

Minutes of the JMC Council meeting held at the Royal Society on Thursday 13 November 2008.

The JMC is grateful for the financial support of the Royal Society.

Present

Officers

Ros Sutherland	Chair
David Martin	Honorary Secretary
Adrian Oldknow	Honorary Treasurer

Members

Peter Johnston-Wilder	Association of Mathematics Education Teachers
John Hibbs	Association of Teachers of Mathematics
Not represented	British Society for Research into Learning Mathematics
June Barrow-Green	British Society for the History of Mathematics
Elizabeth Winstanley	Conference of Heads of Departments of Mathematical Sciences (also London Mathematical Society)
Colin Campbell	Edinburgh Mathematical Society
Nigel Steele	Institute of Mathematics and its Applications
Elizabeth Winstanley	London Mathematical Society (also Conference of Heads of Departments of Mathematical Sciences)
Antony Bastiani	London Mathematical Society
Roger Porkess	Mathematics in Education and Industry
Sally Barton	National Association for Numeracy and Mathematics in Colleges
Lynn Churchman	National Association of Mathematics Advisors
Gerald Goodall	Royal Statistical Society
Bill Richardson	The Mathematical Association (also United Kingdom Mathematics Trust)

Observers

Diana Coben	Adults Learning Mathematics
Nick Bowes	Advisory Committee on Mathematics Education
Not represented	Department for Children, Schools and Families
Tony Holloway	Department for Children, Education, Lifelong Learning and Skills

John Marriott	Higher Education Academy
Celia Hoyles	National Centre for Excellence in the Teaching of Mathematics
Jane Jones	Office for Standards in Education
Sue Merchant	Operational Research Society
Nick Doran	Qualifications and Curriculum Authority
Nick von Behr	Royal Society
Not represented	SEMTA
Paul Scruton	School Mathematics Project
Teresa Smart	The National Strategies
John Connolly	Training and Development Agency for Schools
Bill Richardson	United Kingdom Mathematics Trust (also Mathematical Association)

Co-opted member

James Nicholson	BCME
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Guests

Dame Julia Higgins	ACME
Sue Sanders	ICMI
Peter Thomas	ACME

Item	Action
<p>1. Apologies Janet Ainley (BSRLM), Paul Harper (ORS), John Harris (SEMTA), Barry Lewis (MA), Andrew Osbaldestin (HoDoMs), Sue Pope (QCA), Brian Robinson (NAMA)</p>	
<p>2. Appreciation of departing representatives Margaret Brown (ACME) After many years of involvement, latterly on behalf of ACME, Margaret was stepping down. Her considerable efforts were much appreciated.</p>	
<p>3. Welcome to new guests, representatives, alternates and visitors Representatives: Dr Nick Bowes (ACME Head of Secretariat) Alternates: Lynn Churchman (NAMA), Elizabeth Winstanley (HoDoMs), Sue Merchant (ORS) Guests: Dame Julia Higgins (ACME), Sue Sanders (ICMI), Peter Thomas (ACME) Visitors: Antony Bastiani (LMS)</p>	
<p>4. Minutes of the meeting of Tuesday 3 June 2008 These were accepted</p>	
<p>5. Matters arising from the minutes None.</p>	
<p>6. Reports from Executive Reports from Executive (a) Chair (i) Ros Sutherland gave a brief resume of ICME11 saying that she was pleased with the UK presence. There was some concern expressed at the cost for a display within the NCETM stand and of transporting material. (ii) It was noted that David Martin had been appointed as part-time JMC Secretariat. Over recent months, there had been a lot of activity with joint responses. JMC was working hard for the benefit of the mathematics community. Items which were on-going included: Functional Mathematics; Master's Level Qualifications; Primary Mathematics - to include the consequences of the Williams and the Rose reviews. In addition, it was noted that Ros had been JMC chair for 2 years and that ideas for her successor were needed. If the established pattern were followed, it would be someone from the Mathematics side of the community rather than the Mathematics Education side. (iii) STEM: JMC is represented on the high-level strategy committee. A response was needed on A level target numbers. One target (53 000) had been reached. There was now a revised target of 70 000. Sally Barton observed that this should be phased and be at level 3 (i.e. not just A level).</p>	

Perhaps the target would be set as A level or equivalent. It was noted that the TDA would need to provide teachers if more pupils were to become involved. Celia Hoyles felt that it would be better to talk in terms of proportions. Nick Bowes said there was uncertainty as to what measures were being used.

