

Islamic Epistemology and the Solution of the Education Crisis¹

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Abstract

The paper starts by summarizing basic concepts and paradigms of Islamic epistemology and methodology of research. It then discusses the current crisis of knowledge and education in the ummat whose resolution will be by Islamization of sciences. Islamization of sciences is defined as identifying biases in research methodology that reflect a non-tauhidi parochial world-view. This is followed by Islamization of the disciplines of knowledge which is reformulating basic epistemological concepts and paradigms of various disciplines from an Islamic tauhidi paradigm characterized by objectivity, istiqamat al ma'arifat, and universality, 'aalamiyyat al ma'arifat, of knowledge.

1.0 Basic Epistemological Concepts

1.1 What Is Islamic Epistemology? *nadhariyat al ma'arifat al islamiyyat*

Epistemology is the science of knowledge, *'ilm al 'ilm*. It is the study of the origin, nature, and methods of knowledge with the aim of reaching certainty. Islamic epistemology, *nadhariyyat ma'rifiyyat Islamiyyat*, is based on the *tauhidi* paradigm. Its fixed parameters are from revelation, *wahy*. Its variable parameters are conditioned by varying spatio-temporal circumstances. Its sources are revelation (Qur'an and sunnat), empirical observation and experimentation, and human reason. Its main challenge today is achieving objectivity, *al istiqamat*, which is staying on the path of truth and not being swayed by whims and desires. Istiqamat comes only next to *iman*, as the Prophet said *'qul amantu bi al laahi thumma istaqim'*.

1.2 Nature of Knowledge, *tabi'at al ma'arifat al insaniyyat*

The Qur'anic terms for knowledge are: *'ilm, ma'arifat, hikmat, basiirat, ra'ay, dhann, yaqeen, tadhkirat, shu'ur, lubb, naba', burhan, dirayat, haqq, and tasawwur*. The terms for lack of knowledge are: *jahl, raib,*

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shakk, dhann, and ghalabat al dhann. Grades of knowledge are *'ilm al yaqeen, 'ayn al yaqeen, and haqq al yaqeen.* Knowledge is correlated with *iman, 'aql, qalb, and taqwah.* The Qur'an emphasizes the evidential basis of knowledge, *hujjiyat al burhan.* The seat of knowledge is the *'aql, and qalb.* Allah's knowledge is limitless but human knowledge is limited. Humans vary in knowledge. Knowledge is public property that cannot be hidden or monopolized. Humans, angels, jinn, and other living things have varying amounts of knowledge. Knowledge can be absolute, for example revealed knowledge. Other types of knowledge are relative, *nisbiyat al haqiqat.* The probabilistic nature of knowledge arises out of limitations of human observation and interpretation of physical phenomena.

1.3 History of Human Knowledge, *tarikh al ma'rifat al insaniyat*

Adam was the first human to learn actively when he was taught the names of all things. Human knowledge after that grew by empirical trial and error or through revelations. Development of language and writing played a big role in knowledge development. Publication and telecommunication are responsible for the current knowledge revolution.

1.4 Sources of Knowledge, *masadir al ma'arifat:*

All knowledge is from Allah. Humans can get it in a passive way from revelations or in an active way by empirical observation and experimentation. Whatever knowledge they get is ultimately from Allah. Knowledge may be innate or acquired. Humans have knowledge of the creator even before birth. Some human knowledge is instinct. Most human knowledge is learned as observation, *'ilm tajriibi,* transmission, *'ilm naqli;* or analysis and understanding, *'ilm 'aqli.* Seeking to know is an inner human need that satisfies curiosity.

Revelation, *wahy,* inference, *'aql,* and empirical observation of the universe, *kaun,* are major sources of acquired knowledge accepted by believers. In terms of quantity, empirical knowledge, *'ilm tajriibi,* comes first. In terms of quality revealed knowledge, *'ilm al wahy,* comes first. There is close interaction and inter-dependence between revelation, inference, and empirical observation. *'Aql* is needed to understand *wahy* and reach conclusions from empirical observations. *Wahy* protects *'aql* from mistakes and provides it with information about the unseen. *'Aql* cannot, unaided, fully understand the empirical world.

