

FACULTY OF EDUCATION, UNIVERSITY OF CAMBRIDGE

LENT TERM 2010

CAMBRIDGE COLLOQUIA IN MATHEMATICS EDUCATION

Monday 8th February 2009 at 5.00 p.m., Room 205, Mary Allan Building, Hills Road

Professor Anna Sfard, University of Haifa, Israel and Institute of Education, London

LEARNING MATHEMATICS AS CLOSING THE GAP BETWEEN COLLOQUIAL AND LITERATE MATHEMATICAL DISCOURSE

The aim of this talk is to introduce a research framework, called commognitive, which is the result of my own twenty year long search for ways of talking, and methods of study, with which to produce useful, practice-enhancing insights. After a very brief presentation of basic commognitive tenets, I will focus on commognitive method of study, and show how these research methods are working in two out of the series of completed and ongoing commognitive studies devoted to the development of mathematical discourse. In both of these studies the leading assumption is that the effectiveness of learning process depends, to great extent, on similarities and differences between students' spontaneously developing discourse and the formalized literate discourse in which they are invited to participate.

Monday 1st March 2010 at 5.00 p.m., Room 205, Mary Allan Building, Hills Road

Thérèse Dooley, St Patrick's College, Dublin City University and University of Cambridge

THE CONSTRUCTION OF MATHEMATICAL INSIGHT BY PUPILS IN WHOLE-CLASS CONVERSATION

How can pupils be helped to construct mathematical insights in normal classroom conditions? In this presentation I report on a lesson (one in a series), based on the story of the young Gauss, that I taught at an primary school in Ireland. I trace the construction by pupils of new mathematical ideas and concepts using the RBC model developed by HersHKowitz, Schwartz, and Dreyfus (2001). I demonstrate how the fostering of a 'conjecturing atmosphere' (Mason, 1988) is the main factor that supports mathematically insightful behaviour. Conjecturing is evidenced by pupils' use of linguistic hedges (Rowland, 2000) and is facilitated by teacher follow-up moves (Brodie, 2008). In this context, I show how extended whole-class conversation can offer fertile ground for the growth of new mathematical understanding.

Tea and coffee will be available before each meeting. All are very welcome.

For further other information, contact Tim Rowland at tr202@cam.ac.uk