

Scientific Thinking in Islamic Thought: Concept and its Importance

Alias bin Azhar¹

¹College of Law, Government & International Studies (UUM COLGIS)
Universiti Utara, Sintok, Kedah, Malaysia

Email: az.alias@uum.edu.my

Abstract:

God's revelations, as the main source of knowledge, do not deny, in any way our brain's functional capabilities. The Quran acknowledges the necessity and importance of the brain. Islamic epistemology regards the brain as the second source of knowledge after the revelations. The holistic perspective on knowledge that is gained by mankind is that it is constructed by man in the context of their thinking culture, education and social concepts. Therefore, in this regard, thinking method directly relates to the objectives of Islam and its Sharia, and gives a significant implication towards understanding and developing Sharia as a dynamic knowledge area. This study combines three (3) methods, content analysis; historical method and comparison of the review of the history of the construction of Islamic thought and the review of screening methods Sociology Society background. The discussion this article covers the definition and concept of scientific thinking skills and scientific Islamic thought and the approaches of critical thinking in Islamic scientific thought. In reality, Muslims are not prohibited by their religion to think scientifically through scientific thinking methods, provided that it does not contradict with Islam. Some knowledge which is built through scientific thinking can be used to understand the Quranic texts more profoundly. Also, undeniably, the eminence of God's revelations has been made evident and exploited to proof the existence of Allah.

Keywords: *Islamic Thought, Critical Thinking, Thinkers, Paradigm, Intellectualism.*

A. INTRODUCTION

The brain is the most important anatomical part of a human being; therefore, it is categorized as one of life's elements which should be protected, alongside with religion, life, posterity and property. These five (5) elements are specified in the vision and mission of Islamic law. God's revelations, as the main source of knowledge, do not deny, in any way our brain's functional capabilities. The Quran acknowledges the necessity and importance of the brain. Islamic epistemology regards the brain as the second source of knowledge (after the revelations).

The holistic perspective on knowledge that is gained by mankind is that it is constructed by man in the context of their thinking culture, education and social concepts. History has proven that a society which shuns matters other than its sectarian beliefs or having a traditionalist view will be less critical and creative (Ilyas Supena, 2002) as they are instilled with fear to religious and political authority. Idea generation, determination and the courage to challenge dominancy of other religion's status quo will also be reduced.

It is evident that Muslims had practised higher level of knowledge culture during the islamic golden era superiority (Shaharir, 2005). Among the factors that contribute to the excellent knowledge culture are open attitude and being selective on the type of knowledge and method of learning besides controlled islamisation process on the epistemological aspect of the knowledge. The next factor is critical analytical thinking on the knowledge without being fanatical on a certain thinkers or scholars. What is significant here, based on this legacy, is to study its effectiveness in confronting the current demand and the modernisation processes in the world. This awareness should lead to the reconstruction of Islamic thought through modern knowledge application approach especially on science to ensure the relevance of the past knowledge culture.

B. METHODS

This study combines three (3) methods, content analysis that examine frame epistemology of scientific thinking and Islamic thought (a question of resources, knowledge and attributes of an assessment scale) used someone master/author; historical method and comparison of the review of the history of the construction of Islamic thought and the review of screening methods Sociology Society background such as aspects of socio-political, structural, economic and specific institutions (such as the institutions of education) which affect the theories and its application.

C. RESULT AND DISCUSSIONS

1. Concept of Scientific Thinking Skills

Based on the science of the neuron science, the brain is divided into two hemispheres; the right or HOKA and the left, HOKI. This theory has classified and segmented human beings to two main groups i.e., people who are excellent with their HOKA comprising those who are gifted with arts and creativity; whereas people with strong HOKI comprise of scientists and technologists. Indirectly, it can be understood that human's thinking capabilities are divided into two; science and arts.

Based on Edward De Bono (1993), in summarizing the philosophies of past thinkers: Socrates, Plato dan Aristotle, the thinking system is divided into four elements; analysis, evaluation, arguments and finally, criticizing. He further suggests that thinking levels are divided into five:

- a. Displaying objective
- b. Displaying information
- c. Possibility level
- d. Filters, checks and selects appropriate solution
- e. Displaying action steps

Apart from that, the basic thinking process consists of five main steps; first, starting from general/specific, second, projection, third, focusing, fourth, acknowledgement and finally movement. Edward De Bono's principal belief and authority concerning thinking is *"the study of thinking should be an important subject in cultivating skills"*.

To achieve this discourse, parallel thinking pattern has to be established. (Ainon, 1997). This approach has to be produced simultaneously with critical and creative thinking elements. Both elements of thoughts are combined to form a new finding; thus forming a pattern of concept which is more holistic. Over and above, there will be a prospect to generate scholars who prioritize intellectual freedom.

