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CONFUSION OVER THE CONCEPT OF 'AQL
AND LOGICAL THINKING AMONG YOUNG
MUSLIMS IN MALAYSIA

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**SPECIAL ISSUE FROM THE DEPARTMENT OF FUNDAMENTAL
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Selected Papers from annual symposium on Scholarship Advancement
Programme (SAP) on the 5th of August 2021.

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FOREWORD: A SPECIAL ISSUE FROM THE DEPARTMENT OF FUNDAMENTAL AND INTER-DISCIPLINARY STUDIES (FIDS), AHAS KIRKHS, IN COLLABORATION WITH AL-HIKMAH: INTERNATIONAL JOURNAL OF ISLAMIC STUDIES AND HUMAN SCIENCES

Following the directive from the AHAS Kulliyah of IRKHS, the Department of Fundamental and Inter-Disciplinary Studies held its annual symposium on Scholarship Advancement Programme (SAP) on the 5th of August 2021. The one-day programme was an intervention to advance the development of scholarship among academics in AHAS KIRKHS. Its focus was to accelerate knowledge generation and dissemination by providing a conducive avenue for all academics to write, present, and publish their scholarly work in an academic journal. Since 2019, papers presented at the SAP symposiums have been published individually by staff at the FIDS. In 2022, FIDS has taken the initiative to publish selected papers as a special issue in collaboration with the Journal of Al-Hikmah.

This special issue contains eleven articles, nine in English and two in Arabic, which were presented at SAP 2021. This collection of SAP papers comes under the themes of Islam, Philosophy and Spiritual development. Most if not all articles selected for publication go in tandem with the scope and requirement of Al-Hikmah Journal. Among the areas touched by the authors are on Islamic religious teaching and learning activities, and Islamic movement in the region.

We hope this special issue would provide a kind of poignant magnetism that would touch the readers' interest as most of the papers highlighted the supremacy of knowledge and the significance of the role of spirituality. The concept of papers emerged from the thought that different scholars from diverse Asian countries would offer their respective experiences, historical facts and cultural heritage that would provide the highest level of satisfaction to the readers.



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Confusion over the Concept of ‘Aql and Logical Thinking among Young Muslims in Malaysia

Kekeliruan Terhadap Konsep ‘Aql dan Pemikiran Logik di Kalangan Remaja Muslim di Malaysia

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Abstract

A popular phrase we hear when someone said or did something wrong is “he/she succumbed to logical mind”. This paradoxical statement has become a big wall that people would go to hide and escape from giving defensible justifications for claims made especially claims on religious beliefs and the unseen existences. This pose a huge problem for those who use logical thinking to evaluate the truth value of any proposition as if logical thinking would result in wrong judgment on truth and ethical proposition. What is more, some hold the belief that the Qur’ān shuns logic and thus Muslims are prohibited from applying logical thinking to determine truth from falsehood. This study explored young Muslims’ understanding of the concept of logic to get some insight on this phenomenon, so that informed decisions and planning could be made to arrest this confusion. Moreover, an assessment of young Muslims’ understandings is very important to ensure that they are in line with Qur’ānic teachings. Qualitative analysis was used to analyse data collected from 10 participants using semi-structured interviews. Since face to face interaction was not possible because of the current pandemic, interviews were done using Zoom, Google Meet and WhatsApp. The emergent themes that could be extracted from the participants’ responses were confusion on the understanding of ‘aql and the relationship between the spiritual brain and heart; logical mind as means to solve problems of non-religious issues; and the negative consequences of logical thinking (among others, that it could lead to unbelief). However, a minority of the respondents viewed logical thinking as necessary to understand revelation. This study also found that the young Muslims were weak in logical thinking.

Keywords: ‘Aql, logic, logical thinking, logic in the Qur’ān, logical consequences

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Abstrak

Ungkapan popular yang sering diterima orang tanpa berfikir ketika seseorang mengatakan atau melakukan sesuatu yang salah adalah "dia tunduk pada akal logik". Pernyataan paradoks ini telah menjadi tembok besar yang orang bersembunyi di sebaliknya untuk melepaskan diri dari memberikan justifikasi kukuh bagi tuntutan yang dibuat terutamanya tuntutan terhadap kepercayaan agama dan kewujudan yang tidak dapat dilihat. Ini menimbulkan masalah besar bagi mereka yang menggunakan pemikiran logik untuk memeriksa nilai kebenaran dari setiap proposisi seolah-olah pemikiran logik akan menghasilkan penilaian yang salah terhadap kebenaran dan proposisi etika. Lebih-lebih lagi, ada yang berpendapat bahawa al-Qur’ān menjauhi logik dan oleh itu umat Islam dilarang menerapkan pemikiran logik untuk menentukan kebenaran dari kepalsuan. Kajian ini meneroka pemahaman remaja Islam mengenai konsep logik untuk mendapatkan gambaran mengenai fenomena ini sehingga keputusan dan perancangan yang tepat dapat dibuat untuk mengatasi kekeliruan ini. Lebih dari itu, penilaian terhadap pemahaman pemuda Muslim sangat penting untuk memastikan pemahaman mereka sesuai dengan ajaran al-Qur’ān. Analisis kualitatif digunakan untuk menganalisis data yang dikumpulkan dari 10 peserta menggunakan temu bual separa berstruktur. Oleh kerana interaksi bersemuka tidak dapat dilakukan kerana wabak sekarang, wawancara dilakukan menggunakan Zoom, Google Meet dan WhatsApp. Tema-tema yang muncul yang dapat diambil dari tanggapan para peserta adalah kekeliruan terhadap pemahaman ‘aql dan hubungan antara otak dan hati rohani; akal logik sebagai kaedah untuk menyelesaikan masalah bukan agama; dan akibat negatif dari pemikiran logik antara lain boleh menyebabkan kekufuran. Walau bagaimanapun, sebilangan kecil responden menganggap pemikiran logik perlu untuk memahami wahyu. Kajian ini juga mendapati bahawa remaja Islam lemah dalam pemikiran logik.

