

The Joint Mathematical Council of the United Kingdom

A Charitable Incorporated Organisation

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Registered Office: De Morgan House, 57-58 Russell Square, London, WC1B 4HS

Minutes of the General Meeting held at 11 a.m. on Tuesday 4 June 2019 at the London Mathematical Society

Present

Officers

Chair	Andy Noyes
Deputy Chair	Alice Rogers
Acting Secretary	Chris Chipperton
Treasurer	Jennie Golding

Representatives of Participating Bodies

Adults Learning Mathematics	Diane Dalby (deputy)
Association of Mathematics Education Teachers	Sally Bamber (deputy)
Association of Teachers of Mathematics	Heather Davis
British Society for Research into Learning Mathematics	–
British Society for the History of Mathematics	June Barrow-Green
Edinburgh Mathematical Society	–
Heads of Departments of Mathematical Sciences	–
Institute of Mathematics and its Applications	(Chris Chipperton)
London Mathematical Society	Kevin Houston
The Mathematical Association	Tom Roper
Mathematics in Education and Industry	–
National Association for Numeracy and Mathematics in Colleges	Sally Barton
National Association of Mathematics Advisors	Matt Lewis
National Numeracy	–
NRICH representing the Millennium Mathematics Project	–
Operational Research Society	Evelyn Hardy
Royal Academy of Engineering	–
Royal Statistical Society	Carole Haynes
Scottish Mathematical Council	Bill Richardson (deputy)
STEM Learning	Steve Lyon
United Kingdom Mathematics Trust	–
Wales Institute of Mathematical and Computational Sciences	Sofya Lyakhova

Co-opted Members

Immediate Past Chair	Paul Glaister
UK Representative to the International Commission on Mathematical Instruction	–

Representatives of Observing Bodies

Department for Education [England]	Alex Smith
Department of Education [Northern Ireland]	Julie Harris
Education Scotland	Nanette Brotherwood (deputy)
National Centre for Excellence in the Teaching of Mathematics	–
Office for Standards in Education	Emma Gregory
The Office of Qualifications and Examinations Regulation	Alison Tonkin; Sarah Old
The Royal Society	Helen Harth
The Royal Society Advisory Committee on Mathematics Education	Anthony Tomei
Scottish Qualifications Authority	Sue Pope
Welsh Government Education Department	–

1 Introduction

- 1.1 **Welcome** The Chair welcomed everyone present and especially those who were new or attending as deputies. It was explained that Chris Chipperton would be Acting Secretary until the end of the AGM in November in accordance with provisions in the JMC constitution. Thanks were expressed for the tremendous work Peter Thomas had done on behalf of the JMC during his time as Secretary. The Chair will contact Peter and write formally. **Action: Chair**
- 1.2 **Practical Arrangements** The Acting Secretary went through practical arrangements for the day including the procedure for emergency evacuation.
- 1.3 **Apologies for absence** Apologies for absence were received from: Jeff Evans (ALM), Helen Farmery (AMET), Sue Gifford (BSRLM), David Pritchard (EMS), Ems Lord (NRICH), Chris Pritchard (SMC), Stuart Cathro (Education Scotland), Jane Imrie (NCETM), and John Mason (Welsh Government Education Directorate).

2 Minutes of the meeting held on Tuesday 13 November 2018

- 2.1 **Approval** The minutes of the meeting held on Tuesday 19 February 2019 were approved (proposed - Paul Glaister; seconded - the Treasurer). This followed a minor amendment in the Summary Minutes of the Trustees (7.2 – 2018 to 2019).
- 2.2 **Matters arising not elsewhere on the agenda** The Chair raised the question of the purpose of the discussion sessions held by JMC and whether they should have outcomes or actions. The general consensus was that there were a number of purposes e.g. providing information, exploratory discussion or producing a position paper or proposal.

In relation to the February discussion on the supply of mathematics teachers, it was agreed that Kevin Houston, along with Heather Davis and other relevant PB representatives, would draft a two page summary for circulation and comment. This could then be used to continue conversations with relevant stakeholders, for example the DfE. **Action: Kevin Houston; Heather Davis**

3 Reports from Trustees

- 3.1 **Chair** The Chair reported on managing the transition following the unanticipated resignation of Peter Thomas as Secretary.
- 3.2 **Deputy Chair** None.
- 3.3 **Secretary** None.
- 3.4 **Treasurer** The Treasurer thanked representatives for arranging for the payment of all subscriptions. The Treasurer noted that the financial position was quite healthy at the moment due to a low level of expenditure. Potential exists for JMC to support further activity. Paul Glaister suggested that there might be a need for this following the report on the supply of mathematics teachers. The Treasurer clarified that BCME funds are restricted due to VAT status.

4 Reports from Committees

The Chair encouraged representatives to include key challenges and questions in their reports.

