

From the Chief Executive**QCDA (formerly QCA) consultation**

A report on the recent consultation on level 3 mathematics is soon to be published. It will show that there was a substantial response and that a sizeable majority were opposed to QCDA's favoured model A. At the time of writing, QCDA are considering an alternative model which is also ill-conceived. If and when this new proposal is in the public domain we will provide further information in the form of a position paper; please watch out for it.

The source of the problem is that QCDA and/or Ofqual want mathematics to fit into the same rules that apply to other subjects. The truth is that this cannot be done without inflicting major damage on the subject; otherwise it would have been done long ago. Instead of wasting time coming up with one unsatisfactory model after another, QCDA should be looking at which rules need to be relaxed for mathematics, recognising that, from a national perspective, it is the most important of all subjects at this level.

Surveys

We conducted a survey into the effects of changing GCSE from 3-tier to 2-tier at this summer's conference (and also at some branch meetings). The outcome is a report, *The effects of 2-tier GCSE Mathematics on transition to AS and A Level*, which you can find on the MEI website. We presented this paper to ACME who forwarded it to the DCSF where it is genuinely being taken seriously. So a sincere thank you to all who took part. You will notice that the report contains a large number of direct quotes, ensuring that anyone reading it knows what teachers are actually saying.

At the same time we also did a survey into credit card fraud. The results would seem to be at odds with the judgement in a recent court case and will appear shortly as two articles in a legal journal.

There is now a survey on our website to investigate the reasons for the increase in numbers taking Mathematics and Further Mathematics A Levels. Please respond at www.mei.org.uk/mathsupakesurvey.

Roger Porkess

MEI website

As many of you will have seen, we launched an updated MEI website at the summer MEI conference. The previous style had been in place for a number of years now, so it was time for some updating!

There will be a few broken links and the like still hiding in the new site, so if you do come across any then please get in touch and we'll sort it out as soon as possible. Indeed, we are always happy to hear from you and one of the ways we have looked to encourage this is by enabling discussion posts from site visitors – these will reside under the 'News and opinion' menu, so please do let your thoughts be known on the topics and papers in that area.

With change comes opportunity and we took the opportunity to re-focus various parts of the site. On the homepage, www.mei.org.uk, we now have direct links to two of the most popular aspects of our site, the login to our online resources and the access to the past papers. Under these is a custom Google search function for the site, which should prove helpful if you cannot immediately find what you are looking for. The ever-popular Maths Item of the Month still resides on the homepage with an archive of past items.

We are becoming more involved with the modern technologies of Twitter, YouTube and Facebook. We hope our Twitter 'tweets', which you can see from the MEI homepage, will give you an insight into the diverse areas that MEI staff are involved in. We have saved various videos produced by others, onto our YouTube page. We hope you find them interesting. If you know of any interesting clips please let us know and we will consider adding them to our favourites list. We shall continue to look to work with such emerging technologies to enhance and inform the work we do to support mathematics education.

Stephen Lee

Further Mathematics Support Programme - Data Analyst/Web Manager

MEI Online Resources

The MEI Online Resources continue to be very popular with students and teachers alike. With numbers using the site continuing to grow, we are keen to continue improving so we have re-developed the online resources into a new platform. By using the Virtual Learning Environment, Moodle, we have been able to create a site that is much more modern and adaptable to the needs of the user.

In addition to a bright new look and better navigation facilities there are many great new features including the opportunity to send messages on the site, put events into calendars and post into forums. These are things which most students of today are very comfortable with and so we hope they will use them to improve their learning experience. We plan to add more features in the future.

We have also enhanced the tutor's ability to analyse and monitor student performance and also to interact with other teachers. There is now a dedicated 'Tutor area' which houses information about using the site and forums which anyone who is registered on the site as a tutor can see. We would really like to encourage the use of this area, not only to feed back to us and other users any comments you have, but also to cite good practice of using the site and its contents.

We hope you enjoy using the new resources site and that you think it is an improvement over the old one.

Stephen Lee

Big Ideas in A level Mathematics

This year MEI will run a course designed to support teachers in their early years of teaching A level Mathematics, looking at some of the big ideas in more depth. The course will give participants a deeper understanding of the concepts behind the techniques in A level, addressing issues such as

- The fundamental theorem of calculus
- Why natural logarithms are natural
- What exactly is the sine function?
- Proof
- Multiple representations
- The effective use of ICT

The course will be made up of three days, centred around each of algebra, calculus and trigonometry, and will run at venues in both the North West and South East. The cost will be £100 for one day, £180 for two or £250 for all three. One of the days at each venue will be a Saturday. The dates and venues should be on the MEI website by the time you receive this newsletter. See www.mei.org.uk/cpd for more details.

Bernard Murphy
Programme Leader (CPD)

GCSE 2010

All mathematics GCSEs are changing for teaching from 2010. In common with other exam boards, OCR are reducing the number of GCSE Mathematics specifications they offer for teaching from September 2010. This is due to a change in QCA regulations. Consequently, there will be no MEI GCSE for teaching from 2010.

