

Artificial Intelligence And The Future Of Creative Thinking: A Reflection From Islamic Perspective

OSMAN BAKAR, PHD¹

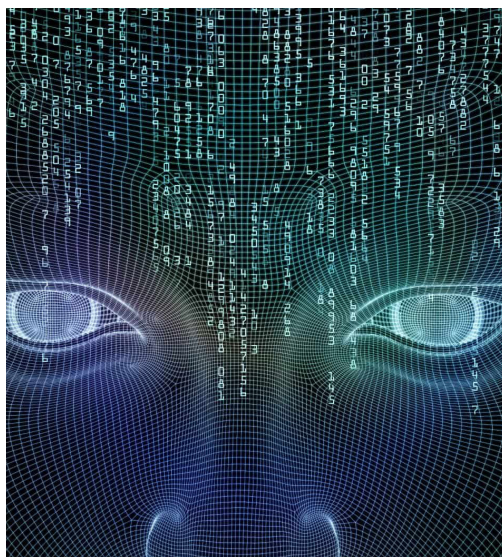
Introduction

During the last fifty years we often hear of concerns in academia about the decline in creative thinking among college and university students. Critical voices on the issue are becoming more numerous and louder, suggesting the decline is a progressive one. In fact, the decline is observed to have cut across generations, implying that its causes and effects are cumulative. The general trend observed by these critics, including this author, is away from deep and critical to shallow and superficial thinking. The brunt of the criticism is now directed at the education system, which is widely seen as the perpetuator of the pedagogical “vicious circle”. Each decade of teachers and students appears to have less critical-thinking outlook than the previous decade!

When progressive decline in quality thinking is entrenched in an education system with no clear counterproposals in sight to arrest it, then there is a cause for great concern. The genuine fear is that the system in question would degenerate to produce either more of the same kind of mediocre graduates that lack critical thinking or, worse, graduates of lower thinking ability what more if this group is produced in great numbers. Wisdom tells us that the progressive decline in deep and critical thinking worldwide needs to be arrested if true human civilisation is to be restored. The eclipse let alone absence of such quality thinking, especially over a considerable period, could spell a civilisational doom for a society. It would cause any society to degenerate to lower levels of civilisational achievement if we can still indeed speak of such a downgraded achievement as civilisational. The societal degeneration occurs because without critical thinking that is given a meaningful and well-defined epistemological and pedagogical role in the educational curricula many existing problems of the world would not be solved, and new problems would pile

up awaiting solutions.

Critical thinking is a necessary condition for the advancement of knowledge, societal salvation, and the Earth’s planetary health. But this condition alone is not sufficient for the realisation of these noble objectives. A sustained critical thinking tradition needs to be put in place that is complemented with spiritual and moral character building. I argue in this article that critical thinking needs to be wedded to spirituality—the essence of which is faith in God. It is only within the framework of this epistemological marriage between rational and spiritual intelligence that humanity can hope to sustain their civilisation and the planetary ecology that supports it. This viewpoint may be dismissed by septs as baseless. But consider the lesson that we learn from history about the rise and fall of civilisations. Critical thinking and spirituality understood in the sense of attachment to rational and ethical values are usually identified with the creative and ascending phase of a civilisation,



while its declining phase coincides with the disappearance of creative thinking and detachment from universal moral and ethical values. Both phases are known to span long periods of time making the decline gradual and hardly noticeable from within the civilisation in question.

Indeed, most members of a great civilisation who live during the phase of its decline are not aware that they have lost their rational excellence that is based on critical thinking, and their moral pride to the language of brute and irrational power and collective arrogance. This is because the feeling of greatness and superiority survives in their collective consciousness. In truth, however, such a feeling is no longer based on sound reasoning and exemplary moral leadership as it used to be during the creative and ascending phase of a civilisation. Rather, it is based on sentiments, ideological or nationalist fervour, and false pride. Devoid of rationality and moral sensitivity, the centres of power in a declining empire or civilisation are only known to be good at demonstrating its might through its display of force, military or otherwise. It is the pursuit of political and military power that overrides everything else in a declining empire. At the same time, hypocrisy in moral and political behaviour is rampant in such an empire, both in its dealings with foreign nations and within its own community.

