

# **Great Personalities of Uzbekistan**

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## Great physician and scientist from Uzbekistan and their contribution to the world civilization

European and US historians acknowledge work of Greek and Roman scholars until 300 A.D. Then it picks up in 1500 A.D., the beginning of Renaissance. Very little is mentioned about the history of social, political and scientific development between the period of 300-1500 A.D. A historian Morowitz describes this phenomenon, “The History’s Black Hole”

For 8 centuries (7th century-15th century) the medieval Muslim scholars made significant contributions in scientific progress when western countries were still in the Dark Ages. Both Qur’an and hadith laid great emphasis on knowledge. The very first verse revealed to the Prophet (PBUH) began with “Read with the name of thy Lord who created thee. The very opening chapter of Qur’an describes Allah as *Rabb al-Alamin* i.e. as Sustainer and Nourisher of the worlds i.e. more than one world. Thus this itself was great revelation in a way that when the philosophers were not even aware of existence of other worlds, Qur’an was referring to these worlds. Quranic verses emphasize to reflect on creation of this universe i.e. obtaining knowledge of this universe through observation and it is this knowledge which is truly scientific knowledge. Be it Copernicus or Galileo they obtained their knowledge through observation of stars and planets.. Thus Qur’an beautifully combines worshipping and reflection of this universe. In fact it is scientists who can really appreciate the Glory of the creator through their keen observations and not ignorant people. In fact it is through science and through observations that today we have some understanding of vastness of our universe.

In hadith literature too, we find many ahadith which stress knowledge. “That a moment’s reflection is better than whole night’s prayer”. “alim is more precious than the blood of martyr”. What is real meaning of this? What the hadith is conveying is this that while we need blood of martyr occasionally (when an enemy attacks and our lives are in danger) but knowledge of a knower (‘alim) is needed every moment of our existence.” “Go to China if knowledge is available there”

And for few centuries (700--1500) Muslims did seek knowledge from all sources.) Muslims shed all prejudices and began to transfer knowledge from other countries and other languages into Arabic and produced great philosophers, mathematicians, astronomers, chemists, physicists, and Great physicians of the world. They not only borrowed knowledge from different sources but also made rich contributions of their own so much so that European universities of the time introduced these works in their courses and what is more they discovered this Greek and Indian knowledge through these scholars.

George Sarton describing about Muslim scientists wrote “During the period 750-1150 A.D. the contribution of the Muslim scholars were un-matched in its brilliance and included such intellectual giants as Al-Razi, Al-Farabi, Ibn-Sina, Al-Haiyatam, Al-Khawarizmi, Ibn-Khaldun and others”

# Great Warriors of Uzbekistan

## Genghis Khan (1167-1227)

Temujin was born to a Mongol chief in 1167 north of Gobi desert. He removed all rivals and notably the tribe of Tartars and united the other tribes and proclaimed himself the Genghis Khan Master of all people. The Mongol horsemen were deadly warriors who were able to ride for day and night sleeping on the saddle and he used prisoners as protective wall against the arrows of enemy. By 1221, Genghis Khan's domains spread from China to Caspian. His successors pushed even further, challenging the Japanese and the Germans from the greatest land empire the world has ever seen.

The Mongols established the pan Mongol empire over a century of stability and recovery. They developed the Yam horse relay system speed communications to a level surpassed by 19th century communication system. The Silk Road traveller could march safely from the land of sunrise to the land of sunset. The importance of the Mongols is that they ushered in global history. The greatest contacts occurred during the reign of Kubilai Khan, [Genghis Khan's] grandson. The diplomatic passport was pioneered at the time of the Mongolian Empire. Pants, paper money, eyeglasses and forks are also introduced by these great Mongols. In 1227 Genghis Khan dies in the capital city of Ningxia. His body was transported to a secret tomb in an unknown location. Before his death, he divided his empire between his four sons. Most of Uzbekistan was given to Ulus of Chagatai his second son.

