
Recent activities and future plans

As mentioned in our last issue, the Higher Education Academy is a new body created to support quality enhancement and the student experience in higher education. The first Chief Executive of the Academy has now been appointed. Professor Paul Ramsden, currently Pro-Vice-Chancellor (Learning and Teaching) at the University of Sydney, and Visiting Professor at the Institute of Education, University of London, will take up this new post in York on 1 August.

This is also the date for incorporation of all the LTSN subject centres into the Academy, including the Maths, Stats & OR Network. A new LTSN prospectus is being prepared to reflect the range of activities on offer, and you can read our contribution on p37 of this issue. To supplement the prospectus, here is the latest news on workshops and projects. Opposite is a short briefing on a major HEFCE funding initiative to set up more than 70 Centres for Excellence in Teaching and Learning, which we would encourage you to get involved in. As ever, you can keep up to date and register your interest via the Mathstore website.

Workshops

Maths Support for Computer Scientists: 22 March, University of Glasgow (to be confirmed)

Research in Teaching and Learning: Getting Started: 24 March, Royal Institute of British Architects, London. Organised jointly with LTSN Physical Sciences and other subject centres, the purpose of this workshop is to provide participants with an overview of the scope of pedagogical research in the science related disciplines. We will explore how to pose research questions and the place of theories. The different methodologies available and research design will be explored, as well as making your findings known and publication. There will be an opportunity to explore the possibilities for collaborative research with other workshop participants.

Teaching OR in Business Courses: 30 March, University of Southampton. This one-day course, led by Julia Bennell, Sally Brailsford and Stewart Robinson, will explore the reasons why OR is not attractive to business students, learn about others' experiences of teaching OR and identify some general approaches to making it more accessible to students. Part of the Day Break programme.

Teaching Time Series Analysis: 14 April, RSS Council Chamber. A one-day workshop led by Chris Chatfield. Part of the Day Break programme.

Widening Participation in MSOR: 19 May, Aston University. Although widening participation has assumed great importance in recent years, the MSOR community has for a long time had to provide for a wide range of ability and motivation in its students. Consequently, there is already a great deal of good practice in encouraging and supporting widening participation in MSOR in higher education, some of which is described in the booklet *Widening participation in Mathematics, Statistics and Operational Research*. However, there are still issues and problems in this area, notably in retention and in realising the potential of all students whatever

their background. This workshop, while sharing good practice, will also take a critical look at some of the problems the community still faces and look for ways forward to address them.

Teaching Undergraduate Statistics using 'R': 19 May, University of Leeds. A one-day workshop led by Charles Taylor. Part of the Day Break programme.

Maths Support for Computer Scientists: 28 May, University of Ulster (to be confirmed)

And it's not too early to think about the **Undergraduate Mathematics Teaching Conference** (1-3 Sept – see p16), and the **Induction Course** for lecturers new to teaching in UK Departments (16-17 Sept), both at Birmingham.

Development Projects

We have had eight applications for mathematics projects to run in 2004-05 and will announce the awards in the next issue. Here are some updates from ongoing projects.

Sharing Project Practice: see workshop report on p28.

Sharing Good Practice in Assessment in MSOR: the books being prepared by this project are still not quite ready, but we hope to print and distribute them before the conference season at Easter.

Diagnostic Tests with Support – J Sims-Williams (Bristol)
This project will generate a set of diagnostic tests and a classified database of questions suitable for diagnosis. The tests will be available online via the TAL server at Bristol, or paper versions could be used by members of the HE community. To date Jon has produced a classification scheme based on the SEFI core zero syllabus, modified to make it more hierarchical. He has discussed with both a Chemistry and a Maths department which of the set of subjects as defined by this classification scheme were important to the initial stage of their courses, and set a test for each department reflecting

their interests. About 100 new questions have been taken from existing diagnostic tests and put into TAL for this purpose.

Java Applets project – D Jordan (Sheffield) and C Jordan (Open University)

Java applets provide a means of enhancing understanding of concepts by providing visual aids. The outcome of this project will be a suite of applets illustrating various mathematical concepts, together with documentation and worksheets. The applets will be freely downloadable and the documentation will show how they can be configured to use local notation. The source of the worksheets will be made available so that they can be adapted for local use. The authors say:

“Our applets are not intended as sophisticated mathematical software but as easy to use visual aids that illustrate key ideas. They can be used as part of a lecture, often with pre-entered examples, and then made available through the web for consolidation. Alternatively

they can be used in workshops, or independently, with accompanying worksheets. The original applets have been used in lectures at the University of Sheffield and at Open University summer schools. Many of them have been made available over the web to students. Topics covered at present include group theory and complex analysis, and it is intended to add applets illustrating ideas from real analysis.”

Some of the current applets can be viewed at <http://mcs.open.ac.uk/crj3/complex/m337.html> <http://mcs.open.ac.uk/crj3/activities/activity.html>

Employability: £5,000 has been granted to each LTSN subject centre by the DfES, to enhance learning and teaching activities relating to the employability of students in their disciplines. There is now an employability section on our website, and we will be working with the Careers Initiative of the Council for Mathematical Sciences to develop this further. Overleaf you will find a summary of statistics showing the employment situation for MSOR students six months after graduation.