Jeffrey Sach, the well-known but controversial contemporary American economist, has been speaking more than once about the decline of the American Empire and its European allies. More recently, he is talking about the end of 500 years of Western dominance over other world systems. In short, he is talking about the decline of Western civilisation. His discussion on the subject is framed in the light of the rise of such Asian powers as China and India. In Sach's view then, we who are living today are living witnesses of the decline of the American Empire and, more generally, of Western civilisation. It would be an interesting study if we were to investigate into the origin and characteristic features of the American civilizational decline, particularly a study of the state of its creative thinking and moral sensitivity during the last fifty years, which we have identified as part of the period of its decline. This study may be pursued along the lines of argumentation that I have presented in my foregoing introduction.

Contributory Factors to the Decline of Critical Thinking

Taken collectively, many factors have been cited by critics for the decline of creative thinking. Several

of these factors pertain to the educational trends in modern times that de-emphasize the teaching of thinking skills. First, there is decreasing attention being paid to the teaching of courses on sources of thinking skills such as logic and creative thinking. In traditional Islamic educational curricula, the teaching of logic (*mantiq*), which is essentially the art of thinking, is accorded great importance. But at the present time this subject is no longer taught, including in many universities and colleges that carry the name Islamic or Muslim. This deprivation of students' access to conceptual tools for thinking advancement is in sharp contrast to what the Muslim philosopher, al-Farabi (870 CE – 950 CE), would like to see, and rightly so, in a higher education institution, especially that is dedicated to the rigorous and advanced training of philosopher-scientists, both natural and social. Al-Farabi wrote the first comprehensive education curriculum for such a purpose in Islamic history in which he included the teaching of logic and language.

Second, the art of problem solving is no longer as important a part of learning in schools and universities as it once was. This art helps sharpen thinking skills and keeps cognitive functions healthy. When I was in school, mathematics taught me the art of solving problems. I solved numerous mathematical problems. Mathematics at the more advanced university level continued to teach me how to solve problems but these are now more of the complex types. The precious lesson that I learnt from my mathematics education is that, in truth, I was not just acquiring the art of solving mathematical problems but, rather, the art of solving all kinds of problems in general. There is a universal lesson that may be learnt from traditional mathematics education. Unfortunately, this lesson is now lost. Examinations in the subject of mathematics are now less about testing a student's ability to solve problems than about him answering correctly his objective tests.

Third, the deprivation of quality time for reflection and contemplation for both students and teachers is obvious to all. Both are overburdened with academic works that only add mental stress, not to speak of their uncomfortable feeling of intellectual insufficiency. There is truth in the claim that the existing academic and learning system is such that it does not provide a favourable condition for deep and creative thinking.

Fourth, over-dependence on educational tools like Artificial Intelligence (AI), which is increasingly recognised as harmful to an individuals' cognitive health and development, notwithstanding some benefits it

confers on its users. AI is also cited as a significant contributor to digital distraction, which critics say can lead to a decline in reading comprehension and learning concentration. A MIT study released in June this year suggests a link between ChatGPT use and cognitive decline². According to the team of eight researchers at MIT's Media Lab, ChatGPT can harm an individual's cognitive function, including critical thinking, over time, especially in younger users. Separating the subjects they studied into three groups – users of OpenAI's ChatGPT, users of Google's search engine, and users of the natural brain only – they discovered that those who use ChatGPT over a few months had the lowest brain engagement and “consistently underperformed at neural, linguistic, and behavioural levels”. This study comes at a time when there is growing concern among educators that AI is increasingly accessible to cheating.

This is not the first study that supports claims about the negative impact of AI-assisted learning on the quality of students' education. In Sweden, there has been for years a fierce national debate on the merits and demerits of digital education and the extensive use of AI-assisted learning tools. Several studies conducted in the country reveal a connection between extensive digital education and decline of student learning. According to Sweden's Karolinska Institute³, a highly respected medical school focused on research, in their response to the country's national digitalisation strategy in education, “there is clear scientific evidence that digital tools impair rather enhance student learning.”⁴ If we accept the logic of this research discovery, then we could add that given the generative nature of AI its rapid use in digital education would only accelerate the impairment of student learning.