Kata Kunci: ‘Aql, logik, pemikiran logik, logik dalam al-Qur’ān, akibat logikal

INTRODUCTION

The Organisation for Economic Cooperation and Development (OECD) listed critical, creative and caring thinking as well as communication and collaborative skills as the most important skills for 2030 (OECD, 2019). The Ministry of Education Malaysia (MOE) had begun the efforts towards teaching for thinking since 1989 and had made it explicit in the school curricula since 1996 (critical and creative thinking skills across curriculum). Then, in 2012 MOE introduced and implemented i-Think program to promote higher order thinking skills in students at both primary and secondary school level (Ministry of Education Malaysia, 2013). However, we have observed a very disheartening phenomenon, especially in social media, of the rampant confusion of the concept of ‘aql, logical thinking and blatant usage of fallacies to win arguments. For example, on April 19th 2021, a netizen wrote that belief and faith is outside of logical thinking, as long as we use logical thinking, then we have no faith. This example illustrates the finding of studies conducted to discover the impact of teaching for higher order thinking skills which met with little success (Lina and Wan Mazwati, 2021; Wilson, 2020). Further observation of interactions in social media uncovers many arguments full of fallacies, committed out of sheer ignorance or probably to camouflage bad arguments and deceive people from the truth (D. Nuruddin, 2020; Sahin, 2016; Miller and Miller, 2015).

The detrimental effects of the misunderstanding of the concept and functions of ‘aql and logical thinking are many. One is *taqlid*, which is defined as blind imitation resulting from superficial, narrow, fatalistic, utilitarian, and rigid thinking (Wan Mazwati and Rosnani, 2022). When *taqlid* became institutionalised, the breadth and heterogeneity of intellectual inquiry among Muslims become narrowed and stagnated (Yusuf, 2021). Decades ago, Sardar mentioned similar effects of blind imitation. He argued that blind imitation would result in “physical, mental and spiritual poverty” that lead to “a total absence of original thought and innovation, dominance of illiteracy, ignorance, parochialism and narrow-mindedness (Sardar, 1991).” Another impact which is the deadliest is the loss of faith because of the inability to defend faith against the onslaught of foreign ideologies and philosophies. We can observe now that many Muslims in Malaysia adopting new ideologies and ways of life. The evidence is the birth of “*Melayu Murtad*” web and Facebook pages; and the fight for recognizing liberal movement as part of Islamic endeavour to bring

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progress in the Muslim world. What is more, Muslims accept and become dependent on Western intellectual knowledge without any criticism and evaluation (Bennabi, 1991); and the result of which is Muslims become perpetual consumers of Western intellectual products. The 21st century should at least show that Muslims are capable of producing knowledge for the betterment of the ummah and humanity. Not to mention also the enshrining of guru mentality which most likely led to extremism in thinking and behaviour.

To understand this phenomenon further, literature search was conducted. However, we discovered that almost all studies on logical thinking in Malaysia were examining its application in academic subjects such as science (Sulaiman, 2017), mathematics (Fah, 2009), and computer science (Ismail, Ngah, and Umar, 2010; Othman, 2010). Literature search on studies on students’ understanding of the concept of ‘aql and its functions according to Qur’ānic or Islamic perspective proved futile. To provide creative solutions to the phenomenon of not thinking logically, we need to have a clear picture on the ground and the first step is to explore from few young Muslims what they think about ‘aql and logical thinking. Therefore, this exploratory case study was conducted to find out young Muslims’ understanding of the concept of ‘aql and logical thinking as explained by prominent Muslim scholars and in the Qur’ān. This is significant to provide an overview of what transpired in the society so that informed decision could be made and also to make available literature that can be used by researchers and all involved as evidence to support their positions.

AL-‘AQL

‘Aql is not a mere accident of human but an integral part of human that distinguishes human from other living creatures. Its existence made possible the potential to choose and be responsible of the choices made. On its own without the enticement from the external factors like seduction from Satan, ‘aql would always choose good. In fact, ‘aql would always choose good but human behaviour sometimes is overpowered by the strength of nafs al-ammārah. For example, every thinking human knows that smoking can cause cancer but because of external pressures and enticements from Satan and negative environment, human does not follow the conclusion made by ‘aql but instead follow the lust build up by those external forces. The Qur’ān says,

“And they say: Had we been wont to listen or use our ‘aql, we had not been among the dwellers of the flames (Al-Qur’ān, al-Mulk: 10).”

“And We have certainly created for hell fire many of the jinn and human, having hearts with which they understand not, having eyes with which they do not see, and having ears with which they do not hear. Those are like livestock, rather they are more astray. It is they who are the heedless (Al-Qur’ān, al-A‘raf: 179).”

