



## THE STATE OF BtSM

(BUILDING THE SCIENTIFIC MIND)

### AN IMPERATIVE FOR OUR TIME

The scientific mind comprises values, concerns, attitudes, ways of thinking, dispositions in approaching the world, as well as command of a complex array of skills and mental capabilities in different domains. It is the mindset that has driven humanity, throughout history, to investigate the world in order to understand it and to be able to interact with it in a constructive manner. While developing a scientific disposition is obviously a must for someone contemplating or pursuing a career in the sciences and/or technology, possessing these habits of mind is equally important for any ordinary person who stays aloof of such a career. This is particularly so in a world—the world of the 21<sup>st</sup> century—that faces challenges and opportunities at a scale and level of complexity that affect the planet as a whole. The conditions at the start of the new millennium require of citizens the ability to take an active part in democratic processes that determine the way in which we collectively shape our world, ensuring that it be inhabited harmoniously and sustainably. There is no way of escaping the fact that we live in a world the texture of which reflects deeply the tremendous advances in scientific and technological progress. Building the scientific mind globally is thus an important imperative for our time.

### HISTORY OF BtSM

The idea to start attending to the need of building the scientific mind among the citizenry of the world initially emerged during conversations following the symposium on ‘*Overcoming the Underdevelopment of Learning*’ organized collaboratively by the Learning Development Institute (LDI) and UNESCO in 1999. The symposium in question took place in Montreal in the context of the annual meeting of the American Educational Research Association. It involved a select group of prominent scientists of different stripes who were concerned about the state of human learning and thus interested in rethinking society’s role in creating propitious conditions for lifelong and life-wide learning appropriate for the new millennium. The group included, among other members, the 1988 Physics Nobel Laureate Leon Lederman. The symposium is documented on the Web sites of both UNESCO and LDI. It is referenced widely in the relevant literature.

Following the discussions in Montreal the idea was further developed in a concept paper on ‘*The Scientific Mind in Context*’ (<http://www.learndev.org/dl/TSM-ConceptPaper.pdf>), which eventually led in 2004 to the decision for the Learning Development Institute to start organizing biennial Advanced International Colloquia on Building the Scientific Mind with

the purpose of creating a global transdisciplinary community of scientists, learning specialists, thinkers, educators, and policy and decision makers dedicated to the cause of nurturing the development of the scientific mind. Doing so falls in line with the quite universally recognized need of most countries to care for the progress of science and technology in their own society through the training of highly qualified scientists and technologists. At the same time it serves the purpose of the less well recognized need for ordinary citizens to develop a scientific disposition that allows them to play an active role in communities and societies that increasingly depend on and are shaped by scientific and technological progress.

The first of these colloquia was held in The Hague, The Netherlands, in 2005.<sup>1</sup> It was organized in close collaboration with and hosted by the Institute of Social Studies. This inaugural colloquium was of a generic nature and set the tone for the subsequent colloquia, which focused on specific themes. Thus, the 2007 colloquium took place in Vancouver, Canada.<sup>2</sup> It was co-organized with and hosted by the Emily Carr Institute of Art and Design (now Emily Carr University of Art and Design - ECUAD). Its lead theme was *'Learning in the Perspective of Complex and Long-Term Change.'* Both the first and the second colloquium were graced with the participation of Nobel Laureates (Leon Lederman and Carl Wieman). The third Advanced International Colloquium on Building the Scientific Mind was held in Cairo, Egypt.<sup>3</sup> It was co-organized with the Information and Decision Support Center of the Egyptian Cabinet (IDSC) and hosted by IDSC and the Friends of Environment and Development Association (FEDA). The latter organization is particularly active in creating sustainable development in the historic center of Cairo, El-Gamaliya. The theme for that third colloquium was *'In Search of a Home in the Universe.'* The choice for that theme was inspired by the fact that 2009 was the International Year of Astronomy. In 2011, BtSM moved to the extreme southern tip of the African continent, to Stellenbosch, South Africa, where we collaborated with the University of Stellenbosch and the Sustainability Institute, which hosted the meeting.<sup>4</sup> The theme for the fourth colloquium was, appropriately, *'Learning for Sustainable Futures.'*

It should be mentioned in the above context that multiple other organizations have taken a keen interest in, collaborated with, and supported the BtSM activities. They include in the first place UNESCO, the United Nations Educational, Scientific and Cultural Organization whose innovative Learning Without Frontiers program had been the birthplace for the Learning Development Institute. Colloquia took place under the highly valued patronage of UNESCO. Moreover, UNESCO National Commissions in the hosting countries were equally forthcoming in becoming involved and lending support to BtSM developments at the national level.

The Foundation for a Culture of Peace, presided over by noted scientist and former Director-General of UNESCO, Federico Mayor, has been a close partner all along.

Coinciding with the organization of BtSM2005 in The Hague, George Miley at the University of Leiden was developing an initiative that became formalized under the name Universe Awareness (UNAWE). It was a fruitful coincidence. UNAWE has ever since been closely associated with and involved in the BtSM activities. Recent discussions with UNAWE have resulted in the determination that UNAWE will play a prominent part in BtSM2013.

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<sup>1</sup> <http://www.learndev.org/ColloquiumBuildingTSM2005.html>

<sup>2</sup> <http://www.learndev.org/BtSM2007.html>

<sup>3</sup> <http://www.learndev.org/BtSM2009.html>

<sup>4</sup> <http://www.learndev.org/BtSM2011.html>

#### THE NEXT STEP IN THE PROGRESSION

Preparations are currently underway for the Fifth Advanced International Colloquium on Building the Scientific Mind, which will take place in 2013. Its lead theme will be '*Science and Technology in the Service of Beauty and Harmony.*' The colloquium is foreseen to take place during five days either in the last week of May or the first week of June 2013 in Bandung, Indonesia.

Further down the line, we expect BtSM2015 to take place in Quito, Ecuador.

Lembang, Indonesia: 7 October 2011  
Jan Visser, President