It is interesting to observe that in Sweden, the second-highest use of the internet in the European Union, after Denmark, it was only eight years ago (2017) that the government introduced a five-year digitalisation strategy for schools that was meant to “create further opportunities for digitalisation, achieve a higher level of digital competence (especially in the context of children, students, and younger people), and promote the development of knowledge and equal opportunities and access to technology.”

⁵But last year (2024) the government declared its intention to reverse “the too many opportunities” for young people to stay digitally connected in the classroom. It is leading an effort to get students to rebalance real life and TikTok reels. In the words of Jacob Forssmed, the country's Minister of Social Affairs

and Public Health, “Swedish students are suffering widespread disorders and a decline in physical and intellectual capabilities due to the hours spent online.”⁶ In my view, the main casualty in the widespread disorders resulting from over-digitalisation is healthy development of critical thinking in young people. If left unchecked, the consequences for society could be devastating.

Sweden's national debate on the issue of what ought to be a balanced digital education and the place and role of AI in the changing landscape of educational technology offers useful lessons to the rest of the world. The country first embarked on a comprehensive digital education policy around 2009 with the goal of replacing textbooks with digital tools to advance the cause of digital literacy. In 2017 it became more ambitious when it unveiled its dream of becoming a world leader in digital education through the implementation of a five-year digitalisation policy (2017-2022) in schools that could only be described as revolutionary in scope and intensity. Critics call the policy “over-digitalisation.” Post-policy research shows widespread negative impact of the implemented policy on student and youth life. The Swedish digitalisation experience in education raises the fundamental issue of how to strike a balance between real life and the needs for virtual space. In years to come this issue is expected to be more engaging to educationists, scientists, and scholars than any other educational technology issue in the past.

Central to this issue is the ethical question of how to use digital tools and AI technology that would best guarantee a holistic and balanced health for the individual users and the health of the community. Practical experience clearly shows that their usefulness in many areas of societal life cannot be denied. But equally true is the cumulative negative effects of their (mis)use on the wellbeing of individual users, especially students, as amply documented by Sweden's Karolinska Institute. This “double-edge sword” nature of digital tools and AI reminds us of the similar nature of all technologies in general. At a more fundamental level we are reminded of the double-edge sword nature of applied knowledge in general, which sums up the ethics of knowledge that is so much emphasised in the teachings of Islam.

The Qur'an teaches man to pray: “My Lord, increase me in knowledge.”⁷ And the Prophet Muhammad (peace be upon him) unveils the spirit of this Qur'anic prayer through his two complementary prayers: “O God! Grant me knowledge that is beneficial,” and, “O God! I seek refuge in Thee from unbeneficial

knowledge.” This prophetic prayer conveys the precious message that while all knowledge is epistemologically true, it is only beneficial to the extent that its use and application will have a self-transformative effect on its possessor so that he becomes a better human being, as well as a community-transformative effect for the better that we call progress. But it is important to note that true knowledge can become unbeneficial if its use and application were to produce opposite effects that are detrimental to the wellbeing of the individual users and their community.

Islamic ethics of knowledge is known for its comprehensiveness and its detailed prescriptions. As such, it may serve as a useful source of ethical guidelines for teachers in digital education and creators and developers of AI-assisted educational technology tools. However, beyond ethics, in the Islamic perspective, digital education and the pursuit of AI progress are to serve higher purposes of education are the cultivation of healthy critical thinking, which itself admits of various levels of attainment, and the formation of spiritual-moral character in individuals. The former attainment is intellectual in nature, and the latter spiritual. The two together – intellectuality and spirituality – define the essence of humanity. The pursuit of digital education and AI, which in truth are mere means to an end and not an end for their own sake, should not distract us from this real purpose of education. I argue that in education it is this wedding of intellectuality and spirituality approach that would help us both attain and preserve a healthy creative thinking culture. Accordingly, in this last part of the article, I would like to briefly discuss a few

aspects of creative thinking in its relations to intellectuality and spirituality.

The Future of Creative Thinking: The Wedding of Intellectuality with Spirituality

According to a prophetic hadith, the present world will not come to an end until not a single human soul is left on earth who invokes the Name of God. The day of the future that is imagined in this hadith coincides with the day when the world will lose its foundational pillars to stand by itself. The creator of the world would remove its supporting pillars that day for the simple reason that all the humans who then fill the earth think that these pillars are no longer of any use to their life. In truth, they entertain the false view that the spiritual metaphysical pillars supporting the cosmic edifice do not exist or are meaningless and redundant to their adopted worldview. But such a falsehood when embraced by the whole of humanity could not sustain the world for even a moment since it goes against the inner logic of the world’s existence or cosmic truth to which many pages of the Qur’an refer as *bi’l-haqq*.