These two verses convey that al-‘aql is capable of not only making conclusion that God exist but choosing the ethical life styles that warrant them the pleasure of Allah. According to Muhammad Asad (Muhammad, 1980), ‘aql is the essence of human that made possible spiritual cognition where human recognizes in the creation of the universe and everything in it, are signs that point towards the existence of God and His beautiful attributes. The Arabic word ‘aql literally means withholding or retraining (Baalbaki, 2003). According to al-Attas, ‘aql is “an innate property that binds and withholds the objects of knowledge by means of words (Al-Attas, 1980).” Since the above Qur’ānic verses state that those who use their ‘aql and think will be free from hell fire, it can be concluded that ‘aql could make correct judgements based on the knowledge that it withholds and binds, on the existence of God and on the right and wrong way to behave. It means that ‘aql is capable of restraining human from behaving according to lust of the nafs.

Other Qur’ānic verses that illustrate the capability of ‘aql to choose good with respect to moral behaviour are in Surah al-Baqarah verses 30-31. “When angels ask: Wilt Thou place therein one who will do harm therein and will shed blood?”, Allah replied with teaching Adam names of all things “He has taught Adam the names of all things”. This answer is very peculiar. Why teaching ‘Adam names of all things’ is in any way connected to moral behaviour of not doing harm and shed blood? This could mean that ‘aql bestowed to human is capable of withholding and processing knowledge by matching, analysing, combining, synthesizing, organizing, evaluating it to make conclusion and judgment on the truth and moral behaviour. Thus, human will not be making any harm or involving in murder (Al-Syarqawi, 2003; Crow, 1999). Al-Syarqawi and Crow posit that the main component of ‘aql is “ethical spiritual intelligence” which is necessary to make correct judgment on what to believe and how to act.

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‘Aql functions not only as a store house that retains data, words, concepts, ideas, information, and knowledge but also functions as a processing unit where the data, concepts, words, information and knowledge are matched, analysed, interpreted, connected, combined, arranged, organized and evaluated to form understanding and knowledge that can be used to make decision and solve problems. It can be concluded that ‘aql processes the concrete data and information gathered by the senses to make conclusions on the abstracts which through the processes of further abstractions conclude on the spiritual. In a nutshell, ‘aql is capable of rational and spiritual perceptions. Thinking rationally is done at the lower intellect and the locus of the lower intellect is in the brain (Amjad, 1992; Henzell-Thomas, 2004; Mohamed, 1998).

While Spiritual thinking is the function of the heart and it is done to achieve spiritual perception. “Spiritual perception is the act of knowing or perceiving the universe as the evidential signs and indications of the existence and greatness of God and His Attributes. It is the realization that the multiplicity of creations, the universes and human experiences, is the signs and manifestation of Oneness of God and His Attributes (Wan Mazwati and Rosnani, 2022).” Since spiritual cognition is done in the spiritual heart, therefore the locus of higher intellect is the *qalb* (heart) (Al-Ghazali, 2007a; Mohamed, 1998). The Qur’ān also refers to *qalb* as a thinking organ capable of achieving and receiving understanding (Al-Qur’ān, al-A‘raf: 179; al-Hajj: 46). Modern science substantiated this position, Armour found 40000 neurons in the heart the same as neurons in the brain (Mushtaq, 2008). Armour, who was a neuro-cardiologist, referred to the nervous system in the heart as “the little brain in the heart (Mushtaq, 2008).”

Concisely, the world ‘aql which is translated into the intellect refers to both thinking at the mental plane and at the *qalb*. Just like the physical heart and brain cannot be separated lest they died, so too the spiritual *qalb* and the mind. Imam al-Ghazali explained that just like the physical brain and physical heart are interdependent, so too are spiritual mind and spiritual heart (Al-Ghazali, 2007a). If the physical heart died, the brain will die too. If the brain is dead, eventually (not too long a time) the heart will die too. More discussion on this can be found elsewhere. The focus of this present study is to explain logical thinking in the Qur’ān.

LOGIC IN THE QUR'ĀN

'Aql is mentioned 49 times in the Qur'ān in the verb form to emphasize the application of 'aql to think. However, the word logic or mantiq in Arabic is not specifically mentioned in the Qur'ān. Commentators give the meaning of 'mantiq' mentioned in Surah an-Naml verse 16 as language. Four more verses use "yantiqūn" which commentators translated as speak. The verses are in al-Anbiya': 63 and 64; an-Naml: 85; al-Mursalāt: 35. But, in Surah al-Nahl verse 125, the Qur'ān mention the word "jidāl" which means, literally, argument or disputation. Specifically, the verse says "*Call unto the way of your Lord with wisdom and fair exhortation, and argue with them in the better way. Lo! Your Lord is best aware of him who stray away from His way, and He is best aware of those who go aright*". Even though the Qur'ān does not mention the word logic specifically but when reading the Qur'ān, readers are challenged to use their logical thinking to prove the claims made against the truth of the Qur'ān or to evaluate claims made by the Qur'ān against scientific and historical evidence.

Logic is the tool used by philosophers to make and evaluate arguments to distinguish the sound from the bad ones by examining the criteria for valid conclusion and demonstration. Thus, it can be said that logic is the study of principles of correct reasoning. An argument, in logic, consists of at least three statements of which one is a conclusion. The two other statements are called claims or premises or propositions which provide reasons to support the conclusion. Claim or proposition or premise is a statement which can either be true or false. An example of a simple logical argument is in the following structure:

bird is an animal (premise 1)

parrot is a bird (premise 2)

therefore, parrot is an animal (conclusion which follows necessarily from the two premises).

