

# JMC

## Joint Mathematical Council of the United Kingdom

### Minutes of the JMC Council meeting held at the Royal Statistical Society on Tuesday 12 June 2012

#### Present

##### *Officers*

Duncan Lawson	Chair
Gerald Goodall	Honorary Secretary
Paul Harris	Honorary Treasurer

##### *Executive Secretary*

David Martin	Executive Secretary
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##### *Members*

Jenni Back	Association of Mathematics Education Teachers
Sue Pope	Association of Teachers of Mathematics
June Barrow-Green	British Society for the History of Mathematics
John Monaghan	British Society for Research into Learning Mathematics
David Arrowsmith	Conference of Heads of Departments of Mathematical Sciences
Colin Campbell	Edinburgh Mathematical Society
Nigel Steele	Institute of Mathematics and its Applications
Tony Gardiner	London Mathematical Society
Alison Clark-Wilson	Mathematical Association
Charlie Stripp	Mathematics in Education and Industry
Sally Barton	National Association for Numeracy and Mathematics in Colleges
Lynn Churchman	National Association of Mathematics Advisors
Lynne McClure	NRICH representing the Millennium Mathematics Project
Lydia Showan	National STEM Centre
---	Operational Research Society
Roeland Beerten	Royal Statistical Society
Stephen Williamson	Wales Institute of Mathematical and Computational Sciences

*Co-opted members*

--- JMC International Representative  
(vacancy) International Commission on Mathematical Instruction

*Observers*

Rosalind Mist Advisory Committee on Mathematics Education  
Graham Griffiths Adults Learning Mathematics  
--- Department for Education  
--- Department for Education and Skills [Wales]  
Nick Todd Department of Education [Northern Ireland]  
Fiona Robertson Education Scotland  
Mary McAlinden Higher Education Academy  
Celia Hoyles National Centre for Excellence in the Teaching of Mathematics  
Emma Ramsey Office of Qualifications and Examinations Regulation  
Jane Jones Office for Standards in Education  
Yasmin Hossain Royal Society  
--- School Mathematics Project  
--- Sector Skills Council for science, engineering and manufacturing  
technologies in the UK  
Bill Richardson United Kingdom Mathematics Trust

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- 1 Apologies** Jeff Evans (ALM), Dylan Jones (DfES (Wales)), John Harris (SEMTA), Janet Holloway (Ofqual), Louise Orpin (ORSoc), Paul Scruton (SMP), Ros Sutherland (JMC International Representative).
  
- 2 Welcome to new representatives, alternates, guests and visitors**

New representative: Sue Pope (ATM).

Alternates: Graham Griffiths (ALM), Emma Ramsey (Ofqual).

Guests: Angela Mabee and James O'Donoghue, Teaching Agency (TA), as Guests for this meeting.

In addition, Stefano Pozzi and Nicola Edwards (DfE) were welcomed for the special morning discussion on National Curriculum developments, and Mike Ellicock (Chief Executive) for the afternoon discussion item on the National Numeracy trust.

- 3 Appreciation of departing representatives** Appreciation was expressed for the work of Peter Lacey as the former ATM representative. It was also noted that Angela Mabee, who had been the representative of the former TDA and was today present as a guest for the TA, would shortly be taking maternity leave.
- 4 Minutes of the meeting of Tuesday 28 February 2012** *Paper JMC-2012-Feb-Minutes*  
Accepted.
- 5 Consideration of any matters arising from the Minutes that do not appear on the main agenda**
1. Mathematics Museum Project support letter (arising from the discussion item on this project).  
*Paper JMC-2012-June-Mathematics\_Museum\_letter\_of\_support*  
It was unanimously agreed that the draft letter as set out in the paper be sent. It was also agreed that in similar situations in future Council should delegate to JMC Executive the task of formulating, finalising and sending such correspondence, taking due note of the mood of any discussion on the matter at Council.
  2. (There were no other matters arising under this agenda item.)
- 6 Reports from JMC Executive**
- i. Chair**
- Duncan Lawson reported that a letter had been received from Martin Hyland, LMS General Secretary, stating that LMS Council had decided at its meeting on 30 March 2012 that it would not ratify the new JMC Constitution. The letter noted that the new Constitution had been formally ratified as required, but felt it was incumbent on the LMS to notify its decision.
- Duncan Lawson encouraged all the Participating Societies at the time of the constitutional change to make their positions clear if they had not already done so.
- [**Secretarial Note.** Further to Minute 6(ii) of the last meeting, under which it had been reported that the revised Constitution had received the necessary ratification as required under the previous Constitution and was therefore fully in effect, the Participating Societies which had at that time notified ratification were AMET, ATM, EMS, IMA, MEI, NANAMIC and RSS.]
- ii. Honorary Secretary**
- Gerald Goodall reported that ballot material for the election of the new Chair of JMC to take office from November 2012 had been sent by email to the representatives of all Participating Societies on 1 May. There were two candidates and the material had included information about them and instructions for ensuring the secrecy and integrity of the ballot. Any representatives who thought they might not have received this material were

asked to get in contact urgently.

