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# Professional Development in Mathematics

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As we write, the shape of the new Higher Education Academy is being determined. Several issues remain to be settled, but it is likely that the Academy will have as one of its main aims facilitating the professional development of all staff in higher education. The LTSN, through its various Subject Centres, has argued forcefully that discipline-based staff development should be an important component of the emerging structure and that departmental visits offer an excellent vehicle for engaging with the widest possible audience.

Other developments, such as Student Satisfaction surveys being piloted in the 2003-2004 academic year, Institutional Audits and the next Subject Review of Mathematics, Statistics and OR (MSOR) – looming on the horizon in 2006 – are likely to have significant impact on teaching and learning in Mathematics. A crucial element in this will be an increased emphasis on staff development in teaching and learning both for new staff and for experienced staff. Traditionally, staff development has progressed in Higher Education via a number of mechanisms. At the local level the most important have probably been the collegial ‘common room’ interaction between maths lecturers actually doing the job, and the central university Staff Development units that often concentrate on more generic aspects of provision. There has also been some, albeit limited, input from mathematical educationalists either located in Maths or Education departments. At the national level there have been various agencies such as SEDA, UCoSDA (now transmuted into the ILT and the LTSN Generic Centre) but only very rarely have these national players impinged on the actual practitioners at the discipline level.

If such things as the Academy and the associated push towards improved Staff Development (SD) are to succeed at the grass roots level then there must be a major engagement with the practitioners themselves – the average lecturer at the chalk-face. Traditionally such influence has been exerted through the various representative/professional bodies that command a substantial membership, such as the London Mathematical Society, the Mathematical Association, the Institute for Mathematics and its Applications. Taken together they form a large part of the practitioner representation, and there are recent moves to co-ordinate the activities of these bodies/agencies, so that, united, they represent as large a body of opinion as possible. However, while fulfilling a valuable role in providing representative views of a large proportion of the practitioner population, thus informing policy and strategy at national level, such agencies do not have the resources to implement these in a co-ordinated manner across the MSOR sector and at the practitioner level.

The LTSN Maths, Stats & OR Network has, over the years, built up a considerable network of expertise and experience and has through its contacts with, for example, departmental representatives developed an awareness

of the typical issues that need to be addressed in this area. Through its contacts at national and local level, at policy and practitioner level, the Network is therefore ideally placed to canvas, represent, and co-ordinate practitioner input to SD activities in MSOR and to liaise with other agencies providing staff development.

It is easy to identify a number of issues facing SD in MSOR that have implications for departments and individual lecturers.

- Outputs of last QAA round of Subject Review – problems with assessment, student progression, etc
- Use and implications of IT in MSOR
- Implications of Widening Participation and retention
- Rapidly changing curricula in schools and HE
- Shortage of maths teachers
- Shortage of maths students
- The tensions between teaching and research
- Increased accountability
- The retirement time-bomb

To obtain the maximum benefit from our resources and to make maximum impact at the grass-roots level, the LTSN Maths, Stats & OR Network is now offering to run customised events for individual departments in the coming academic session. There have been a number of pilot workshops that run on a day or half-day basis. The agenda usually evolves from a number of wide ranging topics (such as assessment!) which are then sharpened up via initial exchanges with the department to provide staff development workshops firmly matched to local concerns. We also envisage assisting the department as it tackles its own issues and tasks (for example, re-visiting a part of the curriculum or reviewing assessment strategies). We would also like further input from practitioners on a range of induction materials for new lecturers that are being developed. The aim of the visits would be to engage as many staff as possible with a programme that had real local resonances. Such visits can be conducted in collaboration with your institutional SD unit and so could be arranged to fulfil institutional SD requirements.

We do not see this exercise as a one way process; we fully expect to come away with as many examples of good practice as we bring. Our fundamental role is to facilitate the promotion and sharing of good and effective

practice – we are less comfortable with the concept of “best practice” – and view these departmental visits as an important part of this process and another way in which the LTSN Maths, Stats & OR Network can meet the needs of our discipline.

Those interested in such a visit should contact, in the first instance

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