proposed two scientific and practical methods; one is “constitutionalism among the ‘ulama” should be established “in the ‘ulama state.” The second is the prevalent ideas should be emerged through the debate and exchange of ideas between students

of varying disciplines and Masters. Islam predicted that this would provide a strong stimulation and incentive for progress and development. Thus, “Just as public opinion predominates in the state, so too should the prevailing opinions of the ‘ulama be mufti, and the prevailing opinions of the students be master and teacher.”²⁹”

Furthermore, for establishing one stream of education, Islam joined as a member to Dar al-Hikmah, Islamic pesantren in Indonesia and Malaysia established for motivating the government as well as intellectuals. The aim of this body was to find solutions for problems confronting the Islamic world, to answer in a scholarly manner the attacks made by oppositions on it, to combat those who attempted to discredit the religion of Islam and it had the power to refer the open flouting of Islamic morality to the relevant authorities. Hence, it was to serve the Muslim people of Iraq, answering questions, informing those concerning internal and external dangers, and generally meeting their religious needs with various publications. Most of the members of the body were prominent ‘ulama, and were divided into three major areas such as jurisprudence (*fiqh*), ethics (*akhlaq*), and theology (*kalâm*).

6.1 The Islamic High learning Institutions with integrated approach

Islam was aware about the problem of education during his lifetime. He perceived that without identifying shortcomings and revamping the existing educational system, it is impossible to change the mindset of the Ummah and to develop the nation. He realized that the entire system of education must be reformed. For reformation, he proposed to reform all educational levels; elementary, secondary and university. His emphasis was to establishing *Islamic High Institutions* in the form of the University for the Bridging of knowledge, where the religious sciences and modern sciences would be taught side by side because the intellectual directions for social change are guided by the universities. His emphasis was also to restructure completely madrasah education with modern approach. This includes the democratization of the madrasah system. He observed that there was a contradiction between certain externals of Islam and certain matters of science. This false idea had caused feelings of hopelessness and despair and shut the door of Ijtihad as well progress and civilizational development. This state of affairs must be done away with. The existing dualism in education, its divergence into religious and secular education must be abolished, which produces dual citizen with hatred and distrust between ulama and scientists because ulama believed that there are basic differences between two systems. He exemplified that the sciences of

²⁹. *Integration of Knowledge in Theory and Practice: The Contribution of Bediuzzaman Said Nursi*. (2010). Journal, Department of General Studies, Faculty of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

religion are the light of the conscience, and the modern sciences are the light of the mind. The truth is manifested and reflected through the combination of the two. "The students' endeavor will take flight on those two wings". When they are separated, it leads to bigotry in the one, and doubts and skepticism in the other. The ignorance is the root cause of sicknesses afflicting the Islamic world like backwardness, poverty, and conflict. The future sovereignty of nation would not lie in the sword, but in science. His emphasis was on the courage of belief, reason, and science as the Europeans are victorious through this courage. He commented³⁰: "You must forge your swords out of the substance of science, industry, and the solidarity of Qur'anic wisdom." His observation was that the existing educational system is the failure of achieving the goal. He therefore, viewed that the existing syllabus of madrasah and university do not meet the needs of students for professional knowledge that would enable them to achieve the personal advancement and material gains. He also opined that the structures of the syllabus and curriculum of the madrasah and university must be rebuilt in consonance with the requirements of Islam and modern age. The aim of his proposal was to produce a leader who able to lead the nation and society in every aspect of life according to the teachings of Islam. Islam as a complete way of life promotes Muslims to be united and living together with the peace of mind and body. For establishing the university, the high learning Institutions suggested the followings³¹:

1. The high learning Institutions would unite the three traditions in the educational system by representing the most superior maktab, ma'had (pesantren) by the reason, the best religious madrasah by heart and the most sacred *zawiyah* by the conscience. As a result of its unique value for the Islamic world, it would in time gain financial independence by reason, high moral quality by the revelation and spiritual enhancement by the self-criticism and self-awareness.

2. Religious subjects should be taught in the new secular schools (*makatib*) and that the positive sciences are taught in the religious schools (*madaris*). As a result, students who study in secular schools will be saved from

³⁰. Al-Kindi, (1953). *Fi Wahdaniya Allah wa Tunahiy Jirm al-'alam* (On the Unity of God and the Limitation of the Body of the World), ed. M. A. Abu Ridah in *Rasa'il al-Kindi al-falsafiyah*, p.129.

³¹. Klein-France, F. (1996) 'Al-Kindi', in S. H. Nasr and O. Lealman (eds) *History of Islamic Philosophy*, London: Rutledge, chi 11, 165–77. Also, Moose, M. (1967) 'Al-Kindi's Role in the Transmission of Greek Knowledge to the Arabs', *Journal of the Pakistan Historical Society* 15 (1): 3–18.

being without religion, while those in the religious schools will be saved from bigotry³².