## Tamerlane (1336-1405)

Tamerlane was born in Kesh, south of Samarkand- Uzbekistan in 1336. He was a descendant of Genghis Khan who restored the Mongol Empire established by Genghis Khan. At the age of 24 he became the head of his tribe, and in a few years he made himself the leader of the whole Mongolian race. He chose the ancient city of Samarkand for his capital; and built a beautiful marble palace and other noteworthy buildings

"As there is but one God in heaven," he said, "there ought to be but one ruler on the earth." So he gathered an immense army from all parts of his dominion, and started for Persia and conquered the rich country from the Tigris to the Euphrates. In pursuing the Tartars he entered **Russia** and sacked and burned some of the Russian cities. At last, his army stood before the city of **Delhi**, and after a fierce assault forced it to surrender. Other **cities of India** were taken and the authority of Tamerlane was established over a large part of the country. From there he marched to meet the sultan Bajazet of Turkey . A great battle followed which raged four or five hours and then the Turks were totally defeated and Bajazet was captured. Tamer then stormed Bagdad, and established his rule.

He made up his mind to invade the Empire of China. At the head of a great army of two hundred thousand soldiers he marched from the city of Samarkand towards China. He had gone about three hundred miles on the way when, in February, 1405, he became sick and died. His army was disbanded and all thought of invading China was given up. Tamur was a soldier of genius. His vast empire speedily fell to pieces after his death. Shah Rukh was the fourth son of Timur and, by 1407, he had gained overall control of most of the empire, including Iran and Turkistan regaining control of Samarkand.

Tamerlane's legacy shines like a bright star as he took the Samarkand of brick and mortar city and transformed it into a architectural pearl of Central Asia

## Babur (1483 – 1530]

Zaheer-ud-Din Babur was born in Farghana- Uzbekistan He was a direct descendant of Timur through his father, and a descendant of Genghis Khan through his mother. In 1495, at only twelve years of age, Babur succeeding his father as ruler of Farghana, in Uzbekistan. His uncles were relentless in their attempts to dislodge him from this position as well as many of his other territorial possessions to come. Thus, Babur spent a large portion of his life shelterless and in exile, aided only by friends and peasants. In 1497, Babur attacked Samarkand and after seven months succeeded in capturing the city but he lost Farghana. As he was marching to recover it, Babur's troops deserted in Samarkand, leaving him with neither Samarkand nor Fergana. By 1501, he was ready again to regain control of Samarkand, but was shortly thereafter defeated by his most formidable enemy, Muhammad Shaybani, khan of the Uzbeks. Samarkand, his lifelong obsession, was lost again. For three years Babur concentrated on building up a strong army, recruiting widely amongst the Tajiks of Badakhshan in particular. In 1504, he was able to cross the snowy Hindu Kush mountains and capture Kabul. A brewing rebellion finally drove him out of Kabul. Escaping with very few companions, Babur soon returned to the city, capturing Kabul again and regaining the allegiance of the rebels. Muhammad Shaybani was defeated and killed by Ismail I, Shah of Shia Safavid Persia, in 1510, and Babur used this opportunity to attempt to reconquer his ancestral Timurid territories. In October 1511 Babur made a triumphant re-entry into Samarkand, ending a ten year absence. However, he was thrown out of Samarkand once again and this time for good as he never returned to Samarkand again.

Babur assembled a 12,000-man army, and advanced into India. This number actually increased as Babur advanced, as members of the local population joined the invading army. The first major clash between the two sides was fought in late February 1526. Babur's son, Humayun (then aged 17), led the Timurid army into battle against the first of Ibrahim's advance parties and defeated Ibrahim Lodhi and thus Babur was succeeded in laying the foundation of the Mughal Empire.

Babur died at the age of 47 in 1531, and was succeeded by his eldest son, Humayun. Though he wished to be buried in his favourite garden in Kabul, a city he had always loved, he was first buried in a Mausoleum in the capital city of Agra. Roughly nine years later his wishes were fulfilled by Sher Shah Suri and Babur was buried in Bagh-e Babur (Babur Gardens) in Kabul, Afghanistan. The inscription on his tomb reads “**If there is a paradise on earth, it is this, it is this, it is this**” Babur is considered a national hero in Uzbekistan and Kyrgyzstan, and is held in high esteem in Afghanistan where he is buried.

