



## **Colloquium Series: Integrated Trans-disciplinary Inquiry Abilities through Education**

Speaker:

K. P. Mohanan, Centre for Integrative Studies, Indian Institute of Science Education and Research, Pune

Date / Time:

July 26, 2012 - 3:45pm - 5:45pm

Venue:

10th Floor, Auditorium, Pixel A, APU

Abstract:

When thinking about education, it is important to distinguish between our educational goals (the desired forms of understanding, abilities, predispositions, habits of mind, and value systems that the educational process seeks to develop) and the means we employ (the pedagogy) to bring about those learning outcomes. Inquiry-Based Learning and its close cousins like Discovery Learning, Socratic Method, and Constructivism are some of the pedagogical means we employ to bring about the desired understanding of a body of knowledge.

Different from all of these, what K. P. Mohanan would like to call Inquiry-Oriented Learning goes beyond the goal of understanding to inquiry abilities as its primary goal, using Task-Based Learning (including Inquiry-Based Learning) as well as Exposition-Based Learning as and when appropriate. Trans-Disciplinarity seeks to integrate different forms of understanding and abilities that, in traditional systems of education, are fragmented and located within particular disciplines like 'physics', 'biology', 'psychology', and 'sociology'. Causal reasoning, for instance, is a trans-disciplinary concept associated with a set of trans-disciplinary inquiry abilities, while the protocol of double blind experiments is a specific instantiation of causal reasoning specific to drug-testing in medicine. Consciousness and mind are trans-disciplinary concepts, studied in psychology as human consciousness and human mind and in biology as animal consciousness and animal mind. In his talk, I briefly outlines an approach to school and college education that combines inquiry-based, inquiry-oriented education with trans-disciplinary integration.

A Note on the Speaker:

K. P. Mohanan received his Ph.D in linguistics from the Massachusetts Institute of Technology, USA, in 1982, and has taught at the University of Texas at Austin, MIT, Stanford University, and the National University of Singapore. He joined IISER, Pune, in January 2011. He has

made significant contributions to linguistic theory in the areas of phonology, syntax and morphology. During the last few years, his primary academic interests have shifted to scientific inquiry and the nature of academic knowledge and inquiry in general, against the broader backdrop of human beliefs (<http://wiki.nus.edu.sg/display/aki>).

He is also an ardent spokesperson for radical educational reform. Drawing upon his experience as a researcher, educationist, as well as his thinking on academic knowledge and inquiry, his current preoccupation is to develop systems and resource materials for students to develop the capacity for critical thinking and inquiry, with focus on trans-disciplinary inquiry abilities of scientific inquiry (<http://iiserp-sci-ed.org/iiser/tiki-index.php>).