However, many Qur'ānic verses provoke readers to use logical thinking to examine arguments in the form of conditional proposition: if p then q; p therefor q or not q therefore not p. Argument in this structure consists of conditional claims. For the conclusion to be true, the first condition must be met or if the conclusion is not true, it is necessarily follows that the first condition is not true. For example, many non-believers from the time of Prophet Muhammad up to now accuse Prophet Muhammad

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was the one who wrote the Qur’ān. Therefore, Allah provoke them to use logical thinking to prove their claim. In the Qur’ān, Allah says:
“And if you are in doubt as to that which We have revealed to Our servant, then produce a chapter like it and call on your witnesses besides Allah if you are truthful (al-Baqarah: 23).”

If you are truthful (p), then produce a surah like it (q)

Up until now with all the advancement in science and technology, it is a fact that they have not produce a surah (Not q), therefore they are not truthful (not p)

Imam al-Ghazali, in his book titled “Qistas al-mustaqim (Just balance)” claimed that the first teacher of logic was Prophet Ibrahim (Al-Ghazali, 1978). He claimed that the five forms of deductive arguments explained in the book as the just scales to measure knowledge so that one can get away from blind imitation because there will be times in one’s life that one has to think on his/her own to make decision. He gave examples of how Prophet Ibrahim used logical thinking to argue with his people who made and worshiped statues; and when the prophet argued with King Namrud. Both arguments used by Prophet Ibrahim were in the form of conditional claims.

“They said: Have you done this to our gods, O Ibrahim?” Ibrahim said, “Rather, this the largest one did it, then ask the idols, if they can speak.” So they returned to their senses and said (to each other), “Indeed you yourselves are the wrongdoers”. Then they ‘quickly’ regressed to their ‘original’ mindset, saying, “You already known that these ‘idols’ cannot speak!” He said, “The do you worship instead of Allah that which does not benefit you at all or harm you?” Shame on you and whatever you worship instead of Allah. Then will you not use your ‘aql? (Al-Qur’ān, al-Anbiya’: 62-67)”

If these idols are gods (p), then they can speak and give you benefit or harm (q)

They admitted that the idols cannot speak and give any or harm (not q),

Therefore, the idols are not God (not p).

Another example is the story of Prophet Ibrahim and Namrud. *“Have you not thought about him who disputed with Ibrahim about his Lord because Allah had granted him kingship? When Ibrahim said, “My God is the one who gives life and causes death,” he said, “I give life and cause death,” Ibrahim said, “Indeed, Allah causes the sun to rise from the east. So make it rise from the west.” And so the disbeliever was dumbstruck. Allah does not guide the wrongdoing people (Al-Qur’ān, al-Baqarah: 258).”*

According to Imam al-Ghazali, this argument can be structured using conditional propositions. The first condition proposition must be true for the second proposition to be true.

The one who can make the sun rise (p), then the one is God (q).

My God can make the sun rise (p), then my God is The God (q)

This paper just presents a few examples of how logic is used in the Qur’ān to provoke readers to use their logical thinking when examining their own claims or the claims made by the Qur’ān. To know more about logic in the Qur’ān, refer to books by prominent scholars like al-Ghazali who explain logic in *Qistās al-Mustaqīm* (Al-Ghazali, 1978), *Mihāk al-Nazar* (Al-Ghazali, 2016), *Mi’yar al ‘Ilm fi Fann al-Manṭiq* (Al-Ghazali, 1990), *al-Mustaṣfa, min ‘Ilm al-Usūl* (Al-Ghazali, 2018). Bear in mind that logic is used to evaluate and make judgment on the propositions made. The propositions are the existing information and knowledge which are combined to make logical conclusions. Unlike inductive arguments where observations and experimentations are made to confirm existing theories or find new theories and knowledge.

Even though all information and knowledge are not new but with logical thinking, new conclusions can be made. Logic is not only in the form of deductive and inductive arguments but thinking of the logical consequences of a philosophical proposition is also another way of thinking logically. In logic, if the premises are true, and the structure is valid, then the conclusion is true and cannot be proved false. The only way to prove that conclusion is wrong is by proving the premises are false and the structure is not valid. In the introduction of his book *“Ninety-Nine Beautiful Names and Attributes of Allah”*, Imam al-Ghazali explained that he used logic to write the book. He stated that from the attribute of seeing, hearing,

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and speaking we can deduce that Allah is living because only the living can have that attribute (Al-Ghazali, 1999).

Using this method explained by Imam al-Ghazali, I used logic to come up with logical consequences of the statement “Rabb who Create”. If God create, then God is the Owner and the universe, and all its content are the owned; and since He create then He have the knowledge of everything and nothing is left except within His knowledge even a speck dust that flew and settled on somebody’s face. We can use this and go on and on to conclude on the attributes of Allah. By using this method, we can conclude that it is logical to obey Allah and live according to the teachings of the Qur’ān and it is not logical for human to conclude on metaphysical existence using ‘aql because the window to human knowledge is through the senses. If the senses cannot sense, then human cannot know on his own without the teachings from the Qur’ān and Sunnah. The claim that human uses logic to know about all the unseen things is illogical. But of course, we can make conclusion on some of the unseen existence when there are observable indicators. For example, we observe things are falling to the ground every time we throw them up in the air, based on this indicator, we conclude that there is an unseen existence that is pulling the things to the ground; and we call this unseen thing as gravity. Without the observable indicators, no unseen things can be known by logical thinking.