# The Theologians of Uzbekistan

## **Imam Mohammed Ibn Ismail Bukhari (R.A) 809-869 C E**

Imam Mohammed Ibn Ismail's Bukhari (R.A) was born 809 CE in Bukhara. By the age of sixteen he memorized over 2000 ahadiths from the books of Imam Waki and Abdullah Ibn Mubarak. He performed Haj at the age 16 and after that he stayed in Makkah and Medinah, compiling the books of 'Qadhaayas-Sahaabah Wat-Taabi'een' and 'Taareekhul-Kabeer'. He traveled to Syria, Egypt, Kufa, Basra and Baghdad in order to expand his knowledge. "I have written ahaadeeth from 1080 different people all of whom were scholars." He also had a large number of students and followers. It has been stated that approximately 9 000 people were privileged to sit in his lessons where he taught his Kitab 'Sahih-Ul-Bukhari'. His memory was considered to be a miracle, for as soon as the saying of a hadith would finish Imam Bukhari (R.A) would repeat it orally.

The Governor of Bukhara made a special request for Imam Bukhari (R.A) to make daily visits to his home in order to teach his children. Imam Bukhari (R.A) declined stating that, "I give greater respect to knowledge rather than to people, for it is they who are in need of the knowledge and it is they who should seek it." Upon hearing this the Governor was annoyed his answer and made a second request that Imam Bukhari (R.A) make a special arrangement to teach his children alone without anyone else being present which was also refused by Imam Bukhari (R.A). The Governor was infuriated by the second refusal and ordered Imam Bukhari (R.A) out of Bukhara.

The people of Samarqand immediately issued an invitation to Imam to come to their town. However, there was also a difference of opinion within the people of Samarqand which forced Imam Bukhari (R.A) to turn towards Khartang. He later returned to Samarqand, where he died in 869 CE.. at the age of 62.

There are a number of books compiled by Imam Bukhari (R.A) however, Saheeh ul Bukhari has gained great esteem. After he had finished he had shown the manuscript to his teacher Imam Ahmad Ibn Hanbal (R.A) for approval .It took him 16 yres to gather the ahaadeeth and to complete the book Muslim considered Sahi Bukhari as the most divine book after the Holy Quran.

Before Imam Bukhari (R.A) had started to collect ahaadeeth there had actually been quite a few published books of ahaadeeth in which Imam Bukhari (R.A) found ahaadeeth of both weak and strong testimonials, which gave him the idea to compile a book ahaadeeth which contains only strong testimonials.

Imam Bukhari (R.A) had taken great care in writing the ahaadeeth and choosing those which met the standards and conditions which he set to find ahaadeeth with only strong testimonials which included only reliable and trustworthy testifiers. Imam Bukhari (R.A) has imposed conditions which all narrators and testifiers must meet before the hadith can be selected.

1. All the Muhadditheen who possess great knowledge of ahaadeeth must agree upon the testifiers' in question ability to learn and memorize, along with his reporting techniques.
2. The testimonial must be complete without any missing testifiers.



3. If there are two different narrators of a hadith related to them by a Sahaabi then the hadith shall be given a high stage in rank. However, if only one narrator can be found and the testimonial proves to be a strong one then this shall be accepted without any doubts.

It is said that he examined and evaluated thousands of Ahadiths and excluded those which did not meet his stringent criterion.

Sahih-ul-Bukhari consists of 7 275 ahaadeeth and after excluding the repetitions 2 353 narrations of the Prophet Sallallahu Alaihi Wasallam can be found.

## Naqshbandiyyah Sufis

The Naqshbandiyyah Order was founded by Shaykh Baha-ud-Din Naqshband born in the 14<sup>th</sup> century near Bukhara. The Order spread rapidly from its original home into the Eastern areas of Persia and present-day Afghanistan, and from there, into India which became the home of some of its greatest later figures

The name of the Order, derived from its founder, means on one level, what is related to an embroiderer or literally one who casts patterns upon cloth (naqshband). But on a deeper level, it means **bonding the heart with God through the imprint of His Name upon the human heart**. The Naqshbandis have always been very orthodox, staunch defenders of the Shari'ah and emulators of the Sunnah.

Naqshbandiyyah is the only Sufi order that claims to trace its direct spiritual lineage/chain (*silsilah*) to prophet Muhammad (PBUH), through Abu Bakr, the first caliph and Muhammad's companion. This lineage also indirectly connects to Ali, the Fourth Caliph, via Jafar as-Sadiq . In contrast, most other Sufi orders trace their lineage through Ali.