### **iii. Honorary Treasurer**

Paul Harris reported as follows.

- (i) Subscriptions received for the current year totalled £6541. In addition, the subscription from WIMCS was known to be in process in the banking system.
- (ii) The ACME grant (£8000) towards support of the Executive Secretary had been received.
- (iii) Expenses for the current year to date totalled £13262.26 (consisting primarily of support for the Executive Secretary and room hire and catering expenses of JMC meetings).
- (iv) The current surplus was therefore £1278.74, but this would largely be used for room hire, catering and travelling expenses for the present meeting.

He further reported that income to date for ICME bursaries had been £5400 and expenditure £4600 but, at present, one contribution of £2400 had not yet been received and four further bursary cheques (coincidentally also £2400 in total) had not yet been paid in by the recipients.

He pointed out that there was at present no formal JMC mileage rate for use of private cars. JMC Executive had resolved to recommend to JMC as follows.

- (i) That a mileage rate of £0.40 be introduced.
- (ii) That it be clear that persons claiming travelling expenses would be expected to use the cheapest reasonable means of travel.
- (iii) That any round trip of more than 100 miles for which mileage would be claimed must be agreed in advance with Honorary Treasurer.

An **amendment** was moved (proposer Tony Gardiner, seconder Sue Pope) that the mileage rate be £0.30. This amendment was **defeated** by 9 votes to 5. The recommendation as set out above was then **approved**.

### **iv. Executive Secretary**

#### **Mathematics Teacher Training Scholarships**

Attention was drawn to Minute 17 of the previous meeting of JMC. The meeting of interested parties there mentioned had been held on 29 March 2012 and a second one on 25 April, chaired by JMC Executive Secretary. A number of JMC organisations had been represented during the early part of that second meeting, but many of these representatives had departed before the end. Representatives of DfE and TA had joined that meeting after discussions

between the JMC organisations. The DfE and TA representatives had heard the views of the JMC organisations' representatives before the latter departed.

While it was unequivocal that the community was committed to recruitment and retention of good mathematics teachers, it had been felt during the early part of the meeting that a large scheme similar to that being introduced by the IoP could not be supported. There were several reasons for this, both of principle and in practice in that organisations within the mathematics community did not have the resources to operate such a scheme. LMS and IMA had been left to work with DfE and TA to see if some form of small pilot scheme could be devised. In discussions during the later part of the meeting, it had appeared that IMA was willing to consider developing a scheme broadly of IoP type but smaller in scale, but LMS had felt that the ideas being explored in outline at that stage were contrary to the sentiments expressed during the early part of the meeting.

Nigel Steele then reported that IMA had been invited to a meeting at DfE on 8 June 2012 and had agreed to investigate a possible scheme based on, but not necessarily identical to, the IoP model. The aim was to gain highly-qualified applicants from different sorts of backgrounds than those currently applying, and it had appeared to him that this was essentially a political imperative. DfE would be inviting LMS and RSS to participate as it was a further aspect of policy to involve learned/professional bodies. It had seemed to him that, pragmatically, it was best to try to set something up as mathematics was the only subject where DfE was encountering difficulties and it had been made plain that the money that would fund the scheme would not be made available for any other purpose.

Tony Gardiner objected, believing that the previous meetings had come to a clear consensus not to develop an IoP-type scheme. A number of other representatives agreed that developments appeared to be moving in a direction that had not been supported by the community.

Duncan Lawson pointed out that JMC had merely facilitated the meetings – it could not itself operate any scheme. Further, JMC could not insist that a member organisation either did or did not take any particular course of action, though it could certainly make its views clear and IMA would be in no doubt regarding the level of unease felt by some participating societies.

Despite this, there was some feeling that, as JMC had started these discussions and the meetings had been chaired by JMC Executive Secretary, JMC was itself implicated in this outcome. It was agreed that JMC Executive would reflect on what had occurred and report back to a future meeting of JMC, with neither Executive Secretary nor Nigel Steele taking part in these reflections.