Centres for Excellence in Teaching and Learning (CETLs)

In January 2003 the government published its white paper *The Future of Higher Education* and in July 2003 the Higher Education Funding Council for England (HEFCE) published their Strategic Plan 2003-08. This plan included proposals to establish Centres for Excellence in Teaching and Learning (CETLs), which have since been further developed into a policy consultation document. HEFCE have committed some £315 million to fund the establishment and operation of at least 70 CETLs over a five-year period. Each will receive an initial capital investment of up to £2 million, and a recurrent annual grant of up to £500,000.

The invitation to bid has now been published at http://www.hefce.ac.uk/Pubs/hefce/2004/04_05, and first stage bids are required by 23 April 2004. This is a short time frame and institutions will need to act quickly to prepare bids for these new centres. This document provides a brief overview of the scheme and outlines the support we can provide in bid preparation.

Characteristics of a CETL

Each CETL proposal must clearly set out the intended focus of activity and the way in which it will be structured.

Activity Focus

Proposals will need to define the focus of the CETL in terms of a distinctive approach to learning and teaching, that has delivered excellent learning and that the proposers wish to identify as a model of excellent practice. Examples given in the consultation document include:

- A form of teaching (lecturing, distance and online learning, research-led teaching, mentoring)
- A way of conceptualising, organising or supporting student learning (small group and syndicate work, laboratory practice, study skills support, student-centred learning, games and simulations, peer tutoring, acquisition of research skills)

- A way of designing or developing the curriculum (problem-based learning, work placements, work-based learning, personal development plans)
- A way of designing student assessment to enhance and deepen learning (online, formative, self and peer, open-book, alternative forms for students with special needs ..)
- A way of involving students in active understanding (use of student feedback, learning logs and portfolios)
- A goal of higher education (social inclusion, widening participation, addressing the needs of minorities, lifelong learning, enterprise, critical thinking, autonomous learning)

Structure

The consultation document suggests that CETLs are not necessarily expected to exist within a single department but could be based across subject, department, faculty

or institutional boundaries. The document suggests a high degree of flexibility in the CETL structure and points towards two principal types:

- Within one institution, where excellence is defined in relation to a single department, or group of departments; or where it is linked to themes, issues of learning objectives that cut across subject, departmental or institutional boundaries.
- Collaborative bids: partner institutions may pool excellence in expertise; or teachers from different institutions may have developed and shared their knowledge and experience to enhance the learning of several student groups. All collaborative bids must be led by a single, named lead institution.

Who Can Bid

Any HEFCE funded institution with more than 500 FTEs is eligible to bid for CETL funding. There is a limit on the number of bids any institution can make dependant on the number of FTE students registered:

Fewer than 5,000:	1 individual bid
Between 5,000 and 15,000:	2 individual bids
Over 15,000:	3 individual bids

Each institution will also be allowed lead one collaborative bid with other institutions and may participate in an unlimited number of collaborative bids. This limit on the number of institutional bids will mean that any department wishing to apply for funding will first need to go through some form of internal selection process.

Level and Purpose of Funding

There are two elements of CETL funding:

- Recurrent: Between £200k and £500k per year for five years
- Capital: Between £800k and £2M

This funding is intended to:

- reward practice that demonstrates excellent learning outcomes for students.
- enable practitioners to lead and embed change by implementing approaches that address the diversity of learners' needs, the requirements of different learning contexts, the possibilities for innovation and the expectations of employers and others concerned with the quality of student learning.
- enable institutions to support and develop practice that encourages deeper understanding across the sector of ways of addressing students' learning effectively.

- recognize and give greater prominence to clusters of excellence that are capable of influencing practice and raising the profile of teaching excellence within and beyond their institutions.
- demonstrate collaboration and sharing of good practice and so enhance the standard of teaching and effective learning throughout the sector.
- raise student awareness of effectiveness in teaching and learning in order to inform student choice and maximize student performance.

Timetable

- First stage submissions by: 23 April 2004
- Decisions on first stage bids and invitations to prepare second stage bids: end June 2004
- Development day for preparation of second stage bids: July 2004
- Second stage submissions by: 29 October 2004
- Recommendations for funding by: January 2005
- Commencement of funding: March 2005

Our Support

LTSN Subject Centres are not permitted to lead bids themselves but will provide close support to bids from within their discipline communities. CETLs will be required to develop close working relationships with relevant Subject Centres and to draw on their expertise during bid preparation and throughout the lifetime of the CETLs.

The LTSN as a whole will support institutions in the development of the CETL bids through workshops offering advice, guidance and information. The first of these will take place on 2 March in London, when staff from 12 subject centres including our own will be present. We can give guidance on the scope for development where bids touch on themes that coincide with our own programmes; facilitate access to information on good practice, on existing projects and research evidence on excellence; and broker, at your request, connections between areas of excellence that might lead to collaborative bids.

If you have any questions on the CETL scheme in general or on the details of the bidding and selection processes, see the web page below or contact our Director John Blake.

http://www.hefce.ac.uk/Pubs/hefce/2004/04_05