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# The LTSN MathsTEAM Project

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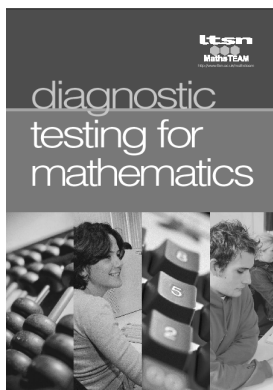
Funded by the Learning and Teaching Support Network (LTSN), the LTSN MathsTEAM project has recently published three booklets as the culmination of its work. The booklets each contain some 20 case studies, contributing to the transfer of knowledge within the higher education community. Each case study offers practical suggestions for academics to gain a better understanding of the present situation and related topics that merit further exploration and research.

The booklets were launched at a workshop immediately prior to the IMA conference on the *Mathematical Education of Engineers* at Loughborough University on 2-3 April. Over fifty people attended, ranging from contributing authors to academics from engineering and science departments. Each was presented with copies of the booklets, intended to address the challenge of enhancing the basic mathematical skills of engineering and science students. In each booklet the authors talk about the barriers and the enablers in setting up different learning initiatives. For those academics considering the implementation of any of the programmes, each case study provides the opportunity of reviewing the learning processes and tools.

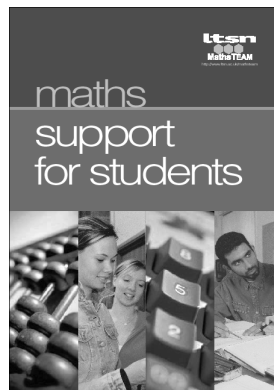
The presentation of the three booklets provided an overall perspective of their contents and raised topics for discussion. Duncan Lawson from Coventry University spoke about the process of assessing the entrant's mathematical skill base using diagnostic testing. Tony Croft, the Centre Director for the Maths Learning Centre at Loughborough University followed this with the different types of student support. Finally, Rob Beale from Oxford Brookes University looked at teaching maths within an engineering and scientific context. The workshop also included two discussion sessions, providing an opportunity for the audience to consider a range of issues relating to mathematics that departments are currently tackling throughout the UK.

Tony Croft chaired the first discussion where each member of the audience stated their areas of concern in relation to the lack of students' mathematical skills and the measures being taken by their institution if any. These measures ranged from a ten-year-old support centre to a "half-hearted facility which does not currently have a home base". One person stated he was attending the workshop to "collect evidence to persuade the head of department to set-up a centre".

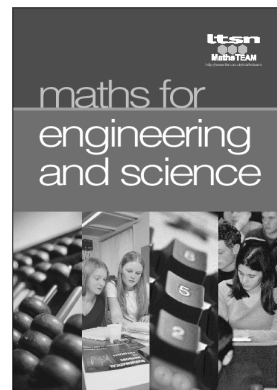
Alan Stevens from Rolls Royce presented a different perspective stating that apprentices working at the company have difficulties with algebra and calculus.



**Diagnostic Testing for Maths**



**Maths Support for Students**



**Maths for Engineering and Science**

He was aware that resources were available to assist but difficulties arose in terms of providing the time to learn especially if money was involved. An interesting discussion followed, with a strong desire to "concentrate on the positive" and the need to emphasise the strengths of the younger generation, be more positive about their skills and communicate with them. Professor John Blake, from the Maths Department at the University of Birmingham, feels it is important to "make maths fun for the younger generation". He urged his colleagues to "go away and communicate the importance of mathematics".

The second discussion session led by Rob Beale looked at teaching maths within an engineering context. This provided an opportunity to examine a wide range of learning and teaching methodologies being used by various departments as illustrated in the booklet, *Maths for Engineering and Science*.

After lunch the President of the IMA John McWhirter presented prizes to Colin Thomas from the department of Chemical and Formulation Engineering at the University of Birmingham and Neil Challis from Sheffield Hallam University who were judged to have written the best case studies.

Overall, the workshop proved valuable, as it focused on current situations as presented in the three booklets. It provided the opportunity for delegates to meet, review good practice, and to share the lessons learned and the explicit knowledge of academics throughout the UK. The booklets can be ordered directly from the LTSN Maths, Stats & OR Network, and more information on the MathsTEAM project can be found at <http://ltsn.mathstore.ac.uk/mathsteam>.