#### **v. Chair of Nominations Committee**

Sally Barton reported that a request had been received from NCETM for a JMC representative to serve on the NCETM Advisory Group. Duncan Lawson would be attending the first meeting. The situation would be reviewed when the identity of the new Chair of JMC was known.

- 7 **JMC International Representative** In the absence of Ros Sutherland, there was no report.
- Secretarial note re ICME bursaries.** At a previous meeting that had been convened by Ros Sutherland, twelve applications for ICME bursaries had been considered. Ten applicants had been awarded the full £600 and two had been awarded £500.
- 8 **UK Representative to ICMI** As there was still no formal representative, and in the absence of Ros Sutherland, there was no report. There was however some discussion. Colin Campbell and Tony Gardiner indicated that some names had been identified by LMS, as the UK Adhering Body to IMU. Gerald Goodall commented that the agreed process of prior consultation with JMC had not been followed; JMC had readily waived this for a short-term representative to deal with the 2012 ICME but had expected the normal process to be followed for a longer-term representative.
- Post-meeting note.** Fiona Nixon, Executive Secretary LMS, emailed JMC Executive Secretary on 25 June 2012 apologising that a previous email had evidently gone astray. The choice of LMS International Affairs Committee for the ICMI vacancy had been Chris Budd, with an alternate in case he was not able to accept. Subsequently, he had indicated that he would be willing to accept. JMC Executive **agreed** by email discussion that (i) in the unique situation that had arisen the procedure that had been used would be accepted, (ii) that Chris Budd was acceptable. Fiona Nixon also suggested a change to the procedure for the future. This will be brought to the next meeting of JMC after further consideration by JMC Executive.
- 9 **BCME 8 (to be held in 2014)** *Paper JMC-2012-June-BCME*
- The report was accepted. Bill Richardson added that progress had been made towards identifying plenary speakers. Malcolm Swan (Nottingham) and Jill Adler (South Africa) had been invited and had accepted. One other was being approached.
- 10 **Discussion on aspects of Ofqual report on Comparison of A Levels with International Qualifications** <http://www.ofqual.gov.uk/news-and-announcements/83-news-and-announcements-news/899-comparison-of-international-qualifications>
- In the discussion, Tony Gardiner said that he was unclear as to the rationale and asked when the full report would be available. Emma Ramsey stated that this would be within a few weeks. Rosalind Mist stated that she would provide an ACME Note to be circulated to JMC.
- 11 **Reports received from JMC Organisations** **i. Teacher Education**
- Paper JMC-2012-June-AMET*

Jenni Back introduced the paper, pointing out that many concerns were reiterated in it. Angela Mabee indicated that she would try to take these up.

Graham Griffiths drew attention to the Lingfield Report which included recommendations to the effect that post-compulsory/vocational teachers should no longer need to have teaching qualifications. [**Secretarial note.** He subsequently provided a link and a short commentary which were circulated to JMC the day after the meeting.] Duncan Lawson asked whether there had been any formal consultation; it appeared that there had not, although responses could be sent informally. The impetus for change from the present situation, under which such teachers had been given 5 years from 2007 to gain qualifications, appeared to be coming from BIS, not DfE. Several members commented that this was scarcely a market-driven situation. It should not be expected that competitive processes between providers would of themselves assure good quality teaching; some regulation was necessary. Members suggested that the matter might be raised by ACME as part of its post-16 work and also raised at the next meeting of the STEM Ministerial Group.

## **ii. Mathematics in Education and Industry**

### *Paper JMC-2012-June-MEI*

Charlie Stripp introduced the report. He drew particular attention to the stance of some Medical Schools with regard to Further Mathematics, especially a requirement by some that applicants must take all their A-levels at the same sitting (normally at the end of the second year of sixth-form studies). This militated against applicants who followed the fairly common route of taking A-level Mathematics after one year and then A-level Further Mathematics the next year.

He also drew attention to the recent evaluation of and impact report on Realistic Mathematics Education (RME). Members expressed considerable interest in RME, feeling that it might have specific benefits especially for learners at foundation levels, and that it might be useful for those proceeding towards degrees involving mathematics if not mathematics degrees as such.

## **iii. National STEM Centre**

### *Paper JMC-2012-June-National\_STEM\_Centre*

Lydia Showan introduced the paper, which was welcomed as informative and helpful in setting out the work of the Centre. She indicated that any assistance in that work, including provision of materials that could be made available, would be welcome.