The major principles of Naqshbandiyyah order are:

- Remembrance (Yad kard): Always orally and mentally repeating the dhikr.
- Restraint (Baz gasht): Engaging in the heart repetition of the phrase "Al-kalimat at-tayyiba."
- Watchfulness (Nigah dasht): Being conscientious over wandering thoughts while repeating the phrase "Al-kalimat at-tayyiba."
- Journeying in one's homeland (Safar dar watan): An internal journey that moves the person from having blameworthy to praiseworthy properties. This is also referred to as the vision or revelation of the hidden side of the shahada.
- Watching one's step (Nazar bar qadam): Do not be distracted from purpose of the ultimate journey.
- Numerical pause (Wuquf-I adadi): Checking that the heart-dhikr has been repeated the requisite number of times, taking into account one's wandering thoughts.
- Heart pause (Wuquf-I qalbi): Forming a mental picture of one's heart.

# The Great Scientist of Uzbekistan

## MUHAMMAD BIN MUSA AL-KHWARIZMI (Algorizm) (770 - 840 C.E.)

Abu Abdullah Muhammad Ibn Musa **al-Khwarizmi** was born at Khwarizm (Kheva), a town south of the river Oxus in present day Uzbekistan. Most of his education and research work was in Baghdad, in the early ninth century. Baghdad at that time was at cultural crossroads, and, under the patronage of the Abbasid caliphs. The so-called House of Wisdom at Baghdad produced a Golden Age of Arabic science and mathematics. In Baghdad, scholars encountered and built upon the ideas of ancient Greek and Indian mathematicians.

He has written many books on Mathematics, '*al-Kitab al-mukhtasar fi hisab*' and '*al-jabr w'al-muqabala*' The Compendious Book on Calculation by Completion [or Restoring] and Balancing. This book is an explanation of the solution to quadratic and linear equations of six varieties. **Al-jabr** refers to the process of moving a subtracted quantity to the other side of an equation; al-muqabala involves subtracting equal quantities from both sides of an equation.

This book was translated into Latin in 12<sup>th</sup> century and in Europe it became known by just one word from its Arabic title 'Al-Jabr'. Later on Algebra is derived from the word Al-jabr. Al Khwarizmi studied old mathematical principals from Babylonian and Indian mathematical works. However his approach is original and had monumental influence on the more advanced mathematics that followed.

He introduced Indo-Arabic numerals to the west. It is preserved only in Latin translation **Algorithm de numero Indorum**. From the name of the author's Latinized version the word Algorithm is derived. He explained the use of Zero. He explained the use of ZERO, decimal system, several arithmetical procedures including operations on fractions and in detail Trigonometric tables containing Sine functions and tangent functions. Developed calculus of two errors, which led him to the concept of differentiation. Today a mathematician in Boston invokes algorithm to solve a difficult computational problem, then he/she is commemorating Al-Khwarizmi. Algebra and algorithms are enabling the building of computers, and the creation of encryption.

Al-Khwarizmi also wrote on Astronomy, developed Calendars, True positions of the sun, moon, and planets Spherical astronomy, Parallax and eclipse calculations and Visibility of the moon (21<sup>ST</sup> CENTURY Muslims are confused on the sighting of the moon).

He also wrote the book **Ketab Surat al-ard** (book of the form of the earth) Gave latitudes and longitudes for 2,402 cities and landmarks, forming the basis for a world map. Created a map of the then known world which shows the pacific coast of South America –about 700 years before Columbus discovered America. Al-Khwarizmi's books translated into Latin.

**WHY STUDY ALGEBRA?** When the brain is stimulated to think, the hair-like dendrites of the brain grow more extensive and more complex enabling more connections with other brain cells. We often hear that we use only a small percentage of our brain's capacity. The study of algebra is a way to increase our use of brain cells and brain function.

The modern technology industry would not exist without the contributions of Muslim mathematicians like Al-Khwarizmi. **GEORGE SARTON** writes, 'Al-Khwarizmi as the greatest mathematician of the time, and if one takes all the circumstances into account, one of the greatest of all time'.

## **Al-Beruni (973-1078)**

Abu Rehan Mohammad bin Ahmed Al-Beruni was born in 973 C.E. at Khawarzim -Uzbekistan. He is remembered by the world as a great and outstanding astronomer, Physician, Physicist, Mathematician, Geographer, Geologist and Astrologer. Because of his wonderful contributions in most of the above mentioned fields, Al-Beruni has been given the title of 'al-Ustadh'. He was also a good linguist and mastered Greek, Syriac and Sanskrit. He was a contemporary of Ibn-Sina.