It may be inferred from the quoted hadith that the *raison d’être* of the world is man’s remembrance of God. In other words, the remembrance of God or faith in Him is what preserves the metaphysical link between Earth and Heaven and between man as a terrestrial being and his Creator and Lord (*Rabb*), and hence the continuation of the world. Without such a preservation, there is no longer any valid reason, metaphysically speaking, for the planet Earth, home of the human species, to exist. It is argued here that there is a “mysterious” causal relationship between



the end of the world and the disappearance of faith in God from humanity. Of course, the ultimate meta-physical cause of the end of the world is God's Will to end it. But He chooses a particular moment in cosmic and human history to end it, which He alone knows. To be sure, man does not know the precise cosmic moment in question in future human history, but He shares with him through His last Prophet part of the secret to the question as to why He will choose that moment. The hadith tells us that there is something about the human condition in their future history that contributes to the answer to the question. The human condition referred to is when the heart of every human being is completely empty of faith in God.

In accordance with the Islamic theory of causality, an event happens due to four causes: namely; the material, formal, efficient, and final causes. With respect to the end of the world, we may interpret the four causes as follows: the material cause is the total breakdown or collapse of the physical order; the formal cause is the complete absence of remembrance of God, which we interpret as absence of faith in Him in every human soul; the efficient cause is the angelic withdrawal from their cosmic functions as invisible supporting pillars of the cosmos; and the final cause is the Divine Will to end the world. The formal cause so-described implies that the human condition in the last days of the world contributes to the divine choice of the time to end the world. It is as if God is saying to humanity at the end of time: "since every one of you human beings no longer believes in Me, why should the world continue to exist?" After all, God created the earth to be the place in the cosmos where human beings will play their role as His vicegerents (sing: *khalifah*).⁸

The hadith implies that the global human condition that is favourable to the continuity of the world is one

that may be characterised as sustained spirituality. But then Qur'anic spirituality is essentially intellectual in nature. In the Qur'an spirituality and intellectuality are inextricably linked to each other. Each is viewed as enhancing the other. A core element of intellectuality is critical thinking. The Qur'an speaks of critical thinking (the Arabic *ta'qqul* and *tafakkur*) as a precondition for the flourishing of spiritual and rational truths. It is especially interested in an education that will produce individuals with critical thinking ability and spiritual-moral character. It is in reference to such individuals that we speak of the wedding of intellectuality and spirituality the heart of which is the remembrance of God (*dhikr'Allah*). This wedding is reflected at various levels of human-divine interconnectivity. The civilizational offspring of such a sanctified wedding is what religion calls the true human norm.

Conclusion

Insofar as thinking ability is a definition of the human species, and in the light of the idea of the true human norm just explained, it is not just any kind of thinking ability that would sustain the species. The quoted hadith supports this argument, since humans at the end of time will still be thinking creatures and yet unable with this thinking characteristic alone to sustain the world. Rather, the kind of thinking needed is precisely the one that would lead to man's consciousness of himself as a theomorphic being who reflects God's Qualities and Names in a total and integral manner and as God's representative (*khalifah*) with a civilizational mission on earth.

This civilizational need poses a formidable challenge to Islamic universities and other institutions of higher learning, especially in this chaotic contemporary world. Malaysia's International Islamic University is currently pursuing Tawhidic Epistemology as its institutional vision and Ummatic Excellence (*khayrun ummah*) as its educational mission, which are positioned as strategic responses to this challenge. A key element in these strategic responses is the revitalisation of creative thinking in its educational curricula and the pursuit of AI that is informed by the Qur'anic philosophy of intelligence. *Wa bi'Allah al-tawfik wa'l-hidayah wa bihi nasta'in*.

PROFESSOR OSMAN BAKAR is currently Rector and Al-Ghazali Chair of Epistemology and Civilizational Studies and Renewal at the International Islamic University Malaysia and Emeritus Professor of Philosophy of Science at the University of Malaya.