There is lack of unanimity on the following as additional sources of knowledge: '*ilm laduniy*; inspiration, *ilham*; intuition, *hadas*; instinct, *jabillat*; geomancy, *firasat*; dreams, *ru'uyat*; and *kashf*. The controversy is not whether they are sources of knowledge but whether they are sources independent of the three mentioned before. Magic & sorcery, *sihr*; astrology, *tanjiim*; foretelling, *kahanat & tatayur*; and other forms of superstition are not sources of true knowledge. They may lead to correct and verifiable facts but only by chance and coincidence. They most often lead to wrong and misleading facts.

1.5 Classification of Knowledge, *tasnif al marifat*

Knowledge can be innate or acquired. It can be '*aqli* or '*naqli*. It can be knowledge of the seen, '*ilm al shahadat*, and knowledge of the unseen, '*ilm al ghaib*. The unseen can be absolute, *ghaib mutlaq*, or relative, *ghaib nisbi*. Acquisition of knowledge may be individually obligatory, *fard 'ain*, whereas other knowledge is collectively obligatory, *fard kifayat*. Knowledge can be useful, '*ilmu nafiu*. Knowledge can be basic or applied. There are many different disciplines of knowledge. The disciplines keep changing with advance of knowledge and understanding. A discipline is defined and is limited by its methodology.

1.6 Limitations of Human Knowledge, *mahdudiyat al marifat al bashariyyat*

The Qur'an in many verses has reminded humans that their knowledge in all spheres and disciplines of knowledge is limited. Human senses can be easily deceived. Human intellect has limitations in interpreting correct sensory perceptions. Humans cannot know the unseen, *ghaib*. Humans can operate in limited time frames. The past and the future are unknowable with certainty. Humans operate in a limited speed frame at both the conceptual and sensory levels. Ideas can not be digested and processed if they are generated too slowly or too quickly. Humans cannot visually perceive very slow or very rapid events. Very slow events like the revolution of the earth or its rotation are perceived as if they are not happening. Human memory is limited. Knowledge acquired decays or may be lost altogether. Humans would have been more knowledgeable if they had perfect memory.

2.0 Methodology of Knowledge, *manhaj al ma'arifat*

2.1 Concepts

Methodology started with Adam naming and classifying all things followed by trial and error discoveries and later by systematic

methodological investigation. Inspired by the Qur'an, Muslims developed the empirical scientific methodology that triggered the European reformation, renaissance, and scientific and technological revolution starting in the early 16th century CE. Francis Bacon (1561-1626), the first European to write systematically about the empirical methodology was inspired by Muslim science reaching Europe in his times. Europeans copied the empirical methodology without its *tauhidi* context, rejected *wahy* as a source of knowledge, and later imposed badly-copied secularized science on the Muslim world. Ancient Muslim scientists had shown that *wahy*, *'aql*, and empiricism were compatible and had used methodological tools from the Qur'an to correct deficiencies and improve Greek science before passing it on to Europeans. They replaced Aristotelian deductive logic and definitions with an Islamic inductive logic inspired by the Qur'an.

2.2 Methodology From the Qur'an, *manhaj qur'ani*

The Qur'an provides general guiding principles and is not a substitute for empirical research. It enjoins empirical observation; liberates the mind from superstition, blind following, intellectual dependency, and whims. Its *tauhidi* paradigm is the basis for causality, rationality, order, predictability, innovation, objectivity, and natural laws. Laws can be known through *wahy*, empirical observation and experimentation. The Qur'an teaches the inductive methodology, empirical observation, *nadhar & tabassur*; interpretation *tadabbur, tafakkur, i'titbaar & tafaquhu*; and evidential knowledge, *bayyinat & burhan*). It condemns blind following, *taqliid*, conjecture, *dhann*; and personal whims, *hiwa al nafs*. The Qur'anic concept of *istiqamat* calls for valid and un-biased knowledge. The Qur'anic concepts of *istikhlaf, taskhir*, and *isti'imar* are a basis for technology. The concept of *'ilm nafei* underlies the imperative to transform basic knowledge into useful technology.

2.3 Methodology from the Classical Islamic

Classical sciences and their concepts are applicable to science and technology. *Tafsir 'ilmi* and *tafsir mawdu'e* parallel data interpretation in empirical research. *'Ilm al nasakh* explains how new data updates old theories without making them completely useless. *'Ilm al rijaal* can ascertain the trustworthiness of researchers. *'Ilm naqd al hadith* can inculcate attitudes of critical reading of scientific literature. *Qiyaas* is analogical reasoning. *Istihbaab* is continued application of a hypothesis

or scientific laws until disproved. *Istihsan* is comparable to clinical intuition. *Istislah* is use of public interest to select among options for example medical technologies. *Ijma* is consensus-building among empirical researchers. *Maqasid al shariat* are conceptual tools for balanced use of S&T. *Qawaid al shariat* are axioms that simplify complex logical operations by using established axioms without going through detailed derivations.