3. The purpose of this bridging is to understand science from the Qur'anic perspective in order to prove its truths and reality. Understanding the al-Qur'ān al-Karīm should be the main aim and purpose of learning science and object of life. Thus the Qur'anic miraculousness should become the guide, teacher and master for entire humanity.

4. According to his observation, in contemporary universities where the natural, physical, mathematical, technological, social and human sciences are taught, but the religious and spiritual aspects are ignored and produced dual citizen in the society. As a result, they become either anarchists, or intellectuals who hold personal interests above everything and secure them in the shortest way.

5. Madaris education would transform from being “single faculty institutions” into being “multi-faculty” institutions and to put it into practice, “the role of division of labor” was in accordance with wisdom and the laws of creation. The failure of its practice, to his opinion, in previous centuries, had led to despotism and the exploitation of learning in the madaris, which had headed them towards destruction.

6. He stresses the need for specialization of the subject for which students have an aptitude and studying further subjects in so far as they would complement the main subject in order to gain a sufficient depth and penetrate the subject as required.

7. Arabic as the language of the al-Qur'ān al-Karīm should be introduced as a compulsory subject for understanding the teachings of the al-Qur'ān al-Karīm and Sunnah of the prophet Muhammad (peace be upon him). In the multi-racial society, his proposal was to use three languages, Arabic, Turkish, and Kurdish, with Arabic compulsory, Turkish necessary, and Kurdish optional.

8. The instrumental sciences should only not be emphasized, but the sacred sciences or religious sciences should also be too such as Tafsir, Hadith, ‘Ilm al-kalam and like should be incorporated as the part of the syllabus.

9. In educational institutions, teachers should be experts in their respective languages and fields as well as role models and practicing Muslims with a sound understanding in the al-Qur'ān al-Karīm and Sunnah. It is fact that the success of this university depend on the effective role of teachers and their contributions with their full commitments and sincerity to Islam.³³

³². *Integration of Knowledge in Theory and Practice: The Contribution of Bediuzzaman Said Nursi*. (2010). Journal, Department of General Studies, Faculty of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

³³. Ibid

10. All graduated students from Islamic High Institutions and other state universities should have equal rights and opportunities regardless languages, tribes, and nationalities in the fields of employments.

11. The teacher training schools should be established and trained teachers who taught in Islamic High Institutions and other educational institutions for a certain period. So that the order and progress of the one should pass to the other, and the virtue and religion of the other pass to the first³⁴.

12. He advised his nation to incorporate collection' into the syllabus in all educational establishments of middle and higher level and to propagate its benefits through the electronic media such as the radio and television. Such a move would also be a means of uniting the nation of Iraq particularly and the Islamic world in general³⁵.

7. Conclusion

There is no doubt that the bridging between the revealed knowledge and modern science is an important tool in reconciling the gap between scientists and religious scholars and breaking down their mystification approaches. For many Muslims, it is necessary because the inevitability and indispensability of knowledge cannot be denied. Early Muslim scholars have amazingly contributed in bridging the science and the revealed knowledge during the glory of Islamic civilization. However, concerns have been raised about the lack of scientific literacy in parts of the modern Muslim world. The issue becomes worse when some scientists who are born Muslims ignored the Islamic values in their scientific findings. Thousands of university and college graduates in Muslim society are not aware of religious and ethical values, Islamic heritage (*turāth*) and culture. The existing trend among Muslim intellectuals is that they consider the West as Centre for knowledge and unaware that the body of this secular knowledge reflects the Western values, culture and historical experience, which only emphasize on material and worldly gains and success. They are also unaware about the total denial of revelation as a source of guidance and knowledge for entire humanity. It is undeniable that the current educational system in the Muslim world is based on Western secular worldview, which makes difficult for Muslim intellectuals to get out from the crisis of mind. Based on these current situations, the trend of separating the revealed knowledge from the modern science will not benefit the Muslim nations, instead will disunite the ummah. Therefore, by bridging the

³⁴. *Integration of Knowledge in Theory and Practice: The Contribution of Bediuzzaman Said Nursi*. (2010). Journal, Department of General Studies, Faculty of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia.

³⁵. *Ibid*.

revealed knowledge and modern science, it is hoped that all graduated students from Islamic High Institutions and other state universities will have equal rights and opportunities regardless languages, tribes, and nationalities in the fields of employments. The emphasis is to establish islamic high institutions in the form of the university for bridging of knowledge where the religious sciences and modern sciences would be taught side by side because the intellectual directions for social change are guided by the universities.

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