

FACULTY OF EDUCATION, UNIVERSITY OF CAMBRIDGE
EASTER TERM 2008

CAMBRIDGE COLLOQUIA IN MATHEMATICS EDUCATION

TUESDAY 6th May 2008 at 5.00 p.m., Room 106, Mary Allan Building, Hills Road

Tony Harries and Patrick Barmby, University of Durham

REPRESENTATION AND UNDERSTANDING IN PRIMARY MATHEMATICS

In this colloquium we will explore the nature of understanding in primary mathematics. First we will explore the way mathematical ideas are represented and how understanding is related to the way in which the learner works both within and between the various representations of a concept. We will use the topic areas of addition and subtraction, multiplication and division, and fraction to pursue these ideas. Second we will explore how reasoning both within and between different representations of a concept helps the pupil to build an understanding of the concept in question.

Monday 2nd June 2008, 5.00 p.m., Room 104, Mary Allan Building, Hills Road

Alastair Pollitt, Cambridge Exam Research

DO 'EXCEPTIONALLY ABLE' MATHEMATICS PUPILS EXIST? CONCEPTUALISATIONS, ORIGINS, AND STRATEGIES

What does it mean to say that a child is 'exceptionally able' in mathematics? What makes giftedness and talent? Can they be identified? Is it useful to do so? The idea of 'gifted children' has existed for about 100 years, but there is not yet much agreement on what they are, where they come from, or what to do about them - if they do exist and can be identified. Much of the content of this seminar is the outcome of a contract with QCA to review what is known in this area, and to make recommendations. I will describe the range of psychological models that have been proposed to account for exceptional ability in mathematics, and draw some lessons - and even a few conclusions - from them. (Alastair is co-founder of Cambridge Exam Research, and formerly Director of Research at the University of Cambridge Local Examinations Syndicate.)

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

For directions to the Mary Allan Building and any other information, contact Tim Rowland at tr202@cam.ac.uk