Science in Muslim World

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The Muslim world covers a vast geographic area, comprising of 57 countries with a total population of approximately 1.3 billion people or nearly one-fourth of the world population. The majority of the Muslim population (62%) is in Asia-Pacific, followed by 20% in the Middle East and North Africa, 16% in Sub Saharan and around 2% in Europe and Americas.

The first word in the Holy Quran is "read", it gives a clear and transparent message that religion of Islam encouraged seeking knowledge. Holy Prophet [PBEH] asked the believers to "study & search for knowledge". He also said, "Scholar's ink is more sacred than the blood of martyrs". That is exactly what Muslims did particularly in the 8th-13th centuries. During that time, the Islamic world hit the peak of its "Golden Age," paving the way for the growth of modern sciences. Most of history's finest scientists and technologists were found in the Muslim world. Scientific inquiry was widespread and some of the greatest scholars and scientists of the world made wondrous discoveries and inventions. Muslims led the world in the study of medicine, astronomy, mathematics, geography, chemistry, botany, and physics. They passed on their studies to the West, where their work was built upon and further disseminated.

Many of the English language words and scientific terms are rooted in the Arabic language, demonstrating the influence of Muslim scholars. The light of science had largely been extinguished from the Muslim world, but it survived, indeed blazed brightly elsewhere [1]. The annual spending on science, research and development in Muslim countries is just 0.2% of gross national product, its population of scientists is meager, and its legal framework for innovation is largely non-existent. Compared to a world average of 1.4%, the numbers of Universities, research institutes are not as much of in the Muslim world as compared to their available resources. Moreover,

scientific / biomedical journals are less in number in the Muslim world and many of these journals do not have on-line access or indexed in major bibliographic databases. The majority of indexed journals, however, do not have a stable presence in the popular Pub-Med database. Arab world contributes less than 0.5% of scientific research papers appearing in the 200 leading medical journals. Furthermore, the number of publications, original writings and translations, per million people is around 0.05 in the Arab World compared with an average of 0.15 worldwide and 0.6 in the industrialized countries[2-3].

Presently, the top ten Muslim countries based on the total number of publications and their citation are Turkey, Iran, Egypt, Malaysia, Pakistan, Saudi Arabia, Indonesia, Tunisia, Morocco and Lebanon. However, the number of publications and their citations from these top ten Muslim countries are very low compared to other countries of the world such as USA, UK, China, Russia, Japan, Germany, France, Canada, Italy, Spain and Australia[4]. There are numerous factors which are a cause of low ranking of science in Muslim world. These factors include lack of researchers, scientists, poor institutional support, and insufficient integration within the international scientific community. Moreover, most of the Muslim countries don't have national science policies based on their local needs and available resources. The political, social and economic problems have hampered science in Muslim world and made it difficult for the scientists to optimize their capacity in research. Promotions in institutions are often based on trustworthiness rather than merit and low salaries and excessively bureaucratic system also stifled the innovation[5]. Muslim countries have generated few scientists of international repute, despite accounting for one-fourth of the globe's population. Only two scientists from Islamic states won the Nobel prizes: Abdus Salam, a Pakistani (physicist in 1979) and Ahmed Zewail, an Egyptian (chemistry in 1999).

Muslim world needs to understand and recognize the worth of scientific research with the economy and development. Muslim world must share the responsibility of increasing the funding for scientific research, improve research infrastructure in universities and research institutes, enhance collaboration with highly ranked research institutes, incorporate well-trained scientists and facilitate them for a long-term stay in their institutions to increase research productivity. Muslim world should pour special funds for science and technology, establish the net work of universities and research institutes, provide better incentives to the faculty, scientists, and researchers to minimize the brain-drain. Contributions and discoveries of

scientists should be honoured and rewarded. Muslim world should adopt the approach to produce science and scientists rather than buying the science and scientists.

REFERENCES

1. Higham N, Ryan M. Museum explores 'hidden history' of Muslim science, Available at: http://news.bbc.co.uk/2/hi/8472111.stm, (Cited Date: April 28, 2011).
2. Al-Khader AA. Enhancing research productivity in the Arab world. Saudi. Med J, 2004; 25 (10): 1323-7.
3. Maziak W. Science in the Arab World: Vision of Glories Beyond. Science. 2005; 308 (5727):1416-1418.
4. SJR. SCImago journal and country rank: Country ranking. Available at http://www.scimagojr.com/countryrank.php. (Cited date: May 2, 2011).
5. Schopper H. Islam and science: Where are the new patrons of science? Nature. 2006;444:35-36.