

Paradigms in Mathematical Education for the XXIst Century: sharing the English experience

HOYLES, CELIA.

In this talk I will describe the range of initiatives that have been put in place in England to improve attainment in and engagement with mathematics – from primary level students to higher secondary.

I will only talk about those initiatives that have been put in place after the identification of a need by the mathematics community as a whole - not those exclusively introduced by Government. As well as providing this overview, I will focus particularly on the National Centre for Excellence in the Teaching of Mathematics (NCETM, see www.ncetm.org.uk), a national infrastructure set up in England by the U.K. Government to promote subject-specific professional development for teachers of mathematics across all phases of basic education (and beyond to college education).

The National Centre was launched in June 2006 following an influential report whose recommendations were largely accepted by Government. Endorsed by the major mathematical societies, the Centre is becoming the 'one-stop shop' for teachers of and leaders in mathematics as well as the vehicle for Government to promote mathematics and its teaching. Its task is to coordinate mathematics CPD provision delivered by a range of stakeholders.

The NCETM offers personal, professional and practical support to everyone involved in mathematics teaching and learning through its local and regional collaborative networks, its high-profile national events and its interactive portal. In my view, key to NCETM's success are: its unerring focus on mathematics and developing excellence in teaching mathematics; its commitment to sharing good practice within and across a range of didactical contexts from primary to college, largely through networks across institutions: its teachers enquiry projects; its offer of access to a range of quality professional development opportunities; and, last but not least, its constant struggle to build bridges across boundaries in the community.

I will offer several examples of successful NCETM activities in order to illustrate the range of its provision, the extent of its impact on the work of those involved in mathematics education, and how it has worked to support some major changes that are on the agenda: for example to have one primary mathematics specialist in every primary school and to engage more students with mathematics post- 16 when choices are made.