

When we talk about the contribution of Muslims to science, primarily from the 8th to the 12th century, the question arises about what happened to it after that? The usual trend is to put it down to the Mongol conquest of Baghdad in the 14th century and before that of Khawarzem and later to the fall of Andalus and Qurtuba. But that doesn't explain why Islamic/Muslim contribution to science didn't get back to where it was in the so-called Golden Age but that it simply collapsed, never to rise. History tells us however that the decline was not instantaneous and catastrophic but gradual over more than three centuries. Ibn Sina (980-1037), Ibn Rushd (1126-1198) and Al Farabi (872-950) are considered the leading lights in translating Greek philosophy into Arabic and interpreting it in the light of the Qur'an. That led to them taking liberties which Al Ghazali (1058-1111) criticized in his book in 1095, Tahafatul Falasafa (Incoherence of the Philosophers) and declared Ibn Sin and Al Farabi to be apostates. In my view the whole confusion was because of the misunderstanding between the Khudrat (Power) of Allahﷻ and His Sunnat (Norm). I really can't imagine how this happened because it is clear as day to me that Allahﷻ can do anything He wants, but as far as the Universe is concerned Allahﷻ has created systems which run everything. To recognize and believe in the systems (which is what science does) doesn't negate the Khudrat (Power) of Allahﷻ to do whatever He likes, including something that is against the system He created. And neither does it mean that there are no systems and

that everything that happens is an independent discrete action ordered by Allahﷻ at that time. But that's a discussion for another day. Ibn Rushd countered Imam Ghazali in 1150 in his book, Tahafut al Tahafut (Incoherence of Incoherence). What strikes me when I look at the dates is that all this happened in the 11th and 12th centuries while the Mongol sacking of Baghdad happened in the 14th century almost 300 years later. So, what happened to the students of Ibn Sina, Farabi, Ibn Rushd and why did their ideas and methods not spread? What happened to the other scientists and their students and what they taught? Some Western and Westernized speakers have blamed Al Ghazali for this and said that because he said that Mathematics was a tool of Shaytaan it killed all scientific development. Firstly, that is not true, because Al Ghazali criticized the unbridled use of philosophy and the attempt to change or negate the Qur'an in the name of logic and not Mathematics per se. Secondly, neither Ghazali nor anyone else had such power as to stop all intellectual and scientific activity by one statement. The truth is that the Mongol and Spanish conquests were the final nail in a coffin which had already started to shut its lid. That lid hasn't opened yet.

In my view the reason lies somewhere else. Please allow me to explain because in the demise lie the seeds for rebirth. One of the many changes that the Industrial Revolution brought about was a global explosion in corporatizing of business and the standardizing of school education. The

Dutch and English East India Companies, more than a century earlier, were the first joint stock companies in the world and were not only enormously wealthy but had private armies and navies, invaded and occupied territory, deposed legitimate local rulers and took over not just land but countries. They traded in slaves and literally looted India and Africa for the benefit of England and the Netherlands. The Dutch East India Company (1602-1800) was worth in today's money, \$7.8 trillion. But it was the Industrial Revolution (1760-1840) which changed the meaning of global dominance from military occupation to trade. Military is still an important player in the equation because as they say, 'If goods don't cross borders, soldiers will', but it is not military conquest which takes the lead today but trade and business delegations. It is not accidental that almost always, the most valuable commodity those business delegations promote and peddle is military equipment i.e. weapons of mass destruction. Yet we want global peace. What we do have is global insanity and global deception. May Allahﷻ save us all.

With the Industrial Revolution, standardized education was necessary to produce the people to mind-the-shop in different ways and so the present-day schooling system came into being. Not surprisingly it was organized on the assembly line system with segregation by date of manufacture, also known as age, focus on subjects necessary to produce people with the skills to fit into the system and schooled to be obedient little cogs in the wheel of global commercial enterprise. All imagination, spontaneity, curiosity,

individuality, creativity, and God forbid, dissent needed to be smothered at birth and this was done very effectively. Religious education followed the same route with even more rigor. What we must remember is that design dictates outcome. A car will never fly no matter how powerful its engine because it is not designed to fly. So also, an education designed to produce obedient slaves can never produce leaders who challenge the system or change it.