In 1017, Sultan Mahmood Ghaznawi conquered Al-Beruni's homeland, took him and other scientists to Ghazna from there on he worked for the Sultan and his son. The Sultan also took him on his expeditions to India where Beruni became proficient in Sanskrit language. He translated many books of science and mathematics from Sanskrit to Arabic and Persia. He also studied Indian culture and wrote a book on Indian culture. Al-Beruni wrote over 150 books during his life time but very few survived.

**Al-Beruni** discovered seven different ways of finding North and South directions. He is probably the first scientist to thoroughly discuss and prove that the Earth moves or rotates around its axis. He also calculated the Longitudes and Latitudes very accurately. All these calculations, observations and theories are presented in his book 'Al-Ather Al-Baqia'. He stated that the speed of light is immense in comparison to the speed of sound. He gave definition and detailed description of the Milky Way.

His very famous book, 'Al-Tafhim-ki Awail Sina'at al-Tanjin', sums up his works of Mathematics and Astronomy. He gave the Specific Weights of eighteen elements. His other famous books are; 'Kitab-al Jamahir' on properties of precious stones, 'Kitab al-Hind' which gives a detailed account of the Indian life, religion, languages, cultures and also, observations on geography, 'Al-Qanun Al-Masudi Fi Al-Haia Wa Al-Najum' on Trigonometry, Astronomy, solar, lunar and planetary motion plus twenty-three observations on Equinoxes.

He knew the earth was round 500 years before Columbus and that the earth went around the sun long before Copernicus (1473–1543). He also plotted the formation of 1029 stars and estimated the distance to the moon and radius of earth correct to within 12 miles and announced to a superstitious world the true reason behind the eclipse. He was an astronomer, historian, geographer, pharmacologist, mineralogist and a walking encyclopedia.

Abu Rehan Mohammad bin Ahmed Al-Beruni died in 1048 C.E. at Ghazna.

## **Abu Ali Hussain Ibn-Sina (Avicenna) 980-1037**

Ibn-Sina was born in a city Afshana near Bukhara. He memorized Quran before age 12 and mastered Arabic language, philosophy, mathematics and logic by age 14. He completed medical education by age 17 and became famous when he treated Sultan Noor of Bukhara. Instead of taking the financial reward he asked for the keys for the finest library in that part of the world to advance his knowledge. In the next 30 years he systematized the knowledge of his time in his philosophical encyclopedia and translated the work of Aristotle in Arabic. However he became a renowned physician and a scholar in medicine. He wrote 200 books on medicine. His encyclopedic work on medicine was published as Al-Qanoon Fil-Tib (Cannon of Avicenna), 5 Volumes. His work superseded the work of Galen and Razi Vol. 1- Deals with Anatomy and Physiology, Vol. 2- Describes Pharmacology, Vol. 3- Pathology and Disease, Process, Vol. 4- Discusses fever, Signs and Symptoms of Disease, Vol. 5- Treatment Modalities. The book was translated in Latin and was used text book of medicine in European schools until 16<sup>th</sup> century. His other famous book is Kitab-ul-Shifa, covers Philosophy, Medicine and Ethics. He described 700 medical preparations and their specific usage. He discussed contagious diseases-phthisis and TB. Described spread of disease through water, soil and human contact. He was one of the first to theorize that small organisms may be responsible for infectious diseases. He described guinea worm infestation. He writes in the introduction of his book “AL\_QANOON” “Whoever has thoroughly understood the book ‘Al-Qanun’, to him nothing will remain hidden of the fundamentals of the medicine”.

Encyclopedia Britannica writes “Probably no medical work ever written has been studied so much”. Ibn-Sina died in the city of Humdan in Iran in 1037.

## Ulugh Beg (1393-1449)

The king who was a scientist

**Ulugh Beg** was the grandson of the great Timur Lane. He was born in Samarkand and he was appointed as a governor by his father and later he became the ruler of Samarkand and Farghana.

Ulugh Beg was primarily a scientist, in particular a mathematician and an astronomer. In 1417, to push forward the study of astronomy, Ulugh Beg began building a madrasah in Rigistan Square in Samarkand, which was completed in 1420. He appointed the best scientist such as Al Kashi, Qadi Zada and other scientists as lecturers in his Madrasah. In addition to the madrasah, Ulugh Beg built an observatory at Samarkand, the construction of this beginning in 1428. The Observatory, which was circular in shape, had three levels. It was over 50 meters in diameter and 35 meters high. Al-Kashi and other mathematicians and astronomers appointed to the madrasah also worked at Ulugh Beg's Observatory.