Thinking skill is closely related to an individual's type and method of learning. The process of learning and responding/reacting is very related to the method of thinking. The thinking pattern also affects an individual's perception. The application of comprehensive thinking element requires strategy and constructive thinking mechanism. Literally, the thinking process involves reaction terms which occur mentally, and requires several active stages as follows (Abdul Latif Samian, 2003):

- a. Identifying and understanding a problem
- b. Finding information to solve a problem
- c. Denying/rejecting after contemplating all possibilities of solution to the problem.
- d. Assessing the hypothesis made
- e. Deciding

Logical thinking earnestly requires ideas with critical and creative thinking. Both thinking skills are significant foundations in the quest to verify and substantiate theories or logical decisions. Being creative and critical enable an individual to ascertain a particular issue or problem so as not to arrive at an erroneous conclusion. Besides, these two factors may lead to the development of the ability to process information and produce innovative ideas. In a wider context, being critical and creative can be optimally utilized in the process of problem solving or decision making.

Thinking logically can be defined as mental methodology, being the legitimate thinking mechanism along with facts or verifiable evidence. To determine truth and understand the research question in depth, inductive and deductive methods are also adapted effectively. Deductive method is a process of reasoning by logical thinking, which is a mental process, from one or more general statements to reach a specific conclusion. Induction, on the other hand, is a process of reasoning from specific facts to a wider generalization.

Several scholars (Ahmad Mahzan,1997, Abdul Latif Samian,2003, Sidek Mohd Noah,2002) have perceived and reacted differently on logical method as an element of critical thinking in relation to religious adherence and science from the context of logical application. Ahmad Mahzan (1997) posits that logical thinking method triggers a clear contradiction between religion and science. He thinks that logical application is not relevant in the context of Islamic belief.

However, different Islamic scholars put forward a different response to the matter (Mohd Fauzi Hamat,2000). Therefore, sharing the same response and sentiments as these Muslim scholars, we look at logical thinking element as a realistic and practical method in the thinking of *fiqh*; to strengthen *tafaqquh* instrument. In relation to this, problem-solving technique based on logical thinking covers three major stages (Mohammad Nasuha,1996): first; defining the problem, second; categorizing the problem, and third; alternative solution.

This approach carries knowledge attributes, exclusive and open. The advantage of this approach in scientific Islamic thought can be referred to three main factors:

- a. The search and formulation of ideas which form basis in a variety of issues
- b. The introduction to an issue, and scrutinizing the issue as well as its fundamentals enable the development of critical thinking.
- c. This process will form the mentality and thinking method which prioritize intellectual freedom and creates *fiqh* toleration, at the same time denies sectarian fanaticism.

Another paradigm in the same scope is critical thinking in the revival of Islamic thoughts, especially the derivation of the scientific Islamic thought. Critical thinking refers to two basic components, the

philosophy and thinking method which were employed by Muslim scholars. From philosophical aspect, these scholars inquire and contemplate on truth and *Sharia* objectives; whereas from the thinking aspect, critical thinking means the thinking method practised by them.

Therefore, in this regard, thinking method directly relates to the objectives of Islam and its *Sharia*, and gives a significant implication towards understanding and developing *Sharia* as a dynamic knowledge area. In actual fact, critical thinking elements from Islam viewpoint, are systematic, formal and objective to facilitate mankind to understand and conduct daily life more systematically (Abdul Halim El-Muhammady, 1993). In reality, muslims are not prohibited by their religion to think critically through Western thinking methods, provided that it does not contradict with Islam. Some knowledge which are built through critical study can be used to understand the Quranic texts more profoundly (A.Rahman Omar, 1990). Also, undeniably, the eminence of God's revelations has been made evident, and exploited to proof the existence of Allah.

2. The Concept of Scientific Islamic Thought

In Islam, thorough knowledge and application of critical thinking is highly demanded. This determines the civilization of a nation, especially the Muslim society itself, simultaneously elevating the dignity of Islam in the eyes of other religions. The process of *tajdid* in Islamic thinking as an ideal vision and mission practically requires an explorative brain projection; exploring, researching and acquiring critical thinking skills to generate holistic benefits.

Realistically al-Quran is not translated only on its textual characteristics but also on contextuality (reality). Guidance from Allah is not without essence; the Holy Quran forms an individual's character so as to ensure he is able to manage himself and the system in the context of pure faith. In the Quran there are nearly 200 verses on science (Harun Yahya, 2003). The ability of Muslim scientists to conduct *tadabbur* and *tafakkur* (Abdul Majid, 2002; Nor Azaruddin, 2004) has enabled Islamic scientific tradition to rise gloriously.

