International Forum on Science Education

3-4 July 2017, Beijing, China

"The History and Science Education along the Belt and Road"

Beijing Declaration on Inquiry Based Science Education (IBSE) for Children and Youth along the Belt and Road.

The 2017 International Forum on Science Education was held in Beijing on 3-4 July 2017. The Forum was hosted by the China Association of Children's Science Instructors (CACSI) and the Children & Youth Science Centre of CAST (CYSCC), and sponsored by InterAcademy Partnership (IAP) Science Education Programme (IAP SEP) and the Economic Cooperation Organization Science Foundation (ECOSF). More than 30 historians and science education experts from 11 countries participated. The Forum aimed at engaging curriculum design experts and historians of science & technology to contribute towards the development of a curriculum based on the concept of "Fusion of Civilizations". The core objective of development of this curriculum is to foster peace right at the beginning of young children's education by employing an Inquiry-based Science Education (IBSE) approach among the countries that share a common heritage of the ancient Land Silk Road and Oceanic Silk Road.

This Forum marked the beginning of the process, whereby the experts deliberated and brainstormed on the way forward and pathways to achieve the desired goals of developing the curriculum based on the grand concept of Fusion of Civilizations. A joint Working Group was constituted comprising historians and curriculum experts, which is aimed at bringing together these experts to discuss how to develop and materialize the IBSE curriculum based on Fusion of Civilization. Based on the recommendations of the Working Group, the curriculum will be further discussed, developed, and presented in subsequent Forums that will be held in Tajikistan and Pakistan later this year. Meanwhile, the Working Group will continue interaction through electronic means (emailing).

During the roundtable discussions, Water and Transportation were identified as two core areas to begin with accumulating ideas and scientific discoveries during the ancient civilizations, as they take important place in ancient cultures and civilizations but also in line with the "Belt and Road" initiative of P.R. China. The knowledge of Astronomy was fundamental to make key decisions on transportation, directions and as well in determination of various religious rituals, whereas the relevance of Water has been intuitively important since the beginning of human civilizations for their survival from food, agriculture, trade and clothing etc.

The Working Group experts are expected to put forward ideas as to how different civilizations developed the knowledge and applications of Water, Astronomy and Transportation, and how this knowledge has contributed to the development of modern day applications of science & technology. "The Discoveries in Islamic Countries" by the LAMAP Foundation is an excellent example, which can be replicated for ancient Chinese and Indian civilizations.

Countries along the Belt and Road have rich, diverse and interactive scientific achievements. Currently, world economic growth is slowing down, and people are faced with many unconventional threats such as resource scarcity, transnational communicable diseases and terrorism. Under these circumstances, evidence-based or inquiry-based youth science education has become increasingly important. Cooperation and exchanges on such science education will not only provide human capital, but also promote regional and global peace and prosperity.

Under the theme of "The History and Science Education along the Belt and Road", four keynote speeches were made to elaborate the importance and possible ways of popularizing IBSE among children and youth among the Belt and Road countries; roundtable discussions were held to pin down concrete steps to carry out the programme; a field trip was arranged to offer first-hand inspiration to historians, scientists and curriculum designers alike.

1. Participants agreed to develop an IBSE curriculum reflecting the ancient wisdom of the S&T of the civilizations along the Belt and Road and aiming at promoting the young generation's understanding and respect among different civilizations. A joint Working Group was formed and members include both science historians and curriculum designers, from both China and other countries along the Belt and Road. Six concrete subjects were specified with water and astronomy as priority areas.

2. Participants agreed to strengthen research on IBSE among countries along the Belt and Road and thus provide intellectual support to cultural exchanges and science education cooperation under the Belt and Road initiative.

3. Participating experts were of the view that communication and cooperation in science education under the Belt and Road initiative is meaningful and promising. Careful planning and concerted efforts are especially needed to make achievements and then implement them solidly. Participants all agree with the vision and ideas proposed by the organizers of this forum and will work in accordance with it. It's important for CAST to play the leading role together with related institutes from China and take advantage of experts and science education resources of international and regional organizations.

4. Participating experts appealed to CAST and relevant departments and organizations in China to establish an official or semi-official coordination mechanism to facilitate science education cooperation as soon as possible. The mechanism will help to aggregate science education resources and establish stable platform for communication and cooperation in science education under the Belt and Road initiative for peace and harmony.