In addition to the single mathematics GCSE, 2010 sees the start of national pilots in Applications of Mathematics and Methods in Mathematics. The MEI website now has a GCSE 2010 section with links to information about single Mathematics GCSE and Twin GCSE pilots; you can find this at www.mei.org.uk/gcse2010. You will also find news of our new GCSE work to develop teaching materials for the twin pilot GCSEs. The content of single Mathematics GCSE is contained within the twin pilot GCSEs so it will also be possible to use these teaching materials for single GCSE Mathematics. The materials use an approach to teaching and learning using Realistic Mathematics Education (RME). RME is a highly researched pedagogy in which students build up their mental images through carefully constructed sequences of context-based examples, and then generalise into the underlying theory.

Free GCSE resources

From the GCSE 2010 page, there is a link to a section of freely available starters which I have worked on. The Picturing Mathematics Starters can be used with any GCSE and are intended to promote discussion which will lead into the main part of the lesson. Please do let me have your feedback on the starters and on the other information on the website.

Stella Dudzic

Programme Leader (curriculum)

MEI conference 2009

First of all, thank you to all of you who came to the conference and for such active, enthusiastic participation. Thank you also to the speakers, the feedback from delegates was overwhelmingly positive. If you would like to read the feedback for your session then please email dan.williams@mei.org.uk and he will send you the (anonymous) comments. Of course, this offer is available to the speakers only.

Many thanks to all of you who took the trouble to fill in the evaluation form at the conference. The comments below are based on the 61 forms we received. It is always reassuring to receive positive feedback and we were delighted to see that many of you found the Conference stimulating:

As a non-MEI, non-A level, non-UK teacher, I found the sessions I chose, the lectures and the conference as a whole excellent and relevant.

Thanks – great days with lots of hard work in preparation

The conference was excellent! I've learnt a lot and have acquired greater insight into the way Maths education can be delivered to learners. Thank you to all the organisers.

It's my first time at an MEI conference and I must say I was very impressed. Always interesting, always informative. I learnt a lot and will use plenty of the new resources/info picked up

Many thanks for the hard work and organisation that has gone into the conference

College and MEI staff were excellent. V helpful and friendly. I think the conference has been excellent value for money and a really enjoyable 3 days! Thank you.

An excellent programme....lectures were delivered by brilliant speakers and made you think. Overall a very well balanced programme with something for everyone...Re the future – more of the same in every respect.

As ever we were keen to hear how we might improve the conference and we will do what we can to act on the suggestions made for next year. For example, we hope to have sessions on introducing three key topics in various modules for those who are new to teaching it. If you have any other ideas please do let us know, we are starting to work on next year's programme and it would be good to have suggestions from people who weren't able to make it to this year's conference.

We hope to see you at Reading for next year's conference from July 1 to 3.

Bernard and Stella

The Further Mathematics Network is dead, long live the Further Mathematics Support Programme!

The Further Mathematics Network (FMN) came to an end on 31 July 2009 after 4 years of promoting Further Mathematics and providing tuition to students who could not access Further Mathematics tuition in their own schools and colleges. The FMN has transformed the level of participation in Further Mathematics. In round numbers, since the FMN started in 2004/5, the numbers of students taking AS Further Mathematics have trebled to over 13 000 and those taking the full A level Further Mathematics have doubled to over 10 000. Over the same period, the percentage of A level Mathematics students also taking A level Further Mathematics has risen from 11% to 15% and the number of state schools and colleges offering Further Mathematics has increased from less than 40% to around 60%. These increases are far larger than for any other mainstream subject.

Professor Dame Julia Higgins FRS, Chair of the Advisory Committee on Mathematics Education (ACME), said:

'It is wonderful news that the numbers studying A Level Mathematics and Further Mathematics continue to rise, year-on-year. More students choosing mathematics beyond 16 benefits the individuals, universities, employers and, ultimately, the nation as a whole. The particularly large increases witnessed in Further Mathematics are testimony to the dedicated work of the Further Mathematics Network. I am delighted that their work will continue in this arena under the Further Mathematics Support Programme.'

From 1 August 2009 the Further Mathematics Network has been replaced by the Further Mathematics Support Programme (FMSP), which continues the work of the Further Mathematics Network and extends it to provide professional development for teachers of Further Mathematics and support for the teaching and learning of level 3 Mathematics within diplomas. Like the FMN, the FMSP is managed by MEI and funded by the DCSF. The National Centre for Excellence in Teaching Mathematics (NCETM) is working in partnership with MEI to support the FMSP's professional development role.

To find out more about the FMSP, please see www.furthermaths.org.uk.

Charlie Stripp
Programme Leader
The Further Mathematics Support Programme

Industry

SEMATA, the sector skills council for engineering and manufacturing technologies, has asked Richard to contribute to its Engineering / Science Workforce Development and Competency Framework.

SEMATA intends to analyse in detail the mathematics actually used by engineering and science industry employees and is trialling this project in the aerospace sector.

Richard spent two days at Agusta Westland in Yeovil with John Harris of Semta. We interviewed three senior engineers to establish the engineering, mathematical and management skills and competencies required by their job roles.

The project is intended to provide information for professional development to help industry to improve workforce development and performance throughout the sector.

For MEI the project could offer an opportunity to explore the use of mathematics in various engineering workplaces.

Richard Browne
Programme Leader (Industry)