Even though some renown Muslim scholars prohibited Muslims to learn logic, but there are prominent past and contemporary scholars who deemed logic as useful tool to measure knowledge and they claimed that to learn logic is religious obligation. This paper has mentioned about Imam al-Ghazali as one of the renowned teachers in logic and he left a lot of legacies for us to explore. Other scholars who shared similar conclusion are Ibnu Rushd (Ibn Rushd, 1976) and Ibnu Khaldun (Ibn Khaldun, 1967). Ibnu Rushd argued that logical or intellectual reasoning is a religious obligation. He further made an argument that since logical reasoning is a method of philosophy, then the study of philosophy is a religious obligation. Moreover, Ibnu Khaldun claimed that logical-philosophical thinking sharpens the mind through orderly presentation of proofs and arguments, so that the habit of excellent and correct arguing is obtained. Contemporary scholar from the Malay Archipelago, Hamka said that philosophy with logical tool can exercise the intellect (Hamka, 1995). Many other scholars and academicians agree with the propositions made by past scholars on logical thinking which is a philosophers’ toolkit. They are Professor Nasr

(Nasr, 1982), Rosnani Hashim, (Rosnani, 2011) Sardar (Sardar, 1991), Zafer ul Hasan (Seyed Zafer, 1931), and Manzoor (Manzoor, 1989) to name a few.

From the analysis of the Qur'ānic verses and views of prominent scholars past and present, it can be concluded that logical thinking is a tool to measure knowledge in order to make decision on what to believe and what to do. It is also logical to conclude that logical thinking can only make conclusion on the metaphysical existence through observable indicators. Those who use logical thinking to convey news from the unseen world which do not give effects to the senses are making illogical claims.

However, there is a confusion which can be witnessed in social media which claimed that those who made wrong conclusion were those who use logical thinking. This claim revealed confusing in understanding the concept of 'aql and its ability to think logically as mentioned in the Qur'ān and explained by scholars. Therefore, this exploratory case study was conducted to discover whether the claim made publicly in social media is something to worry about and to act on so that creative solutions can be offered to arrest the problem.

METHODOLOGY

The present study used exploratory case study research method to collect and analyse data from ten participants who were young Muslims from Gombak District in Selangor. Case study is “an empirical inquiry that investigates a contemporary phenomenon within real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 2009).” The purpose of using exploratory case study method is to get a first picture of a problematic situation that transpired in the real world by analysing the actual behaviour in the real setting delicately to avoid obstructing the reality. This study used Stake's explanation of the aim of an exploratory case study, which is to expand perspective and to gain deeper insights on the examined problem in order to gain better view of this problem in the real world (Stake, 1995).

This study attempted to describe the young Muslims' views on the concept of 'aql and its functions which are mentioned and used in the

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Qur’ān. Nonetheless, this study described only the participants views on ‘aql and logical thinking and did not generalize to other young Muslims in Malaysia or in the world. The main aim was just to get the first glance of what has been happening in the real setting. Data was collected using semi-structured interview questions via online platforms like Zoom, Google Meet and WhatsApp. The interview questions were open and broad to avoid putting words into their mouths. By doing so, interference was minimized so that real data can be collected. The interviews were recorded and transcribed based on the predetermined themes which were the concept of ‘aql, locus of ‘aql, views on logical thinking and logical thinking in the Qur’ān. Even though the study only used single data source, but the data gathered were verified by the participants after the transcriptions were completed.

FINDINGS AND DISCUSSION

The participants for this study were 10 young Muslims aged from 17 years old to 23 years old. Two were 17 years old, one 19 years old, one 20 years old, three 21 years old, two 22 years old and one 23 years old. Some of them were IIUM students and two were their close friends. The participants were asked to give their views on the concept of ‘aql, the locus of ‘aql, and the relationship between the brain and the heart. The reasons these questions were asked were to discover the participants understanding on the concept of ‘aql and its functions; whether they can relate their responses to the Qur’ānic concept of ‘aql as the faculty used to think from concrete to abstract to spiritual; and to assess their knowledge on the locus of ‘aql and how it is related to spiritual heart and brain. Since ‘aql is popularly equated with logical thinking, the participants were also asked to share their opinions of logical thinking and its consequences.

Views on ‘Aql and Its Locus

The findings of this study revealed that all participants gave a very brief definition of ‘aql. Four of the participants described ‘aql as a gift from Allah that differentiate human from animals. The main function of ‘aql, according to three of them, is to think. Respondent 7 said, “with ‘aql, we can have the ability to think, create, understand and to know what is right

and what is wrong”. These assertions were supported by respondent 10 who said that the main function of ‘aql is to think. It can be concluded that the respondents viewed ‘aql as an organ of thinking. One participant understood the concept of ‘aql as a method of thinking logically which the Malays commonly referred to as “logik akal” (the logic of ‘aql) which denotes the only function that ‘aql can do is thinking logically; and another one participant said that ‘aql is a component located in the human brain, that is, ‘aql is part of the brain. This study also found two participants asserted that the most important function of ‘aql is to be able to understand, appreciate and follow the signs of Allah without which human cannot worship Allah. However, the participants were not able to elaborate this view which imply superficial understanding of the concept of signs mentioned in the Qur’ān.

