Azim Premji University Faculty Seminar

Topic:
Revisiting transfer of learning in Mathematics: insights from an urban low-income settlement

Speaker: Arindam Bose

Date: 18 February 2015 (Wednesday)
Time: 11.00 am to 12:30 pm
Venue: 10th Floor, Pixel A (Azim Premji University)

About the Topic

Debates on transfer of learning in mathematics are not new. There have been several arguments both in favour of and against learning transfer. Claims of situatedness of learning within tasks and non-transferability of knowledge between tasks are widely contested. Direct Application (DA) of learning is a common paradigm for characterising transfer which led to many instances of transfer failure (Bransford & Schwartz, 2001). In this talk, previous studies in Mathematics Education Research (MER) have been examined which have addressed the problem of transfer as a goal of learning. The proposed alternative framework shows that some of the transfer failures in mathematics can be considered as partial transfer by broadening the DA paradigm which can scaffold classroom pedagogy by drawing upon out-of-school mathematics. Occurrence of instances of learning transfer indicate that in everyday contexts students often gather and develop their mathematical understanding from different sources and such instances also question the validity of the distinction between different forms of mathematical knowledge. Claims are supported by data drawn from an urban economically active low income settlement where sample middle graders are engaged in house-hold based micro-enterprises and possess diverse opportunities for gaining mathematical knowledge.
**About the Speaker**

Arindam Bose is an advanced doctoral candidate in Mathematics Education in Tata Institute of Fundamental Research (TIFR), Mumbai, India. He holds a Master’s degree in Mathematics from University of Pune and five years of teaching experience at the undergraduate level in Patna University, India. Arindam was a member of the mathematics focus-group in the making of the Bihar Curriculum Framework 2006 for school education in the Indian state of Bihar.

For his doctoral dissertation, Arindam explored the nature and extent of everyday mathematical knowledge possessed by middle grade school students living in an urban low-income settlement that has embedded in it a thriving micro-enterprise economy. The objective of the study was to unpack and document the connections between students' mathematical knowledge, work practices and identity formation, and inquire into the implications of these connections for school learning. The study argued that experiences from everyday work-contexts makes students familiar with artefacts and practices that represent a crystallised and embodied form of mathematics, which can be resources to make potentially powerful connections with school mathematics. It also argued that school mathematical knowledge represents a form of generalisation or abstraction consisting of ideas or constructs that illuminates diverse instances in the everyday settings.

Arindam's key areas of interest in Mathematics Education are connections-disconnections between out-of-school and school mathematics, language diversity and Math learning, and ethnomathematics.