2.4 Islamic Critique of the Empirical Method, *naqd al manhaj al tajribi*

Using methodological tools from the Qur'an and classical Islamic sciences, Muslims developed a new empirical and inductive methodology in the form of *qiyaas usuuli* and also pioneered the empirical methods by experimentation and observation in a systematic way as illustrated by the work on Ibn Hazm on optics. They criticize ancient Greek methodology as conjectural, hypothetical, despising perceptual knowledge, and based on deductive logic. They accept the European scientific method of formulating and testing hypothesis but reject its philosophical presumptions: materialism, pragmatism, atheism, rejection of *wahy* as a source of knowledge, lack of balance, rejection of the duality between matter and spirit, lack of human purpose, lacks of an integrating paradigm like *tauhid*, and being Euro-centric and not universal. European claims to being open-minded, methodological, accurate, precise, objective, and morally neutral have been observed not to hold in practice. In its arrogance it treats as absolute probabilistic and relativistic empirical knowledge based fallible human observation and interpretation.

3.0 Crisis of Knowledge and Education, *azmat al ma'arifat wa al ta'aliim*

3.1 Manifestations of the Crisis

There is pervasive ignorance of *uluum al diin* and *uluum al dunia*. There is little respect for scholarship. Wealth and power are considered more important than scholarship. There is neglect of the empirical sciences. There is a dichotomy in the education system: traditional Islamic vs. imported European, *ulum al diin* vs *ulum al dunia*. Integration of the 2 systems has failed or has been difficult because it has been mechanical and not conceptual. The process of secularization in education has

removed the moral dimension from the education and violated the aim of Islamic education to produce an integrated and perfect individual, *insan kaamil*. The brain drain from Muslim countries has compounded the educational crisis.

3.2 Ummatic Malaise due to the Knowledge Crises

Knowledge deficiency and intellectual weakness are the most significant manifestation of *ummat's* decadence. The intellectual crisis of the *ummat* is worsened by copying and using poorly digested alien ideas and concepts. The prophet warned the *ummat* about the lizard-hole phenomenon in which the *ummat* in later times would follow its enemies unquestionably like the lizard running into its hole. Among the manifestations of the *ummatic* malaise are action deficiency, political weakness, economic dependency, military weakness, dependence in science and technology, and erosion of the Islamic identity in life-style.

3.3 Historical Background

The generation of the Prophet (PBUH) was the best generation. The best teacher met the best students and excellent results were obtained. Companions had excellent knowledge and understanding. Seeds of the current crisis appeared towards the end of the *khilafat rashidat*. New social and political forces overthrew the *khilafat rashidat* and the ideals it represented were distorted or abolished. Then the authentic *'ulama* and opinion leaders who remained faithful to the ideals of Islam were marginalized and persecuted. Intellectual stagnation then ensued. The process of secularization of the Muslim state progressed. Widespread ignorance and illiteracy became common. Many non-Islamic ideas and facts without valid proof have found their way into the intellectual and religious heritage of the *ummat* making the existing intellectual crisis even worse.

4.0 Preliminary Steps towards Reform of Knowledge and Education

4.1 Knowledge, a Pre requisite for *Tajdid*

Reform and revival of the *ummat* will occur through educational and knowledge reform. *Tajdid* is a recurring phenomenon in the *ummat* and is a sign of its health and dynamism. It is a basic characteristic of the *ummat* that periods of reform/revival alternate with periods of decay and return to *jahiliyyat*. *Tajdid* requires knowledge, ideas and action related by the following mathematical equation: $tajdid = idea + action$. Action

without knowledge and guiding ideas will not lead to true change. Ideas without action are not change at all. *Tajdid* requires and is preceded by a reform in knowledge to provide ideas and motivation on which to build. All successful societal reform starts with change in knowledge. The ideal society cannot be created without a knowledge base. That knowledge base must be correct, relevant, and useful. Successful revival movements throughout Muslim history have always been led by scholars.