The Chair stated that reports received after the deadline will not be included in JMC papers and 'No report' will be given against the organisation. Late reports will be circulated by the (Acting) Secretary following the meeting.

- 4.1 **BCME Committee** Sally Barton moved the recommendation that BCME10 take the form of three linked days in late June or July as previously discussed. This was passed by 9 votes to 1 with 3 abstentions.

Issues raised included:

- The move to June/July was likely to impact on whether teachers could be released from school, especially in Scotland
- The hope that there was/would be collaboration with organisations which traditionally hold conferences at that time
- MEI holds a very successful conference in the intended timeframe

Advantages were considered to be:

- The ability to attend on separate days
- Continued strong BSRLM involvement
- Greater flexibility around accommodation options

It was stressed that a BCME Chair is still required as well as committee leads for primary, secondary and post 16. It is expected that the chair's workload will be reduced compared to previous BCMEs and an administrative support package will be available. One suggestion was that an honorarium be considered. The Acting Secretary is to write to member organisations with a call for recommendations for the BCME Chair.

Action: Acting Secretary

5 Election of Secretary

Chris Chipperton had been nominated by the IMA and MA with further support from AMET, ATM, NAMA, NANAMIC, and the LMS; no other nominations had been received. Chris Chipperton was duly elected to serve as Secretary for three years from the end of the AGM on 12 November 2019.

6 Reports from Participating Bodies

6.02 **Association of Mathematics Education Teachers.** Sally Bamber stated that ITE recruitment was even lower than expected. However, changes to the bursaries did not seem to have had a detrimental effect in themselves.

The DfE had only issued three year quotas to some providers. It would be useful for planning if all providers were issued with these.

The Chair is to write to Lorna Howarth to request an update on the pattern of recruitment and mitigation activities.

Action: Chair

6.03 **Association of Teachers of Mathematics** The report was noted.

6.08 **Institute of Mathematics and its Applications** The report was noted

6.10 **The Mathematical Association** The report was noted.

6.15 **NRICH representing the Millennium Mathematics Project** The report was noted.

7 Reports from Observing Bodies

7.04 **The Office of Qualifications and Examination Regulation** The report was noted.

In addition, Alison Tonkin stated that analysis of, and reporting on, the new A levels was being planned. Consideration was being given to what research should be carried out. Teacher feedback will be included and different for mathematics to other subjects, and participation will be greatly encouraged.

Given that adequate time existed, the Chair invited verbal reports from organisations that had not submitted reports.

4.04 **MMSA** John Barton (NANAMIC) is the new Honorary Secretary.

7.07 **The Royal Society** Feedback on the Dynamics of Data Skills is encouraged. Helen Harth will circulate a link.

Action: Helen Harth

7.09 **Scottish Qualifications Authority** There have been some positive changes in participation rates. In National 5 Applications of Mathematics, which had a 50%+ pass rate for the first time last year, there is an 80% increase in candidature. There is good participation in Higher Mathematics compared to the other UK jurisdictions, although it is substantially lower than Higher English.

SQA is developing a new Higher in Applications of Mathematics. Asked what had led to the initiative, Sue Pope said there was a political imperative to increase STEM participation.

Materials will be available in June 2020 for first teaching in 2021 and awards from 2022.

Under the Curriculum for Excellence all qualifications included teacher assessed units. These have been removed due to teacher workload. The Advanced Higher in Statistics will change to incorporate a new paper. The changes are warmly welcomed by universities and have been reported in an article published by RSS.

The SQA consider that the evidence on exam statistics presented in the recent Scottish Mathematical Council report indicates that standards are being maintained.

8 Discussion of Reports

There were no matters for discussion from the reports. The Chair has urged representatives to identify key questions, challenges and problems for discussion in their reports.

9 Maths Week England

The Chair reminded the meeting of the background to Maths Week England (MWE). A discussion had taken place in November 2018 with presentations given on Maths Weeks in Ireland and Scotland. A number of individuals with significant experience of outreach activities were also in attendance. No specific decision was taken. JMC returned to the matter in February and expressed the desire to encourage support for MWE and suggested some ways forward.

Since February, a nascent MWE has been initiated by Andrew Jeffrey including a website, <http://mathsweekengland.co.uk/> which, amongst other things, lists aims; there is also a Twitter handle @Maths_Week and a Facebook page <http://www.facebook.com/MathsWeekEngland> The are 11-16 November 2019.

Independently, the Chair and Kevin Houston have both had conversations with Andrew Jeffrey. Issues that arose include:

- Andrew Jeffrey has initiated MWE alone but a large MWE would need support infrastructure
- The availability of financial and human resources has not been considered
- The MWE site centres on schools and needs to be more broadly conceived
- The list of mathematics communicators does not include any females
- Concerns were expressed about the logo that omits the global south

Any suggestions for improvements should be channelled through the chair.