Table 1: Views on Concept of the ‘Aql and Its Locus

Views on ‘Aql	Frequency	Locus of ‘Aql	Frequency
Gift from Allah to human only	4	Brain	5
Component of the brain	1	Heart	2
A method of thinking (logic)	2	Do not know	3
Organ of thinking	3		
Organ to appreciate and obey Allah (spiritual cognition)	2		

From the analysis of the collected data, it can be concluded that all participants had a superficial and narrow understanding of the concept and functions of ‘aql. Superficial because it touches only the surface of the concept of ‘aql. Narrow because ‘aql is viewed by majority of them as an organ of critical-logical thinking only. Only two of the participants viewed ‘aql as capable of spiritual cognition. This is far removed from the explanations given by scholars where ‘aql means a spiritual organ that is capable of processing information and knowledge not only to make judgment on what is right and what is wrong, but also capable of restraining the nafs so that one can be morally upright (Henzell-Thomas, 2004). What is more, five of the participants said that ‘aql is located in the brain while three of them did not know because “‘aql cannot be seen and detected by sense”.

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This is not consistent with the teaching of the Quran where heart is considered as having the capability to think. According to Mushtaq, the separation between mind-brain and mind-heart is the result of materialism and secularism (Mushtaq, 2008) which pushed away heart from understanding human intelligence because the materialists understood thinking as biochemical electrical impulses in the brain.

Views on Relationship between the Brain and the Heart

Even though five of the respondents said that ‘aql is in the brain, but seven of them strongly believed that the brain is the most important organ in the human body. All type of thinking, critical, creative and logical thinking, is the function of the ‘aql which is in the brain. They maintained that the ‘aql in the brain not only decides routine things but most importantly, makes moral decision of what is good and bad; and what to do or not to do. Participant 1 said:

“The brain acts as a way for us to decide whether these actions are considered good or bad. For example, stealing and lying is considered bad but only when we think that it is bad, we won’t do it. For the heart however it depends on the nature of the heart. Nature of the heart can be either good or bad. If we have a good nature of heart, then our personality would be good. For example, even if we have a good heart but people are still displeased about us, only with the brain or ‘aql that we are able to think of a way to please that person back.”

Similarly, Participant 9 shared almost the same view. She said, “Brain is more important than the heart because sometimes when we follow our heart, we cannot differentiate the good and bad things. If we use our brains, we will be more rational in doing things.” This view was supported by four other participants. They said:

“...the brain is more important than the heart because the brain will interpret the data that we receive and take it into an action so the bad things or good things we do come from the brain.”

“We need brains to make moral decisions. The moral decisions can be grasped through learning, experience or even a piece of advice from anyone. Thinking enables us to weigh the pros and cons of every action or decision that would eventually affect the well-being of ourselves.”

“The heart only does one thing, which is pumping the blood. Brain is the one who gives commands to the whole body. How can it be if there is no brain?”

Another participant believed that brain and heart cannot be separated. They said, “Brain and the heart both need each other in order to feel and to think. We don’t just use our brain only but add a little heart into it as both are needed in order to fully think properly.”

In a nutshell, seven participants viewed that there is no relationship between the spiritual brain and heart. The ‘aql in the brain act independently to analyse and evaluate data from the external world to make judgement on what is good and bad. They argued that the heart is emotional, therefore could not make good moral decision. No participant mentioned about ethical-spiritual function of the ‘aql to bind base desire so that one could have good moral behaviour. Majority of respondents believed that moral judgment and moral action are the same. When moral judgment is made, naturally people would act rationally according to the dictate of logical thinking. However, they seemed to be unaware or had not reflected on the fact that many would conclude on moral issues logically. But making logical conclusion does not mean that the right actions would follow necessarily. For example, many people would conclude that smoking is dangerous, but people have not stop smoking. This is because ethical behaviour is not the result of logical thinking only but also the strength of ‘aql to restrain the nafs or base desires which is connected with high spirituality.

In brief, the participants had good understanding of the functions of ‘aql for rational-logical thinking which is consistent with the elucidations made by scholars. According to scholars cited in this study, the rational-logical thinking is the function of ‘aql juz‘i which is located in the brain (Henzell-Thomas, 2004). However, majority of them opined that there is no relationship between brain and heart which is incongruent with scholars’ explanation of ‘aql. According to past and contemporary prominent scholars, ‘aql is both at the brain and heart (Mushtaq, 2008). Hanzell-Thomas explained thinking at lower level is done in the brain using ‘aql juz‘i and at thinking at higher level is at the heart using ‘aql kulli (Henzell-Thomas, 2004).

Spiritual Cognition

Since the highest potential of the ‘aql is recognizing that the universe and all its contents are signs of the existence of Allah. Therefore,

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participants were asked on how they perceived the sun, the sky and the earth to assess their spiritual cognition. Participant 1 said, “the earth and the scorching sun shows the greatness and power of Allah. Allah is the One who created the sky, atmosphere, stars, planets and also the animals. This just shows that we are nothing compared to the Almighty. So, if we use our ‘aql, we can determine that all of these are all created by a God”.

Similarly, participant 2 believed that “...these natural phenomena are related to a great power that gives everyone convenience. If someone uses ‘aql and uses it wisely, they could think of why the phenomena exist and believe that we are nothing but just a mere humankind.”

Participant 5 explained that “they remind me of Allah's attribute of al-Khaliq in which al-Khaliq, the Creator, is the One Who brings things into existence after their non-existence, Who invents and innovates without a prior model. Allah's creation includes the sky and sun has been designed and created according to the highest heavenly standard of splendour and order hence, it is impossible to be ever emulated by anyone”.