4.2 A New Knowledge Strategy, *nahwa istratijiyyat ma'arifiiyyat jadiidat*
 The Muslim *ummat* is a potential economic and political *bloc* whose potential is not yet realized. The contemporary *tajdid* movement has a lot of strengths but also has basic deficiencies that must be corrected. The knowledge and intellectual crises are still a barrier. Reform movements unguided by correct knowledge and understanding will falter and fail or will be deviated from their paths. Social change requires change in attitudes, values, convictions and behavior of a critical mass of the population. Attitudes, values, convictions, and behaviors are determined by the knowledge base. The vision of the knowledge strategy is an upright balanced person who understands the creator, knows his place, his roles, his rights, and his responsibilities in the cosmic order. The mission of the knowledge strategy is conceptual transformation of the education system from kindergarten to post graduate studies to reflect *tauhid*, positive moral values, objectivity, universality, and serving the larger causes of humanity.

4.3 Towards an Islamic Methodology, *nahwa manhajiiyyat 'ilmiyyat islamiyyat*

A *tauhidi* universal, objective and unbiased methodology must replace the Euro-centric and philosophically biased context and not the practical experimental methods. The precepts of *tauhidi* science are: unity of knowledge, comprehensiveness; causality is the basis for human action, human knowledge is limited, investigation of causal relations is based on constant and fixed natural laws, harmony between the seen and the unseen, 3 sources of knowledge (*wahy*, *aql* & empirical observation); *khilafat*; moral accountability; creation and existence have a purpose, truth is both absolute and relative, human free will is the basis of accountability, and *tawakkul*.

5.0 Development of a Scientific Culture, *nahwa thaqafat 'ilmiyyat*

5.1 Basic Concepts

The Qur'an is the basis for developing a vigorous and dynamic scientific culture in the *ummat*. Basic concepts are the Qur'an, intellect, knowledge, fiqh, thinking, innovation and creativity. The Qur'an is not a textbook of science. It however contains many verses that train the mind to observe, analyze, think and act in a scientific manner. The Qur'anic stories have lessons, many scientific, for those who understand. Intellect is correlated with signs and with knowledge. Failure to use the intellect and blind following are condemned. Knowledge is supreme. It removes blind following. Human knowledge is limited. Knowledge is acquired by study. Humans were ordained to read. Knowledge by itself is not useful unless it is associated with work. The Qur'an has used the term fiqh to refer to understanding which is deeper than knowing. The Qur'an puts emphasis on thinking. Thinking is based on empirical observation. The Qur'an emphasizes freedom of thought in the form of freedom of belief. Innovations in religion are prohibited but creativity is encouraged.

5.2 Descriptive Knowledge

The Qur'an described mountains, the barrier between two oceans, metal, the wind, plants, the sky, honey, and water. It described the motion of the earth, the boats, the sun, the moon, the water, and of the wind. It described processes such as making of iron, armor, dams, and boats. It described the creation of the human from dust. It describes the constant laws of nature, *sunan al laah fi al kawn*. The laws are fixed and stable and operate in various situations. Order is a law of nature. Recording of observations is emphasized.

5.3 Analytic Knowledge

The Qur'an calls for evidence. It rejects false evidence and condemns non evidence-based knowledge such as sorcery, consulting fortune tellers, speculation or conjecture. Human thought is a tool and not an end in itself. It operates on the basis of empirical observations and revelation, both objective sources of information, thought that is not based on an empirical basis or revelation is speculative and leads to wrong conclusions. The Qur'an calls for objectivity. It condemns following subjective feelings and turning away from the truth. Reliance is on observation and not speculation. The Qur'an calls upon humans to observe Allah's signs in the universe and in humans. The Qur'an however made it clear that human senses have limitations. Rational thinking and logical operations were described. In many prohibitions the

Qur'an provides logical reasons. The use of similitude, *tashbiih*, of two things and phenomena is seen several verses. The Qur'an also employed many examples, *mithl*, to illustrate concepts. Prudence in reaching conclusions is emphasized.

5.4 Etiquette of Scientific Discourse

The Qur'an and sunnat teach the etiquette of scientific discourse. Questions can be for finding out information. The opposing opinion should be respected. Differences on scientific matters can arise and are natural. Discussion and exchange of views is a necessity for humans. Discussion has its own etiquette. Truth must be revealed. Contradictions must be avoided. Arrogance is condemned. The following are attributes of good discussion: objectivity, truthfulness, asking for evidence, and knowledge. Purposeless disputation is frowned upon. False premises should be abandoned once discovered. Fear of people should be no reason for not revealing the truth. Deception is condemned. The truth of any assertion must be checked. *Yaqeen* is the basis of *'ilm* but *dhann* is not.