(b) Secretary

(i) David Martin expressed thanks for the help with the joint submission with ACME and NCETM to QCA GCSE Mathematics Subject Criteria Consultation (<http://www.answers.me.uk/gcse>)

Nick Bowes indicated that there was an update on GCSE mathematics subject criteria. There was agreement that the pair of GCSE courses would broadly be Pure and Applied. There would be little extra content. It was expected that normally they would be taken as a pair. The target of 2012 was a cause for concern and this view had been passed on to the Minister as well as asking for a statement that the pair was seen to be the norm. There was a perceived view that if a single course was seen to be the norm then taking a pair would be elitist.

Peter Johnston-Wilder expressed concern that there is to be a new mathematics curriculum but not a new GCSE and therefore a risk that the two would not be properly matched.

Lynn Churchman had concerns over the suitability of a single GCSE.

Roger Porkess said that a single GCSE could not capture the spirit of the new mathematics curriculum.

Tony Holloway was concerned over the lack of dissemination beyond England.

Nick Doran commented that QCA had made a submission and a response was awaited.

Celia Hoyles remarked about implications for performance tables and also expressed concern about short deadlines for responses.

Paul Scruton felt that responses to developments were favourable but was worried as to whether awarding bodies were prepared. He also highlighted concerns over references in the HMI report on teaching to the test.

Peter Johnston-Wilder said he felt that both teaching and learning would suffer hugely.

(ii) Reports from meetings: David expressed thanks to Lynne McClure for the report on Every Child Counts.

(iii) CfSA: the activities need to be evaluated.

(c) Treasurer: There is no need for a change to subscriptions which are now due.

(d) Chair of Nominations Committee: Nothing to report.

Colin Campbell emphasised that there must be contact to parts of the UK outside England.

Review CfSA
JMC link (David
Martin)

<p>7. Ofsted – Mathematics: understanding the score – discussion</p> <p>Jane Jones gave a swift resume of the recent report. It was positively received and felt to be potentially very influential.</p>	
<p>8. Report from ACME</p> <p>It was reported that the Outer Circle was in the process of being increased from about 20 to about 35 by adding practitioners. Names would be available soon.</p> <p>The JMC Chair would be invited to attend termly meetings.</p>	
<p>9. Report from NCETM</p> <p>Celia Hoyles reported that the NCETM had now obtained funding up to 2011 and that its work plan was being finalised.</p>	
<p>10. Standing Committees</p> <p>BCME:</p> <p>Plans were in hand.</p>	
<p>11. Higher Education</p> <p>Elizabeth Winstanley reported that the discussions between the LMS and IMA about a merger were still taking place.</p> <p>Gerald Goodall said he had concerns over the proposed Science Diploma and asked that ACME exert some pressure. Nick Bowes shared these concerns and will monitor the situation.</p>	
<p>12. MoreMathsGrads</p> <p>Nigel Steele commented that there would be appointments to cover North and South Wales. Also, there are meetings of HEFCE to select the lead HEI for national roll out. There will then be further bids in November.</p>	
<p>13. Teacher Education</p> <p>Peter Johnston-Wilder observed that in the current development of the Master's Level programme there was concern over the load this would place on NQTs. There needs to be allowance for teachers who are differently qualified. There are also questions over the training required for those who will teach diplomas.</p>	
<p>14. International Affairs</p> <p>Sue Sanders commented briefly that the reports from those who had received grants for ICME11 were now available.</p> <p>(http://www.answers.me.uk/icme11)</p>	
<p>15. Update on current developments.</p> <p>a. TDA John Connolly had submitted a report and made a few additional comments.</p> <p>b. QCA The end of KS3 testing was noted. Concerns were expressed over</p>	

