[Science, diplomacy and higher education](https://nation.com.pk/13-Feb-2019/science-diplomacy-and-higher-education%22%20%5Ct%20%22_new)

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Science diplomacy is an evolving concept without any defined boundaries having broader implications in the development of knowledge economies. Traditionally, general diplomatic relationships are confined to a triangle of i) dialogues ii)negotiations and iii)representation in international relations. However, collaboration in science is also an essential tenet of the diplomatic missions having a more profound impact in mutual ties among countries. The Vienna Convention on Diplomatic Relations Article 3(e) stating “Promoting friendly relations between the sending State and the receiving State, and developing their economic, cultural and scientific relations.” highlights the role of diplomatic missions in promoting scientific research among nations. Unfortunately, the past few decades have seen vast global disparities in scientific development and technological advances confined to defined global geographical pockets – an apparent failure of science diplomacy. This scenario ultimately resulted in smarter nations harnessing the benefits of science through innovative technologies, whereas, countries putting lesser efforts in developing scientific relations are lagging far behind. Science diplomacy experts believe that all this is due to inabilities of diplomatic missions to fulfill their job appropriately, i.e., aligning their efforts with the Vienna Convention mandate on promoting scientific research exchanges among the sending and receiving nations.

During the Global Presidential Conclave on the Future of Higher Education held in West Chester University, Pennsylvania, USA, in the year 2012, I was the only Muslim delegate to present my vision for sharing of science and technology – an option for bringing global peace and prosperity. The idea was very well received, and in discussion sessions, several gaps between the countries reaping the benefits of innovative, high-quality research and those lacking behind were identified. Sadly, most of the states identified were from the Organization of Islamic Conference (OIC) countries. Furthermore, during deliberations, it also gleaned out that intellectual property rights give an edge to the scientific savvy nations, however, upon the expiry of proprietary rights very few governments have strived for generic benefits of new inventions. To clarify my point, I always discuss simple technology, the production of insulin - a hormonal medical preparation used for the treatment of people who have diabetes is produced through a biotechnological process. The saga about the production of this life-saving drug spans over the past hundred years. People who have diabetes used to have a short span of life. Now diabetes is considered as a chronic disorder, and there are millions across the world having a longer life and surviving with the disease. Intriguingly, every country has people suffering from this disease impacting their quality of life. The next question is “Do all nations have the capability to produce insulin drug used to treat diabetes?”. Scientifically speaking, insulin is produced through a simple biotechnological procedure, and almost every nation has ample resources and necessary workforce. Furthermore, countries manufacturing this medicine has monopolised the respective technologies, whereas diplomatic missions have never been able to identify this gap.For the OIC countries, I will advise and propose them to have a science diplomacy conference just focusing on diabetes disorder in Ras Al Khaimah, United Arab Emirates and watch how a small Emirati state is producing insulin marketed across the Muslim world and globally. The company Julphar Pharmaceuticals is a good example for the Muslim nations to start thinking about sharing of technologies through science diplomatic measures. This idea very much resonate with the definition of science diplomacy by one of the former directors of the American Association for the Advancement of Sciences stating “the use and application of science cooperation to help build bridges and enhance relationships between and amongst societies, with a particular interest in working in areas where there might not be other mechanisms for engagement at an official level”.

Threatened by the challenges of science diplomacy including its stratified benefits regional blocks are emerging. One such effort is European nations initiatives “Inventing a Shared Science Diplomacy for Europe (InsSciDE)” focusing on creating an environment for shared science diplomacy across Europe by taking into consideration high-value interdisciplinary research. The Muslim world initiated such programmes through The Islamic Educational, Scientific and Cultural Organization (ISESCO) and COMSTECH – an Organization of Islamic Cooperation’s Standing Committee on Scientific and Technological Cooperation for the promotion and cooperation of science and technology activities. The intended and expected outcomes and the overall benefits from these organizations yet to be evaluated. For the Muslim world, It is time to assess the performance of existing organisations towards promoting exchange of their scientific and technological strengths, science diplomacy efforts and create new collaborative opportunities through diplomatic and non-diplomatic avenues for their survival in the near future to face the challenges by the industrial revolution 4 (IR4) is to offer.

One of the prerequisites for promoting science diplomacy is what we can offer from our ends? Diplomatic relations including science diplomacy are mediated through reciprocal exchanges between the sending and receiving nations. In Pakistan, existing federal and provincial higher education commissions can play an important role in generating environments conducive to promoting science diplomacy. However, first we should have a proper discipline wise inventory of our strengths and human resources in science and technology, and it should be shared with the Ministry of Foreign Affairs, currently headed by a very seasoned leader well apprised of science diplomacy. Efforts should also be directed to reckon the past efforts by the Higher Education Commission of Pakistan in encouraging science diplomacy. Worth quoting is a program initiated during the founding chairperson Higher Education Commission of Pakistan era “Foreign Faculty Hiring Program’. The willingness of the current government to promote science diplomacy through high quality collaborative scientific research, developing trained human resources having contemporary skills and establishing public health systems are the high-value science diplomacy avenue. What is needed is to devise or revise preexisting innovative programmes in higher education commissions. It might involve a strenuous exercise among the public, private and non-profit academic organisation of Pakistan through a consultative process with universities across the countries including research organisations and health sector setup. This could be through prioritising research domains having relatively higher opportunities for scientific collaborations. Such efforts will not only align with the vision and mission of the foreign ministry rather will help in building economically stable and viable Pakistan having sustained growth and capable of exchanging science and technologies through science diplomacy avenues. LET’S NEVER FORGET; WE ARE THE BEST IN EXPORTING OUR SCIENTISTS AND TECHNICAL MANPOWER THAT NEED TO BE REVERSED. IT IS TIME TO THINK HOW!

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