## **iv. NRICH representing the Millennium Mathematics Project**

### *Paper JMC-2012-June-NRICH*

Lynne McClure introduced the report, indicating that she was very happy to engage in dialogue with anyone interested in the work of the Project.

**12 Report from ACME** *Paper JMC-2012-June-ACME*

This item was taken as part of the general discussion under item 16.

**13 Report from NCETM** *Paper JMC-2012-June-NCETM*

Celia Hoyles introduced the report, explaining that the new contract for the Mathematics CPD Support Programme had been awarded in March 2012 for three years to a consortium managed by Tribal Education in partnership with Myscience, MEI and the IoE [web links are given in the paper]. Many aspects of the work of the old NCETM would continue, especially the NCETM brand and web portal.

NCETM greatly appreciated the support it had received, and continued to receive, from organisations in the mathematics community.

The event for head teachers of teaching schools mentioned in the report had now been fixed for 17 October 2012.

**14 Update on current developments** **i. Northern Ireland**

*Paper JMC-2012-June-NI*

The paper was received, with considerable interest in the apparent developing differences between the situations in Northern Ireland and in England.

**ii. Ofsted**

This item was expanded to include discussion on the Ofsted report "Mathematics: made to measure", published on 22 May 2012. See <http://www.ofsted.gov.uk/resources/mathematics-made-measure>. Jane Jones circulated further material to support this discussion.

She indicated that the report, although officially triennial, represented closer to four years of Ofsted's work. Not much had changed; Ofsted continued to be concerned with the variable quality of teaching, and it was important to try to understand what were the issues standing in the way of sustained improvement. There was a great deal of diversity in practice, but a common feature emerging from within-school comparisons was that less attention was often being given to both the high- and the low-attainers, with a focus on the middle of the spectrum.

John Monaghan asked whether it was known what use schools made of any Ofsted suggestions. Tony Gardiner reiterated concerns over early entry to GCSE; it was commented that early entry for corresponding examinations was



not in line with Scottish Government policy, other than in individual cases. Members also queried whether the MAST scheme was having any effect; Jane Jones replied cautiously that there may be some "green shoots".

### iii. TA

#### *Paper JMC-2012-June-TA*

Members noted that the Teaching Agency (TA) had become a new executive agency of the DfE on 1 April 2012. James O'Donoghue introduced the paper with brief elaboration.

## 15 Reports from meetings

There was nothing to report.

## 16 Morning discussion item

**Note.** In addition to covering several items associated with the ACME report (see Minute 12), this item was expanded to include discussion with Stefano Pozzi and Nicola Edwards (DfE) in regard of a major announcement by the Secretary of State the previous day concerning the primary level in the National Curriculum Review. JMC Honorary Secretary had been able to arrange for them to attend JMC at very short notice because of the obvious importance of this announcement.

(For information on the Secretary of State's announcement, see <http://www.education.gov.uk/schools/teachingandlearning/curriculum/national-curriculum/b0075667/national-curriculum-review-update>).

### i. ACME

#### *Paper JMC-2012-June-ACME*

Lynne McClure and Rosalind Mist introduced the ACME report, which led to extensive discussion.

Interviews for new members of ACME had been held the previous week and offers of appointment had been made, subject to formal ratification by the Royal Society. [**Post-meeting note.** The appointments have been announced. See <http://www.acme-uk.org/news/news-items-repository/2012/7/new-acme-members>.]

A call for new members of the ACME Outer Circle would be made shortly.

It was intended to hold some meetings and web seminars (via NCETM) on the National Curriculum Review.

In respect of A-level reform, ACME had met with IMA, LMS, RSS and HoDoMS and with the (to date) English and Welsh Awarding Bodies. ACME

would welcome wider input from JMC organisations. The Ofqual consultation was expected to open soon.

Members were very concerned about the tight timelines for responding to the Ofqual consultation; responses needed considerable reflection and should not be rushed. Emma Ramsey indicated that there would be stakeholder events over the summer. Nevertheless, it was not at all obvious how JMC organisations could find the resources to deal with the consultation properly. David Arrowsmith felt that UUK (Universities UK) must commit to taking a lead role in the process. More generally, there was much unease about how "higher education" (whatever that meant in this context) might be able to go about developing A-levels.

In respect of the linked pair GCSE, it was confirmed that this would continue for the time being but, in common with all GCSEs, would become a linear examination. There was disquiet about this, especially as there were issues around whether the pair should be seen as "in series" or "in parallel", but it seemed inevitable. Charlie Stripp commented that it was better to have a linear linked pair than no linked pair at all. There were as yet no assumptions about how this might fit into the more general reform of the National Curriculum and GCSE.