Action: All

Discussion raised the following points:

- The potential size of MWE could generate national media interest including television.
- MWEngland brings a difference in scale compared to other such events, e.g. LondonMW National Numeracy Day
- With an increasing number of such events/weeks/days on the calendar, participating organisations may feel stretched
- The question of whether it would be possible to have one aligned week was raised
- MWEngland is an obvious gap given similar programmes across the jurisdictions of the UK
- Planned evaluation is really important as this would help to demonstrate impact and support a case for funding
- MW Scotland is now well established with government support.
- HE already does lots of events and timings could be altered to align with MWE. National media coverage would add to the message. HE involvement should be about much more than getting pupils to visit.
- The aims need reviewing, and should include those outside of education, e.g. adults
- There is opportunity for the public to be involved and some participating bodies are well placed to lead on this wider engagement.
- There is a big move to develop Pi Day into an international mathematics day. Would this have an impact on timing?
- Maths Hubs might be key players in this development.

JMC endorsement may lead to other organisations being openly supportive ATM, NRICH and MangaHigh are already signed up as partners. The MA is due to discuss possible involvement.

The meeting considered whether there were downsides to JMC endorsement. It was noted that it would be strange if JMC was not supportive of a MWE given its aims, but the JMC itself was not equipped to be centrally involved.

Ultimately, participating member organisations need to consider their involvement as some have already done. This involvement could be in a limited way focusing on just one day in the week or with a 'light touch'. It is an opportunity that can be shaped.

JMC representatives are encouraged to discuss with their organisations what they might do in relation to MWE. Feedback on developments and plans would be helpful and should be emailed to the Chair and Acting Secretary.

Action: All

On behalf of JMC, the Chair or Acting Secretary will write to organisations asking for their support of MWE in some way.

Action: Chair/Acting Secretary

10 Any other business not elsewhere on the agenda

The Chair said that discussion items for the next two meetings were set but, in all probability, needed widening. Currently, they are:

November: The professional development landscape across the UK

February: 14-18 qualifications – awarding organisations will be invited

The Chair asked if there was anything else the JMC should be considering.

11 Discussion: 5-18 Mathematics Education in the Four UK Jurisdictions

The Chair started the session with the idea of framing descriptions against a maximum of four foci. JMC members were asked to consider what key areas should be used to help frame written descriptions for each jurisdiction.

Ten minute presentations for each of the jurisdictions were given – Scotland (Nanette Brotherhood and Sue Pope); Northern Ireland (Julie Harris); Wales (Sofya Lyakhova); England (Tom Roper).

It was agreed by the presenters that their Powerpoint presentations can be circulated to representatives by the Acting Secretary.

Action: Acting Secretary

The presenters were thanked for their extremely interesting and informative presentations. Considerable discussion took place with the Chair reiterating the request for key areas to be identified. The following synthesises possible areas for consideration when drafting country reports (in no particular order):

- The nature of any overarching (educational) philosophy and its influence on policy and practice
- The broader political and educational context within which mathematics education operates, and a sense of its evolution over time
- The extent of curriculum and system coherence or fragmentation of the system
- Relationships between key stakeholders: ministers, civil servants, local authorities, awarding organisations, academics, head teachers, teacher unions, etc
- The prominence, and influence on practices, of testing and assessment including the purpose (e.g. accountability); timing (national testing ages); item design (who does it?); accountability (how are results used?); validity (what do they assess?)
- The use of tools in classrooms, e.g. calculators, dynamic geometry, spreadsheets
- The nature of 14-19 mathematics progression pathways (i.e. who gets what?)
- The preparation and supply of teachers of mathematics
- Models for professional development and the general state of the CPD landscape (e.g. national programmes, local markets, CPD deserts, etc.)
- Equality and diversity issues in the workforce and student participation and outcomes

These framing ideas will be used as a reference point for those writing descriptions of mathematics education in each jurisdiction.

Authors/coordinators are asked to draft the written description for their jurisdiction, with collaborators from JMC or elsewhere as appropriate, and email it to the Chair and Acting Secretary by 9 September 2019.

**Action: Stuart Cathro; (Nanette Brotherhood);
Sue Pope; Julie Harris;
Sofya Lyakhova; Tom Roper**

12 Conclusion

The Chair thanked everyone present for their contributions and closed the meeting.

13 Dates of future meetings

Tuesday 12 November 2019 at The National Council for Voluntary Organisations, Regents Wharf, 8 All Saints Street, London N1 9RL (deadline for papers: Tuesday 29 October 2019)

Tuesday 18 February 2020 at The National Council for Voluntary Organisations, Regents Wharf, 8 All Saints Street, London N1 9RL (deadline for papers: Tuesday 4 February 2020)

Tuesday 2 June 2020 at 11 a.m. at The London Mathematical Society, De Morgan House, 57-58 Russell Square, London WC1B 4HS (deadline for papers: Tuesday 19 May 2020)

These meetings will begin at 11 a.m.