
Recent activities and future plans

In our last issue the heading of this section was *The Future of the LTSN - All Change?*, referring to the Academy which is being proposed for the enhancement of learning and teaching in Higher Education and which will encompass the work currently carried out by the LTSN, ILTHE and HESDA. Two other initiatives taking shape in HE may have a more direct effect on you and your department. Both involve mathematics, statistics and OR, and both are referred to as *Centres for Excellence*.

1 A National Centre for Excellence in Mathematics Teaching (NCEMT)

In March the Secretary of State for Education and Skills announced NCEMT at a DfES/ACME Conference on CPD for mathematics teachers. Mr Clarke added that he would be asking the Chair of the Post-14 Mathematics Inquiry to advise him on the 'costs and options' for the NCEMT, which will:

- Cover all ages from pre-school through to universities and adult learning
- Provide teachers with professional support, training and development
- Work with teachers to produce specific curriculum support, exciting classroom materials and opportunities to explore different teaching approaches
- Work with the Numeracy Strategy in primary schools and the maths strand of the Key Stage 3 National Strategy
- Link closely with specialist schools, local partner schools and universities to create strong and innovative subject specialist networks
- Support and enhance projects for the benefit of mathematically gifted young people

The Post-14 Mathematics Inquiry is expected to report back to the Secretary of State on a recommended structure for the NCEMT by September 2003.

2 The Education White Paper included a quite distinct reference to the creation of Centres for Excellence in Teaching and Learning (CETLs) within HEIs and further education colleges

HEFCE has now published a formal consultation document inviting HEIs and further education colleges to contribute to the development of proposals for these CETLs, the aims of which are to reward excellent teaching practice and to invest in that practice further so that the funding delivers substantial benefits to institutions, teachers and students. Responses are invited by 24 October, and HEFCE will publish the invitation to bid for CETLs later in the year. The deadline for first stage applications is likely to be mid-April 2004, when institutions would be required to identify existing excellent practice and outline a business case of how the CETL would develop and use the funding. Bidders successful at that stage would be given four months to

develop a detailed business plan for further consideration, and the first CETLs would start operating in early 2005.

IMPORTANT: a number of institutions are already making internal enquiries, developing ideas, and preparing the ground for possible bids. It is important that Mathematics, Statistics and Operational Research are fairly represented in the new CETL landscape. There is much excellent and successful pedagogic practice in our community – will it be reflected in your institution's response to HEFCE?

Full details can be found at http://www.hefce.ac.uk/Pubs/hefce/2003/03_36.htm, but here are a few key extracts from the proposals:

- institutions could bid for between £200,000 and £500,000 per year in recurrent funding over the five years and up to £2 million in capital funding
- bids could come from any institution directly funded by HEFCE, including further education colleges with over 500 full-time equivalent (FTE) directly funded HE students. Collaborative bids could include directly and indirectly funded partners, and include staff funded through the Teacher Training Agency and NHS.
- a CETL could focus on one of the following approaches, in terms of the staff who contribute to teaching in relation to that particular approach: academic staff, subject librarians, technical and learning support staff or administrators
 - a) A form of teaching
 - b) A way of conceptualising, organising or supporting student learning
 - c) A way of designing the curriculum, including its assessment
 - d) A goal of higher education
 - e) An identified issue or problem area in teaching HE

The focal point for CETLs would be teaching and the development and enhancement of that teaching. HEFCE do not envisage CETLs duplicating the role of the HE Academy or LTSN Subject Centres by primarily focusing on dissemination activity. However, they believe that enhancing the standard of teaching by sharing good practice is a key objective of CETLs and that they could use available networks, like the HE Academy, to do this.

National Teaching Fellows 2003

Two of the 2003 National Teaching Fellowships have been awarded to academics in the MSOR discipline, and we are delighted to congratulate them on their achievement.

Sidney Tyrrell is an Associate Senior Lecturer teaching Statistics and Quantitative Methods, and Teaching Fellow in Coventry's School of Mathematical and Information Sciences. Her diverse career has featured experience of distance and independent learning, the latter provoked by the inadequacy of the distance learning materials, and extensive work with children in the Guides Association, all of which have contributed to her approach to her present work at Coventry. Sidney's project aims to produce and disseminate accessible e-learning materials for Quantitative Methods at a range of levels, to use these with students both in virtual learning environments and as part of a general learning support website, and to disseminate the materials and the knowledge of good practice learned while building them.

Amanda Chetwynd is a Professor in the Department of Mathematics and Statistics at Lancaster University. Her work involves not only teaching maths in the University, but also developing ways of teaching mathematical proof with 11-16-year olds and various initiatives to encourage women in mathematics and science. Amanda's project aims to bridge the gap between school and university mathematics. It will address current issues of major national concern: the serious decline in mathematical competence of students entering higher education; the shortage of students choosing to study mathematics and related disciplines; and the insufficient number of well qualified mathematics teachers in schools. It will develop and disseminate innovative written and web-based materials which will show how mathematics provides essential underpinning for a wide range of subjects, focusing on Probability and Statistics, two areas of mathematics that are of fundamental importance to many subject areas.

Additionally **Vicki Tariq**, Senior Lecturer in Biology at Queen's University Belfast, will use her fellowship to research the problems students encounter with mathematical literacy and evaluate possible measures to improve it to inform policy and contribute to national debate on this issue.

Projects and Workshops

Updates from the projects on staff development and mathematicians as educational co-researchers can be found overleaf. Other projects have contributed to workshops over the last three months; reports can be found in the newsletter and on the website. Plans for the autumn are listed in the Diary and include:

Induction Course for lecturers new to teaching in UK Departments, 18-19 September at the University of Birmingham

Sharing of Projects Practice, 12 November at the University of York – a one-day workshop aimed at sharing practice for the implementation, support and assessment of final-year project-based activities. Full details on page 61.

Undergraduate Mathematics Teaching at Research Frontiers, in the Day Break programme. Further meetings in this programme will be announced in due course.

Publications

The following publications can be ordered at any time. There is no charge for the leaflets or for individual copies of the booklets. Full details at <http://ltsn.mathstore.ac.uk/publications>

Facts and Formulae leaflet: bulk copies available free of charge for distribution to students

Algebra Refresher, and Calculus Refresher: Bulk copies can be purchased for distribution to students. The current cost is £125 for 100 copies, payable in advance.

Learning and Teaching in Mathematics, Statistics and Operational Research

Occasional series ISSN 1476-1378.

2/01 Guidelines for Introducing Groupwork in Undergraduate Mathematics

3/01 Good Practice in the Provision of Mathematics Support Centres (currently out of print, but we are taking orders for the second edition)

LTSN MathsTEAM publications

Diagnostic testing for mathematics: an in-depth review of current diagnostic testing including the results of a focused project and national survey. There are detailed case studies as well as brief outlines of the actual testing procedures. ISBN 07044 23731

Maths support for students: as Engineering and Science departments face the problems of inadequate mathematical preparation by students, many are setting in place networks of support-based activities, eg maths learning centres. This booklet presents case studies illustrating these initiatives. ISBN 07044 23758

Maths for engineering and science looks at teaching mathematics in context. Case studies from contributing authors describe the execution of the learning activities, the support needed, the implementation difficulties, evidence of success and suggestion of how other academics could reproduce the activity. ISBN 07044 2374X