This means that they can arrive at spiritual cognition even though they could not explain how the ‘aql processes those data and information to conclude as such. Wan Mazwati and Rosnani explained that spiritual perception is when the eyes of the heart could see as the result of observation, analysing, connecting, arranging, combining and interpreting through rational thoughts, that the material existences are indicators of a Metaphysical Existence and signs that point towards the ultimate destination which is God (Wan Mazwati and Rosnani, 2022). Therefore, the universe and all creations within it are indicators of God’s existence and signs of His attributes. Amazingly, nine participants posited that the sky, the scorching sun, the earth and all natural phenomena are signs that show the power and greatness of Allah Almighty. However, shockingly one participant was not sure whether those phenomena are creations of Allah.

View on Consequences of Logical Thinking

The findings revealed that all participants viewed ‘aql as logical thinking when asked about their views on the consequences of using ‘aql to think. From the analysis of the responses given by participants, predetermined themes of positive and negative consequences of logical thinking were used to guide data analysis. Majority of participants thought that logical thinking is needed in daily life to gain knowledge, to make decision, solve problems, come up with creative ideas and rational solutions, to give well-reasoned answers to questions, and to plan. Participant 1 said that “We can use logical thinking in our daily life to gain knowledge, sciences,

and mathematics. ‘Aql is important for thinking in order to understand things more deeply.’ Her views were supported by Participant 3 who said that:

“Logical thinking is important because it can help you handle important decisions, solve problems, generate creative ideas, and set goals. All of it is necessary for developing something good. Someday you will come across challenges on a daily basis that require logical thinking. The stronger your logical thinking, the easier you can come up with solutions that will benefit you in many ways.”

Furthermore, Participant 4 and 5 also share similar views. They said, “If we use logical thinking in a good way, it can help to solve problems and we might solve it by using our own logical way that will not give bad impact to other people.” and “Logical thinking enables us to reason logically when solving issues. They enable you to provide well-reasoned answers to any issues that arise. Logical thinking also encourages us to make decisions that most people will consider rational.” respectively.

Another positive impact of logical thinking shared by the participants is the ability to consider all consequences when trying to make best decision. Participant 8 said, “We might consider all the consequences that might occur when we are dealing with many choices, and this will be a good one because we can avoid any bad consequences of choosing the wrong decision.” However, Participant 2 warned that logical thinking needs guidance from Allah to lead good a life and to avoid making wrong choices.

While there were positive consequences of using logical thinking, it seemed that according to the participants, the negative out weight the positive consequences as if those who use logical thinking live a life in illusion which can harm them mentally thus led to sadness and because of that will be revengeful and finally conclude that liberalism is the right philosophy of life. Participant 3 worried about letting people to use logical thinking and said,

“Logical thinking is not for everything because some things we can think logically but some are not. It can harm us mentally because we are human not God. We have our limits and our mind cannot reach everything. Even our body also cannot do everything like we want. Sometimes, we have to believe things happened with a reason like how the universe was created. We cannot use our logical thinking to think about it. If we keep thinking about it logically, it can harm our mental health.”

Participant 1 and 2 also shared the same concern. They thought that those who used logical thinking can end up being misguided and support

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LGBT thus would go astray. “Logical thinking can lead to misguided thoughts for example agree and support the legitimacy of LGBT.”, said Participant 1 and “logical thinking would make people go astray” said another.

Participant 4 illustrated what might happen if one uses logical thinking by saying, “It will lead to wrong understanding because it all depends on our knowledge. Sometimes, our knowledge is not hundred percent good or truthful. Some of the thinking may be just an illusion”. It is also shocking to discover that one participant thought that logical thinking might result in living life of sadness and revengefulness. She said, “We will feel sad and revengeful. For example, when we put our efforts into something, we will think we are already successful because we have sacrificed much of our time on it to become a successful person. But if we do not succeed, we will feel sad and we forget that Allah SWT is the only one who gave us the success.”

What is more, according to one of them, “It would be bad for Muslims to rely on logical thinking without considering the Islamic perspectives....we humans might lack exposure and information of the Islamic approaches thus we may perform actions that negatively affect ourselves and others”. Another participant prohibited teaching logic to children because “logical thinking in kids can affect their personality when they grow up, and they may hurt others' feelings since they only think using logic”.

With respect to belief and faith, the participants believed that logical thinking is limited to think of faith “...because we might not think beyond our capability of knowledge that already exists in our memory.” By using logic, “We will think about the unseen matters....and we will believe wrongly because we just use our reasoning to think about the unseen matters that can only be known by learning the Qur’ān and Sunnah of Prophet Muhammad.”

The data obviously showed that all participant undermined the ability of logical thinking to make conclusions on the unseen based on the observable indicators in the universe. According to them, ‘aql positively functions just to handle decision making and problem solving processes pertaining to non-religious aspects of life. Imam al-Ghazali emphasized that logic is the tool used to determine truth from falsehood in many of his books, especially books on logic. Even in *Ihya’ ‘ulum al dīn* on Book of Knowledge, he emphasized the importance of ‘aql as criterion of knowledge (Al-Ghazali, 2005b). He wrote in “*Mi’yar al-‘Ilm fi fann al mantiq*”, “I claim that I use this criterion to balance and measure religious

knowledge, arithmetic, geometry, medical sciences, jurisprudence, theology and kalam. I can, with this criterion, distinguish in it the true from the false". Furthermore, Imam al-Ghazali maintained that logic has got nothing to do with religious essentials and is perfectly neutral (Al-Ghazali, 2005b).