<p>external tests being replaced by internal ones.</p> <p>c. DCELLS Tony Holloway added a few comments to his report.</p> <p>d. OFSTED Ofsted is working with the science learning centres to put on three STEM conferences in the spring term, building on the recent publication of the triennial reports for science, design & technology and mathematics.</p> <p>e. The National Strategies Teresa Smart noted that her team were pleased with the Ofsted report and that it lends support to the work of the National Strategies.</p>	
<p>16. Reports from meetings Every Child Counts - Lynne McClure</p>	
<p>17. Dates of future meetings at the Royal Society Tuesday 24 February 2009; Thursday 11 June 2009; Tuesday 10 November 2009</p>	
<p>18. AOB: None</p>	
<p>Discussion Item Level 3 Mathematics following work by ACME This was introduced by Peter Thomas (ACME) and Dame Julia Higgins, recently appointed Chair of ACME.</p> <p>ACME – represented by Dame Julia Higgins FRS (Chair), Dr Nick Bowes (Head of Secretariat) and Peter Thomas (Member of the Committee) – introduced their draft position statement on Level 3 Mathematics in 2011. The position statement is intended to support the mathematics community to form a view ahead of the QCA consultation in spring 2009 on proposed changes to Level 3 Mathematics to be introduced for first teaching in 2011.</p> <p>The major points outlined by ACME included:</p> <ul style="list-style-type: none"> • Creation of a Level 3 mathematics qualification smaller in volume than AS Level • AS and A levels to be available in Mathematics, Further Mathematics and Use of Mathematics, but discontinued in Pure Mathematics • Move from 6 unit to a 4 unit structure in A-Level mathematics (plus the removal of choice), but retention of 6 unit structure in Further Mathematics • Inclusion of a qualification additional to GCE which provides stretch, challenge and inspiration. 	

JMC then discussed the draft position statement.

Elizabeth Winstanley (LMS) highlighted the issue of choice – recognising this currently can lie with centres and not students, but this can reflect what their teachers have the capacity to teach. The fear is that the removal of choice might mean they drop the subject altogether. The absolute priority should be improving the teaching and learning of mathematics not just what HE wants.

Gerald Goodall (RSS) highlighted ‘branching points’ within the work. The first of these is on whether there should be any change at all in 2011 – he favours no change in 2011 and thinks the focus should be on 2016. Gerald’s major concern is about what could actually be taught in such small parts of units under a 4 unit structure.

Sally Barton (NANAMIC) agreed that there is an issue with choice – centres make choice for students but this generally is in the students’ best interests. She would like to retain choice although eventually all teachers ought to be able to teach statistics and mechanics but at present there are issues with A-level teachers being able to teach this range.

Sue Merchant (ORS) expressed unhappiness at the loss of decision mathematics particularly as ORS had recently prepared materials to support the course

Ros Sutherland (Chair) commented at this point that she felt around the table that there ought to be choice

Jane Jones (Ofsted) commented that Ofsted had found that where there was more choice, uptake was greater of mathematics but a recent visit had shown high uptake in a centre with no choice but classes spread across the option blocks so all had access, so there are other ways to get high uptake. Jane also counselled caution and said that it may not be the 6-unit structure which had given rise to the numbers doing A-Level mathematics but the change to the content. Also, students doing mechanics and statistics did struggle with one or the other (usually mechanics) and therefore sounded some caution about putting them in to a single structure

Peter Johnston-Wilder (AMET) questioned whether the system was working well; there is a need to improve understanding: have less choice and focus on teaching effectively what they need to learn.

Bill Richardson (Minuting Secretary, UKMT, MA) described that in Scotland, Higher Mathematics (taken in S5) is all pure. The choice that existed in Advanced Highers (taken in S6) from 2000 was removed in 2005 and they are now all pure. The quality of work has improved; the universities know what they are getting and it seems to have worked.

Sally Barton (NANAMIC) agreed that longer exams will allow ability to design assessments to make students think like mathematicians and therefore, proposed that perhaps at some point in the future, we will have a 4 unit structure

Peter Thomas (ACME) outlined the reasons behind the move from 6 to 4 units. There would need to be a good reason to keep 6 – most other subjects now have 4 and mathematics would be an exception. It will allow longer examinations with longer examination questions but recognised we need to be clearer about the principles why 4 are better.

Roger Porkess (MEI) expressed concern that a structure with 4 units for A-Level Mathematics and 6 for Further Mathematics would decimate further mathematics and will affect upgrading between the two. His concern is that what QCA are proposing are not small recommendations – and a research agenda is therefore critical in order to investigate the impact.

Jane Jones (Ofsted) highlighted that the 2011 changes don't allow changes from new GCSE to have filtered through (i.e. it ought to be 2012).

Ros Sutherland (Chair) indicated the broad support for Use of Mathematics, which will be an important vehicle for promoting mathematics to those who might not normally do mathematics.

In summary, ACME members thanked JMC for a very constructive discussion and felt that the arguments underpinning the position statement will be enriched as a result. Further work is scheduled to revise the draft position statement which ought to be finalised in early 2009.