In Islamic scientific tradition, technology in any form is considered as a tool. Technology simplifies and shortens means, but it is not the final goal. Technology develops, its product is creative and innovative because research tradition progresses forward. New inputs in technology development enables it to permeate into every mazhab or of life; its impact on consumers is overwhelming.

In the education world, the importance of tool and goal go hand in hand. In relation to this, Ibn Khaldun (1968) opines that the goals of education are;

- a. To prepare an individual religiously.
- b. To complement man's moral values.
- c. To complement man's social values.
- d. To complement an individuals vocational and career.
- e. To increase thinking ability.

In addition, several knowledge characteristics possessed by students can be categorized as follow: (Nik Aziz Nik Pa, 2007);

- a. Based on constructs thought by students and not found from the physical environment students' background knowledge.
- b. Generated from activities based on students' background knowledge or from daily needs.

Both characteristics mentioned above can involve misunderstandings and misinterpretations. They are however open to enrichment. Students' thoughts are like generators waiting to be activated. Brainstorming technique can be used to generate strategies which can be applied in Islamic thought studies. This is important for strengthening and enriching students' way of thinking.

In the meantime, the instillation of reflective thinking elements is very relevant to be coordinated in Islamic thought studies based on students' knowledge construction as discussed earlier. This process can motivate students to think in sequence, quick in decision making, critical in assessment and encourages students to think openly. These ability and skill play a role in constructing solutions to advanced problems.

Hence enabling the creation of students with proper methods of thinking: rational, meticulous and objective. Other than this, students will be provided with the ability to derive and analyze; increasing *ijtihad*. *Ijtihad* capability should have the foundation of *istinbat* and *istidlal*, by referring to modern and legacy sources with authority (Shukeri Mohammad, 2000). Students ought to have scientific skills; a product of the application of scientific way of thinking. This skill, among others enables them to explore new phenomena based on their background knowledge. Further the students will master the ability to experiment, investigate and understand the relationship between theory, concept and general principles which are contained in the Islamic thought studies.

In addition, the importance of practising thinking process must be systematically plan with a blueprint, not merely rhetorical (Muhammad Kamal Hassan:1996). For contemporary reformists, to ensure reformation effort is successful, we have to avoid struggles and typical/rhetorical thinking, a group that only talks with ideal ideas but unable to translate the ambition to a more practical programme for Muslims to practise. What we require is a struggle and open-brained thinking, one which is able to think rationally by considering the success and failure factors of a reformation programme, and able to translate ambitions to a more practical programmes appropriate for the society.

Based on reformist paradigm as a modest paradigm in contrast to traditionalist paradigm):

- a. It is important for Muslims to uphold the holy Islamic teachings as provided by the revelations of Allah to ensure Tauhidic paradigm is relevant all the time.
- b. Emphasizing on the *tajdid* effort in all aspects of Muslim's life due to the falsifications and fraudulence of the Quran and sunnah; an outcome of Muslim's own negligence in observing the tenets of Islam. This is made worst by the colonialisation of Muslims by the West, which consequently in the long run creates indolence and passivity among Muslim scholars (Taha Jabir al-Alwani:1991).
- c. Emphasizing on the rational paradigm which is based on *ijtihad* courage to generate efforts to escalate Muslim's creativity.
- d. Emphasizing on the process to sharpen Muslim's intellectualism in understanding Islam.

To this group, the aura of past Islamic civilisation is not merely to be nostalgically prouded of. In fact, the summary and inductive essence of the civilisation in the form of the best methodology should be implemented by the Muslim society (Muhamad Kamil Abd. Majid:2001). Based on certain Muslim scholars, the development of great civilisation surfaces from the practise of knowledge culture (Wan Mohd Nor Wan Daud:1990). This refers to the utilisation of a set of ideas and creativity of a society to research on knowledge and translates it into a task-oriented program in order to

create an integrative development for mankind (Louy M. Safi:1998). To them, the introduction of critical thinking element can be the main alternative to strengthen Islamic education system.

3. The Approaches of Critical Thinking in Scientific Islamic Thought

All these suggestions focus on the application and realisation which should be given to the inculcation of critical thinking element. Among the suggestions are:

Firstly, to inculcate a more constructive critical thinking paradigm in Islamic studies that is free from *taqlīd* element. Hence, we need to be brave in learning and utilising the theories and modern paradigms that contribute to critical thinking development. For instance, we need to be open and acknowledge several critical paradigm which was forwarded by modern muslim scholars, even though we may be subjected to negative implications. Among the approaches are:

- a. The paradigm that asserts past Islamic knowledge epistemology construction needs to be improved by contemporary scholars. As an example, we can still refer to Islamic jurisprudence. This discipline is not static and closed. It has been made complete by past jurists and it is impossible for substance to be added by current jurists. As a knowledge discipline, it needs to always grow according to the passage of time. Briefly, in line with the concept of knowledge, it is experimentable, appraiseable and consolidated by scholars of different era.
- b. The theory that states Islamic knowledge development process has utilised three major thinking patterns separately, not integratively. The three patterns are (i) *bayani* approach (more inclined to texts, the brain is considered secondary), (ii) *burhani* approach which is based on rational strength through logical theorem and (iii) *irfani* approach, as commonly applied by Muslim sufis. It is an understanding approach that focuses on inner experience (*baṭīniyya*): *zawq*, *qalb*, *wijdān*, *baṣīra* and intuition. In modern contexts, Muslim scholars need to identify the focal strengths and weaknesses of these three thinking trends. They are also required to be integrated to produce a sound thinking approach; utilising all positive aspects contained in all three thinking trends.

Secondly, to emphasize from a more quranic perspective, the idea of critical thinking. Viewing negatively on the role of the human brain, in contrast to the believe of other religions, which was also upheld by certain past Muslim scholars, we need to stress on Islamic paradigm that is rationalistic; characterized by these features:

- a. To vehemently oppose the culture of *taqlīd* i.e. the practise that acknowledges opinions without thorough investigation. This practise must be totally rejected especially in Islamic creed and Islamic jurisprudence, because the consequence of such practises will definitely damage the capability of the human brain, which in essence, noble in nature.
- b. The issues of Islamic creed and Islamic jurisprudence should be acknowledged through rational brain and nothing is dogmatic in nature.
- c. Islam is brain-friendly; healthy brain will encourage the process of controlling, sharpening and nourishing the brain capacity to the maximum through the process of exercising and practising knowledge culture.
- d. Human mental ability is high; it is able to outclass the mental ability of all other creatures of Allah, including animals, angels and even the devil itself. In line with Islamic

knowledge culture concept, the mental potential needs to be developed through intellectual research to be applied in educational institution (Majid Ersan,1997).

- e. The importance of practising healthy critical thinking which is appropriate with Islamic values, which include:
 - 1) Autocratic thinking approach replacing truth thinking. Truth thinking refers to a way of thinking which does not admit own self weakness, having a split tongue and linking own weakness to others, believing that he is ideal and perfect.
 - 2) A critical thinking approach and not impulsive in facing important societal issues.
 - 3) Holistic thinking approach replacing partial thinking. Holistic thinking refers to in-depth knowledge of a particular issue or matter by knowing its characteristics, details and the relationships between the details.
 - 4) A reformative thinking approach replacing traditional and obsolete thinking.
 - 5) An intellectual thinking approach replacing presumptuous and impious thinking
 - 6) A thinking approach that is appropriate with the laws of nature, replacing irrational and superstitious thinking.
 - 7) A systematic thinking approach (*blueprint*) and not merely rhetorical.

Thirdly, a selective attitude on external knowledge genre, including those from the west. Based on orientalism genre's attribute which on the overall is anti-Islam and is undertaken by non-muslim scholars has caused certain quarters to take a negative stand and become passive by strongly disagreeing and denying worthy elements in the particular work (Asaf Hussain,1984). In fact, there are certain quarters who claim that those who learn from the orientalist will be regarded as the enemy of Islam, the devil's followers and the extension of the orientalist's tongues, who should vehemently be opposed by all muslims (Abdul Rahman Abdullah,1997). Further, as Wan Mohd. Nor Wan Daud (1990) points out, quite a number of Muslim scholars have been infected with, *westophobia*, irrational fear and hatred towards the west. In essence, this disease is a fragment of a mental illness, xenophobia, which causes the sufferer to feel afraid of external elements.

D. CONCLUSION

Briefly, it can be concluded that the application and methodology of the elements of scientific way of thinking in the Islamic thought must emphasize on the aspect of generating muslim scholars and thinkers way of thinking. Hence enabling the creation of muslim scholars and thinkers with proper methods of thinking: rational, meticulous and objective. This approach is important to generate human resource that can contribute effectively in the nation's development process. Besides, from the context of education and training, integrative knowledge is significant in forming a holistic personality which encompasses the mind, spiritual and physical aspects. The development and progress of a country depends on the character and charisma of the people born through its education system.

One may conclude that the inculcation of critical thinking element is crucial in the scientific islamic thought. Alternative suggestions for the inculcation of critical thinking element can be implemented through Islamic studies pedagogy, the application of the Quran-based critical thinking theory, and the standardisation of Islamic critical thinking and further, practising selective attitude on external sources. In reality, it is also important to emphasize that all these suggestions are quite impossible to be executed, particularly when a new form of Islamic knowledge paradigm is not exposed to all levels of muslim society.

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