What is more, the Qur'ān challenges and provokes readers to use their 'aql and logical thinking to evaluate the truth from falsehood. Many verses of the Qur'ān use logical argument to present the truth. Contemporary scholars like Sardar and Bennabi asserted that logical-philosophical thinking is the necessary tool needed to defend faith and religious belief from being influenced by foreign ideologies which are deadly to Islamic belief (Sardar, 1991). In summary, these young Muslims were very much influenced by the popular belief that 'aql is logical thinking and logical thinking is not a valid and reliable source to tell what is true from what is false in religion. No wonder logical thinking is not a priority among Muslims for fear of losing religious convictions and as a result, adopt liberalism philosophy of life.

CONCLUSION

This study discovered that the confusion on the concept and functions of 'aql is real. It revealed that the young Muslim participants were not able to explicate clearly the correct meaning of 'aql and the connection it has with brain and heart according to explanation made by scholars based on relevant Qur'ānic verses and science. Even though they had come up with some good answers, but the answers were probably not the result of the usage of their 'aql but probably they remember the answers from reading or from their teachers i.e. others have done the thinking for them. For example, they said that 'aql which they equated with logical thinking could not make conclusions on the unseen; but they said that the heaven and the earth, which are material existence, are creations that indicated the existence and power of God, which is the unseen existence. They made contradictory claims but probably they were correct in the sense that they did not make this conclusion but they had learned or listened from others.

Further analysis from the answers given by the young Muslim participants showed evidence that they had not only little knowledge and were confused on 'aql and logical thinking, but the answers also displayed their weaknesses in using the 'aql and logical thinking. In addition, they seemed unaware that the Qur'ān mentioned 'aql and thinking many times because they never relate their answers with the Qur'ānic teachings. Moreover, they made claims that they did not support with any evidence at all either

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through giving good examples or by providing well-established facts. They claimed that logical thinking in children would result in bad personality because logical people have no empathy without giving any evidence. In addition, they also did not even give logical explanation or proof why they thought that using logic would result in unbelief and would succumb to the teachings of liberalism.

Besides inability to justify their claims with well-thought arguments, they also blamed ‘aql and logical thinking for the wrong decision made. For example, they said that people who were influenced by the teachings of atheism and liberalism philosophies are those who used logical thinking as if it is very logical to fall into the traps of unbelief and other philosophies. Another important insight is that the young Muslims perceived ‘aql is not important and not the tool to understand religious belief or faith. They seemed to believe that it is enough to listen to teachings of scholars and teachers without questioning. This is dangerous for it helps develop blind imitation and guru mentality. Guru is always right even though he/she is going against the teachings of Qur’ān and Sunnah. In conclusion, the responses given the young Muslims exhibit the confusion in understanding the concept of ‘aql; that they had no self-awareness and no self-reflections (meta-cognition)—that is why they were inconsistent which is also an indicator of confusion; and they failed to justify their answers but instead held on the preconceived ideas that they had in their mind. Most importantly, this study revealed the incoherent worldview of the young Muslims.

This study brings into the forefront the pertinent issues on the teaching of and for thinking at the secondary and tertiary level of education especially in the teaching of Islamic Studies; and highlight the issues on the process of developing Islamic worldview of Muslim students since the purpose of education is to develop the environment of the mind, which is the worldview, within which authentic learning could take place. Educators should not leave the teaching for thinking to the academic subject teachers for ‘aql is an integral part or essence of human, therefore knowledge about human and ‘aql should come from authentic sources. Since Muslims believed that human is created by Allah, therefore, it is logically followed that the most authentic source is the Qur’ān and Sunnah. Of course, the Qur’ān and Sunnah will not be understood without the use of excellent cognitive ability. This study suggests further research should be done to collect more data so that generalization could be made on the concepts of ‘aql and logical thinking among young Muslims.

Even though this study did not generalize the findings to the general population, but it would give some suggestions for the reason that knowledge of the self and thinking is obligatory for every Muslims (Al-Ghazali, 1978). The topics of ‘aql and its functions should be included in Islamic studies at primary and secondary level. Qur’ānic verses on ‘aql and thinking should be included in the syllabus and discussed in teaching and learning processes. At the university level, a specific subject about human nature should be made compulsory to all Muslim students. The focus in the course of human nature is not on the discussion of the physical aspect of human but on the spiritual aspect of human: the mind and the soul—nafs, ‘aql, qalb, rūh. Al-Ghazali said knowledge of the self is one of the ingredients of alchemy of happiness. Human nature should not just be a topic in any other subjects because one full semester is needed to fully go through the discussion on Qur’ānic verses, past and contemporary scholars’ views, and scientific findings on human nature (Al-Ghazali, 2007b).

As for thinking course, be it critical-logical, creative and ethical-spiritual thinking, it should be taught as a stand-alone course at the tertiary level. Any education that claimed as Islamic Education should not sidelined this course because not only ‘aql is an essence of human but also the tool of knowledge to distinguish truth from falsehood especially in this era where one could be lost in mountains and mountains of information. Since logical-critical thinking is prerequisite to the study of philosophy, then it is not sufficient just to be added as a topic in introductory philosophy course. A topic in ‘Basic Philosophy’ course could not achieve the objective of producing thinking students because of heavy content and many instructors would resort to teach philosophy instead of doing philosophy. In this age of information explosion, universities could not have done justice by reviewing the curriculum every five years; and since the development of new theories and knowledge is so fast, the only rational action that a university could do is to arm their students with tools of thinking so that they would be able to be an independent learner who can use the available knowledge creatively to solve contemporary problems. But most importantly, the students would be able to filter through their thinking ability the truth from falsehood so that they would be able to stand tall with production of new knowledge and inventions but would not lose their religious mooring.

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