6.0 Islamization of Knowledge: Concept & Practice

6.1 The Concept of Islamization:

Islamization is a process of recasting the corpus of human knowledge to conform to the basic tenets of *'aqidat al tauhid*. The process of Islamization does not call for re-invention of the wheel of knowledge but calls for reform, correction, and re-orientation. It is evolutionary and not revolutionary. It is corrective and reformative. It is the first step in the reform of the education system as a prelude to reform of society.

6.2 History of Islamization

The 2-3rd centuries H witnessed a failed effort at Islamization of knowledge. Greek scientific knowledge was transferred to Muslims together with Greek philosophy and ideas that caused confusions in *'aqiidat*. Greek science depended more on philosophical deduction than experimentally-based induction. It discouraged the scientific *tarbiyat* of the Qur'an which emphasized observation of nature as a basis for conclusions. The recent Islamisation movement towards the close of the 14th century H aimed at de-europeanizing education systems and building an education system based on *tauhid*.

6.3 Reform of Disciplines:

Islamization has to start with reforming the epistemology, methodology, and corpus of knowledge of each discipline. It must be proactive, academic, methodological, objective, and practical. Its vision is objective, universal, and beneficial knowledge in the context of a harmonious interaction of humans with their physical, social, and spiritual environment. Its practical mission is transformation of the paradigms, methodologies, and uses of disciplines of knowledge to conform to *tauhid*. Its immediate goals are: (a) de-Europeanizing paradigms of existing disciplines to change them from parochiality to universal objectivity, (b) reconstruction of the paradigms using Islamic universal guidelines, (c) re-classifying disciplines to reflect universal *tauhidi* values, (d) reforming research methodology to become objective, purposeful, and comprehensive (e) growth of knowledge by research, and (f) inculcating morally correct application of knowledge. The Qur'an gives general principles that establish objectivity and protect against biased research methodology. It creates a world-view that encourages research to extend the frontiers of knowledge and its use for the benefit of the whole universe. Scientists are encouraged to work within these Qur'anic parameters to expand the frontiers of knowledge through research, basic and applied.

6.4 Misunderstanding the Reform Process

Islamization has been misunderstood as rejection of the corpus of existing human knowledge and disciplines. It has been misunderstood as creation of knowledge exclusive to Muslims. It has been misconstrued as rewriting existing text-books to reflect Islamic themes without deep thought about the paradigms and methodology. It has also been confined to spiritual reform of the student, scholar, or researcher. The following superficial approaches to civilization have been tried and failed: 'Insertion' of Qur'anic verses and hadiths in an otherwise European piece of writing, searching for scientific facts in the Qur'an, searching for Qur'anic proof of scientific facts, establishing Qur'anic scientific miracles, searching for parallels between Islamic and European concepts, using Islamic in place of European terminologies, and adding supplementary ideas to the European corpus of knowledge.

6.5 Practical Steps / Tasks of the Reform Process:

The first step is a good grounding in Islamic methodological sciences of *usul al fiqh*, *'ulum al Qur'an*, *ulum al hadith*, and *'ulum al llughat*. This is followed by reading the Qur'an and *sunnat* with understanding of the changing time-space dimensions. This is followed by clarification of basic epistemological issues and relations: *wahy* and *aql*, *ghaib* and *shahada*, *'ilm* and *iman*. This is followed by an Islamic critique of basic paradigms, basic assumptions, and basic concepts of various disciplines using criteria of Islamic methodology and Islamic epistemology. Islamic reviews of existing text-books and teaching materials are then undertaken to identify deviations from the *tauhidi* episteme and the Islamic methodology.

The initial output of the Islamization process will be Islamic introductions to disciplines, *muqaddimat al 'ulum*, establishing basic Islamic principles and paradigms that determine and regulate the methodology, content, and teaching of disciplines. This parallels Ibn Khaldun's Introduction to History, *muqaddimat* presented generalizing and methodological concepts on historical events. Publication and testing of new text-books and other teaching materials is a necessary step towards reform by putting into the hands of teachers and students reformed material. Developing applied knowledge in science and technology from basic knowledge will be the last stage of the reform process. This is because in the end it is science and technology that actually lead to changes in society.