That is why we have the few school dropout success stories. We applaud these people and indeed we should. But what we must do even more is to ask why it is that they had to drop out of school to succeed? And therefore, what does that tell us about schooling?

‘Design determines outcome.’ People ask me, ‘I want to start a school, what curriculum should I use?’ I tell them, ‘What is the school designed to produce? The curriculum will depend on that.’ To illustrate, if I ask you, ‘I want to start a factory, what machinery should I buy?’ you will ask me, ‘What is your factory supposed to produce? The choice of machinery will depend on what you plan to manufacture in your factory.’ Without total clarity about the final product, you cannot determine design or resources that you need. Ask this question to the head of the school your children go to, ‘What is the goal of this school? What is it designed to produce? Do you have that written down in a one-line statement?’ Why one-line? Because that

is the criterion of clarity; only what is clear can be expressed in one line. If you don't get an answer that satisfies you, take your child out of the school.

Let us therefore begin by defining the design of education: What must education produce? And then see what the Qur'an tells us about how to do it. I propose to you my definition: **Education must produce morally upright, intelligent, compassionate, people with the courage to drive positive change.** That's my one-line definition. We Muslims must do this to please Allahﷻ from whom nothing is hidden and to whom we are accountable.

Let's see what the Qur'an says about education. Allahﷻ defined intelligence and intelligent people as those who recognize His signs in His creation.

إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ لآيَاتٍ لِأُولِي الْأَبْصَارِ
الَّذِينَ يَذْكُرُونَ اللَّهَ قِيَامًا وَقُعُودًا وَعَلَىٰ جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ
وَالْأَرْضِ رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا سُبْحَانَكَ فَقِنَا عَذَابَ النَّارِ

A'al Imraan 3: 190. Verily! In the creation of the heavens and the earth, and in the alternation of night and day, there are indeed signs for men of understanding.

191. Those who remember Allah (always, and in prayers) standing, sitting, and lying down on their sides, and think deeply about the creation of the heavens and the earth, (saying): "Our Rabb! You have not created (all) this without purpose, glory to You! (Exalted be You above all that they associate with You as partners). Give us salvation from the torment of the Fire.

Not only did the Qur'an not separate science from theology but stated that the intelligent are those who can see that link and recognize Allahﷻ through His signs in His creation. We must repair this breach and bridge the gulf.

At the same time, the Qur'an is not a book of science nor is its purpose to teach science. The purpose of the Qur'an is far wider and encompassing. It is to create noble human beings in every field of endeavor. Consequently Allahﷻ sent a teacher with His Book, and mentioned the method of teaching and learning which Heﷻ prescribed for us. It comprises of four interlinked steps. Allahﷻ said:

لَقَدْ مَنَّ اللَّهُ عَلَى الْمُؤْمِنِينَ إِذْ بَعَثَ فِيهِمْ رَسُولًا مِّنْ أَنفُسِهِمْ يَتْلُو عَلَيْهِمْ آيَاتِهِ
وَيُزَكِّيهِمْ وَيُعَلِّمُهُمُ الْكِتَابَ وَالْحِكْمَةَ وَإِنْ كَانُوا مِنْ قَبْلُ لَفِي ضَلَالٍ مُّبِينٍ

A'al Imraan 3: 164. Indeed, Allah conferred a great favor on the believers when He sent among them a Messenger (Muhammad ﷺ) from among themselves, reciting unto them His Ayaat (Qur'an), and purifying them (external & internal) and instructing them (in) the Book (Qur'an) and Al-Hikmah [wisdom of the Sunnah] while before that they had been in manifest error.

Allahﷻ emphasized the importance and status of the Messengerﷺ and called him Allahﷻ's Neyma (Blessing of Allahﷻ). The four steps are: Recite the Ayaat of the Qur'an (Inform), Purify (internal, external, behavior, dealings), Teach the Qur'an (meaning, implications, application) and Impart Wisdom

(demonstrate for emulation). And ended by saying that before the coming of Muhammad ﷺ, people had been misguided. We will look at this in detail and see how this shows us the way forward to change what and how we teach to make it powerful, inspirational, influential and relevant.