## **ii. National Curriculum review announcement**

Stefano Pozzi suggested that the announcement the previous day might usefully be seen as prefacing a pre-consultation exercise before the formal consultation. It was genuinely the case that DfE wished to speak to anyone who might want to contribute to the discussion. In the short term, ACME would take a lead in gathering views, but this was not to prevent organisations from submitting views directly. This process would carry on during the summer, following which there would be advice to ministers in view of comments received and a formal consultation would take place later in the year. Consultation on the secondary stage would follow in due course.

A brief summary of government's response to the recommendations of the Expert Panel in respect of the primary stage was as follows.

- There will be clear aims, emphasising the difference between the formal National Curriculum and a school's overall curriculum
- Breadth will be emphasised – no present subject would be removed from the primary curriculum, and a foreign language was now included in KS2
- Schools must publish their curriculum at subject level, including subjects that are non-compulsory (it was confirmed in discussion that this also applies to academies)
- "Levels" will be removed and not replaced
- There will be consultation on a new grading system
- The National Curriculum for ICT has been disappplied

- The National Curriculum for subjects other than English, mathematics and science will be much slimmer
- The published draft National Curriculum for mathematics was indeed a **draft** for discussion
  - It had three main aims, fluency, solving problems and reasoning mathematically (in discussion, there were many comments that the second and third of these were not to be found to any great extent in the draft)
  - There were two key blocks, one being number and the other geometry and measure (including data and probability)
  - The specified years were advisory but intended to help sequencing
  - There were no detailed attainment targets, instead merely a global sentence so as to cover the minimum legal requirement
  - Test specifications and grading systems would be developed and consulted on
  - It was accepted that it is demanding, this was intentional – ministers seek a debate on this
  - It was intended to be as broad as it is deep

Stefano Pozzi emphasised again that comments were welcome. These should be specific to the mathematics curriculum or parts of it as well as generic.

Among many other matters, the discussion emphasised that there would be major implications for CPD and for initial teacher training.

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|-----------|---------------------------------|--|
| <b>17</b> | <b>Any other business</b>       | None.  |
| <b>18</b> | <b>Dates of future meetings</b> | <p>All future meetings will be at the Royal Statistical Society, unless and until there is an announcement to the contrary.</p> <p>Tuesday 6 November 2012 (immediately following the JMC AGM)</p> <p>Tuesday 26 February 2013</p> <p>Tuesday 11 June 2013</p> |

## DISCUSSION ITEMS

### **Presentation and discussion led by Fiona Robertson on work in Scotland, particularly the Teaching Scotland's Future Project**

Papers:            *JMC-2012-June-Teaching\_Scotland's\_Future*  
                      *JMC-2012-June-Teaching\_Scotland's\_Future,\_Scottish\_government\_response*

Members welcomed the opportunity to be informed about and to discuss work in Scotland.

Fiona Robertson explained that there was great emphasis on professional development for teachers, and that subject-specific CPD was at the heart of this. Every teacher had an entitlement to 35 hours of CPD. A strength of the new Curriculum for Excellence was that numeracy was increasingly found in other subjects, which brought about further CPD responsibilities. Further, the changed inspection régime in Scotland included action plans for professional development where appropriate. Raising standards was not seen as just a curriculum matter, it was for the profession as a whole and professional development support too.

### **Presentation and discussion led by Lynn Churchman on the National Numeracy trust**

Lynn Churchman was joined by Mike Ellicock, Chief Executive. He explained that National Numeracy (<http://www.nationalnumeracy.org.uk/>) had been launched on 2 March 2012. Whereas adult literacy had improved in recent years, adult numeracy had shown decline, certainly since around 2003. This seemed to imply that the finance and effort of a national skills strategy may have gone into literacy to the detriment of numeracy. National Numeracy aimed to make a real difference, with a vision that numeracy should be "for everyone for life" rather than a fear that "I can't do maths". This would have implications for the overall mathematics curriculum.

In reply to Duncan Lawson, Mike Ellicock explained that National Numeracy was a small organisation leaning heavily on its trustees. There was some funding and it was looking for more, but remaining independent of government. It hoped to be able to engage fruitfully with the community. It expected that some considerable time would be needed to make a difference, but hoped that it would have the ability and tenacity to achieve this.

It was noted that there were important interactions with the issue of training of teachers of adults that had been raised earlier (see Minute 11(i)).