The achievements of this scientist are innumerable. Ulugh Beg's *Catalogue of the stars, (Zij-i Sultani)* was the first comprehensive stellar catalogue since that of Ptolemy (90-168 AD). With the circle of experts Ulugh Beg plotted the coordinates of 1018 stars, devised rules for predicting eclipses and measure the stellar year to within one minute of modern electronic calculations. Observations made at the Observatory brought to light a number of errors in the computations of Ptolemy which had been accepted without question up to that time. Data from his Observatory allowed Ulugh Beg to calculate the length of the year as 365 days 5 hours 49 minutes 15 seconds, a fairly accurate value. He produced data relating to the Sun, the Moon and the planets. *The difference between Ulugh Beg's data and that of modern times relating to [Saturn, Jupiter, Mars, Venus] falls within the limits of two to five seconds.*

Like Galileo (1564-1642 AD), Ulugh Beg challenged religious orthodoxy. Ulugh Beg was supported by the official clergy and he built various madrasah and mosques, but he failed to diffuse the growing hostility and power of religious fanatics. In 1449 his son seized his power and by the decree of court he was deported to Mecca but just outside Samarkand he was beheaded. His observatory was raised to the ground and later on his head was displayed on the top of the Madrasah. All the scientists working with him ran away to different parts of the world. However his work was published and was translated in European languages and it was recognized that his contributions in Astronomy were superseded by Tycho Brahe (1546 -1601) the famous astronomer of 16<sup>th</sup> century. The underground remains of the observatory were rediscovered in 1908 by Russian archeologist. In 1999, Uzbekistan celebrated 600<sup>th</sup> anniversary of the birth of Ulugh Beg by restoring the beautiful building that survived him.

## **Ms. Carly Fiorina**

### **Hewlett-Packard's former Chairman and CEO**

In Minneapolis, MN on Sept. 26, 2001 said, "There was once a civilization that was the greatest in the world. This civilization was driven by invention. Its architects designed buildings that defied gravity. Its doctors examined the human body, and found new cures for disease. Its astronomers looked into the heavens named the stars, and paved the way for space travel and exploration. When other nations were afraid of ideas, this civilization thrived on them, and kept them alive. When censors threatened to wipe out knowledge from past civilizations, this civilization kept the knowledge alive, and passed it on to others. While modern Western civilization shares many of these traits, the civilization I'm talking about was the Islamic World, 800-1600 CE, which included the Ottoman Empire, the Courts of Baghdad, Damascus and Cairo. (She forgot Cordoba) It was leadership that harnessed the full capabilities of a very diverse population-that included Christian, Islamic and Jewish traditions.

#### **Decline in scientific progress**

Scientific and scholarly progress during the medieval period flourished on account of a strong emphasis on rational traditions, freedom for pursuit of knowledge and encouragement of intellectual pursuit.

During the late 12<sup>th</sup> century, the public debate between the reason and revelation, predestination and free will closed the doors of Ijtihad. Two parallel systems of education formed – Islamic Shariah Knowledge and secular scientific knowledge. Madrasas started focusing more on teaching of shariah and refraining from teaching mathematics science and philosophy.

The knowledge of science and technology gradually transferred from Muslim world to Europe leading to European enlightenment and renaissance. The Muslims today are thought to be not only backward on the fields of science and technology but are seen resisting acquisition of this knowledge. Their universities have hardly any achievements. Science came to be equated with west and became unacceptable. The Ulema are ignorant of modern science and becoming afraid of it. The oil rich countries are using their resources in investing in Madrasas which impart traditional and theological education. By keeping their people ignorant the dictators and the kings suppress the progressive ideas.

#### **What need to be done?**

The Muslim students must be educated in the knowledge of Quran and Hadith. This will help in correcting the distortions in religious dogma. Teaching must be focused against dogmatism and fanaticism and must be focused on tolerance and understanding. Natural sciences must be compulsory for all children with an aspiration for students to receive the highest educational standards in the subject of their choice.

Women need to encourage pursuing higher education even if they stay home and take care of the children. Their background in Islamic and secular sciences will help in raising children and inspiring them to achieve the highest educational level.