

Mathematics Teaching 2005 Conference Report

The Mathematics Teaching 2005 conference, held in Moray House School of Education at the University of Edinburgh, provided an excellent opportunity for teachers to access recent research and to keep abreast of developments in mathematics education. This annual conference was the 20th in a series and it continues to attract a large number of delegates from across Scotland as well as welcoming some delegates from south of the border. It is a unique event in that it encourages communication between the primary and secondary sectors as well as between practising teachers and those working in higher education and ITE.

The 2005 theme was 'EVERYONE COUNTS', thinking about mathematics for the full spread of abilities. The plenary sessions tackled issues related to the teaching of high and low attainers in mathematics. Dr. Anne Watson, Reader in Mathematics Education at the University of Oxford, gave the opening address. Anne considered ways of helping all students to achieve in mathematics, with teachers paying attention to pupils' barriers and beliefs, ensuring all possibilities and pitfalls were adequately explored. The session was based on research in classrooms and drew on teachers' stories and experiences of how teaching and teachers can make significant differences to students' life-chances. The title of her session, *Deep Progress in Mathematics*, highlighted the need for practitioners to focus on supporting low-attaining students to learn more mathematics, get better at learning mathematics and to feel better about themselves as mathematics students. These were big issues for the delegates to take on board but the thought provoking examples and clarity of presentation set everyone up for the workshops and continued discussion throughout the day.

Conference delegates each took part in three from an offering of fifteen workshops and discussion sessions presented during the day, choosing from:

How an Interactive Whiteboard can Improve Teaching and Learning (P/S)

Marc Barry and Paul Smith, Port Glasgow High

Maths On Fire: Spark creativity through matchstick puzzles (P/S)

John Dabell, Millgate House

Concept Cartoons in Maths (P/S)

John Dabell, Millgate House

Should we bin our Dienes' Material? (P)

Allan Duncan, University of Aberdeen

Pupils Working as Mathematicians (P/S)

John Hibbs, Ofsted / Open University

Critical Skills in Action (S)

David Hunter, Lasswade High School Centre

Using ICT to Support Mathematics 5–14 (P/S)

Katie Iddon, City of Edinburgh

Number Partners: A buddy scheme in mathematics (P/S)

David Martin, Harris Academy, Dundee

The Shape of Things to Come: A kinaesthetic approach to teaching shape (P/S)

Helen Martin, University of Aberdeen

Enterprising Mathematics Challenge - Primary Day (P/S)

Helen Martin, University of Aberdeen

Teaching People to Reason Mathematically: The structure of attention (P/S)

John Mason, Open University

ICT Support for Pupils working below Level B in P6-S2 (P/S)

Sandra O'Neill, CALL Centre, University of Edinburgh

Gifted Mathematicians in the Primary Classroom (P)

Moira Smith, Flora Stevenson's Primary School, Edinburgh

The Magic Mathworks Travelling Circus (P/S)

Paul Stephenson, Magic Mathworks

Counting Squares: Starting points for mathematical problem-solving (P)

Keith Windsor, Mathematics Consultant

These sessions included a lively mix of classroom ideas from teachers, teacher educators and others in the sector, with a high calibre of contribution from home and further afield. The workshops were well received by participants, allowing for active involvement and full discussion and engagement with the issues raised. The opportunity to meet with colleagues in the workshops and during the breaks was also a noted strength of the event.

Dr. John Threlfall, Lecturer in Primary Mathematics Education at the University of Leeds, led the closing plenary session. John specialises in primary mathematics and assessment with a particular interest in the role and effect of ICT on learning and assessment. It was on this theme that he presented, highlighting some of the issues in raising the attainment of potentially high achievers. Through some paper and computer mathematics materials from the recently published resources 'mathsinsight' and 'mathsinsight²' (see: www.worldclassarena.org), John considered pupils' responses to challenging questions, and discussed teaching strategies to support the development of mathematical thinking in mathematically able pupils. This session tied in with the theme of 'EVERYONE COUNTS', offering suggestions and approaches for those pupils who have a lot of mathematical potential but may not currently be adequately challenged in their classwork.

The conference exhibition included representatives from Active Maths Ltd., Boardworks Ltd., Cambridge University Press, Casio, EdpaX Ltd., Harcourt Education, Sum Detective Resources, Sum Dials and Teejay Publishers.

Particular thanks are due to the speakers and workshop leaders, all of who voluntarily gave of their time. Their time and efforts were clearly appreciated by those who attended the conference. In addition, this year saw a pilot of a *Student Conference* on the preceding Friday. Around 130 PGDE Primary and Secondary (Mathematics) students benefited from a reduced version of the event reported above, attending two workshops alongside the plenary from Dr Anne Watson. Pupils from local schools participated on the Friday, experiencing *The Magic Mathworks Travelling Circus* and providing the student delegates with a live circus rather than static activities! Thanks go to the staff and pupils from Flora Stevenson Primary School, Lasswade High School Centre and West Calder High School – although we hope they also enjoyed their experience!

We are indebted to the members of the conference steering committee for their input to the academic programme, to the CPD team of Alan Shanks and Linda Craig for the administrative support that enabled the conference to go so smoothly, Jim Buchanan and his team for ensuring the rooms were prepared for the event and finally to Lesley Pert and her staff at Chapters who provided the excellent catering throughout the day – thanks to all concerned.

A full report of the conference proceedings containing details of each session will be published in due course. Please note that handouts and presentations from some sessions are already posted on the ECME site at www.education.ed.ac.uk/ecme

Tom Macintyre, Ruth Forrester

Conference Organisers