

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 AGM and General Meeting held online at 11.00 a.m. on Thursday 11 November 2021

Present

Officers

Chair	Andy Noyes
Deputy Chair	Noel-Ann Bradshaw
Secretary	Chris Chipperton
Treasurer	Jennie Golding

Representatives of Participating Bodies

Adults Learning Mathematics	Beth Kelly
Association of Mathematics Education Teachers	Fiona Curtis
Association of Teachers of Mathematics	Lou Hoskyns-Staples (deputy)
British Society for Research into Learning Mathematics	Jeremy Hodgen
British Society for the History of Mathematics	June Barrow-Green
Edinburgh Mathematical Society	–
Heads of Departments of Mathematical Sciences	Jan van den Heuvel
Institute of Mathematics and its Applications	Paul Glaister
London Mathematical Society	Kevin Houston
The Mathematical Association	Tom Roper
Mathematics in Education and Industry	–
National Association for Numeracy and Mathematics in Colleges	Graham Griffiths
National Association of Mathematics Advisors	Matt Lewis
National Numeracy	–
NRICH	Ems Lord
Operational Research Society	Evelyn Hardy
Royal Academy of Engineering	–
Royal Statistical Society	–
Scottish Mathematical Council	Carol Lyon
STEM Learning	Steve Lyon
United Kingdom Mathematics Trust	–
Wales Institute of Mathematical and Computational Sciences	Sofya Lyakhova

Co-opted Members

UK Representative to the International Commission on Mathematical Instruction	–
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Representatives of Observing Bodies

Department for Education [England]	Alex Smith
Department of Education [Northern Ireland]	–
Education Scotland	–
National Centre for Excellence in the Teaching of Mathematics	Sue Madgwick
Office for Standards in Education	Hannah Stoten; Steve Wren
The Office of Qualifications and Examinations Regulation	Sarah Old
The Royal Society	Cath Boulton
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 noted that the meeting was originally scheduled to be face-to-face, but had been changed to online following consideration by the trustees.

1.2 **Practical Arrangements** Thanks were given to all those who had sent in reports. Due to the size of the agenda, no oral reports would be taken from Participating Bodies.

Timings for the day were given.

1.3 **Apologies for absence** Apologies for absence were received from: Hayden Rissbrook (ATM), Charlie Stripp (MEI), Sam Sims (National Numeracy), Julie Harris (DoE), Pamela Di Nardo (Education Scotland), and Pete Kennedy (Welsh Government Education Directorate).

Kevin Houston (LMS) and Sue Madgwick (NCETM) had advised that they would be joining after the start of the meeting.

A number of representatives reported that they were unable to stay for the whole meeting.

A particular welcome was given to new attendees Lou Hoskyns-Staples (ATM deputy) and Cath Boulton (RS).

2 Annual business

2.1 **Reception of the Annual Report** The Annual Report was approved unanimously.

2.2 **Reception of the Annual Accounts** Jennie Golding presented the Annual Accounts. These were self-explanatory and had benefitted from there having been no face-to-face meetings. The deposit account had been run down and subscriptions kept at previous levels.

The Annual Accounts were approved unanimously.

2.3 **Approval of the Budget** The Treasurer drew attention to a rogue entry in the Income (ICME bursaries returned and held). The budget was approved unanimously as presented.

2.4 **Approval of the Subscription Rates** Approval was given to subscriptions for 2021-2022 being held at the same level as 2020-2021.

2.5 **Election of Chair** It was noted that at the June meeting Andy Noyes had been elected Chair to serve from the end of the annual business until the end of the AGM in November 2024.

2.6 **Election of Trustee** The Secretary reported that one nomination for Elected Trustee had been received, this being from the MA. As a result, Tom Roper was elected unopposed to serve from the end of the annual business until the end of the AGM in November 2024.

2.7 **Co-option of Co-opted Trustees** The Secretary explained that the Trustees had considered the vacancies for Co-opted Trustees. Given their contribution and involvement over the preceding year, and to aid with continuity, the Trustees proposed that Sofya Lyakhova and Kevin Houston be re-appointed for the roles to serve until the end of the AGM in November 2022. This was approved unanimously.

2.8 **Co-option of ICME Bursaries Committee Representative** The Secretary proposed that Chris Budd (UK Representative to the International Commission on Mathematics Instruction) be co-opted as a Co-opted Member to serve until the end of the AGM in November 2022. This was approved unanimously.

To enable the co-option, Council unanimously passed a resolution to override clause 9.1.14 of the Constitution.

3 Minutes of the meeting held on Tuesday 2 June 2020

3.1 **Approval** Subject to two small amendments in 3.2 and 9, the minutes of the meeting held on Tuesday 8 June 2021 were approved unanimously.

3.2 **Matters arising not elsewhere on the agenda** The Chair had been in contact with representatives of Observing Bodies. As a result, some verbal reports will be given under item 7 but minutes will not be taken.

It was noted that MWE 2021 was taking place over the course of the week.

4 Reports from Trustees

4.1 **Chair** The Chair expanded on his written report stating that there had been some delay in the developments concerning the proposed National Academy for Mathematical Sciences (NAMS) and the expected green paper is not yet available. Separately, both he and the Treasurer had met with David

Abrahams and Celia Hoyles. There is a better feeling about some aspects of the proposal, but concerns still exist around educational aspects. When more information is available, it is intended for there to be a meeting with the Trustees and an extraordinary meeting of Council. The issue of NAMS is likely to have an impact on the afternoon discussion.

The Chair has followed up on the Multiply Initiative with the DfE. The definition of numeracy is wide-ranging.

Conversations have taken place between the DfE and the Russell Group of universities about the mathematics content of the new T levels.

- 4.2 **Deputy Chair** Council were reminded that there is a standing request for blog posts. Both the OR Society and NRICH had provided good posts recently. In addition to providing information, posts can be a vehicle to promote events, initiate discussion, etc. A rolling list for the year would be especially helpful and representatives are encouraged to make contact with the Deputy Chair regarding this. **Action: All** It is hoped to further develop the Council's Twitter profile.
- 4.3 **Secretary** The Secretary's report was noted.
- 4.4 **Treasurer** The Treasurer's report was noted.
- 4.5 **Constitution** It was noted that no changes were necessary.
- 4.6 **Bye laws** It was noted that no changes were necessary.
- 4.7 **Policies** It was noted that no changes were necessary.
- 4.8 **Risk register** It was noted that the Trustees had reviewed and amended the Risk Register.

5 Reports from Committees

- 5.1 **ICME-14 Bursaries Committee** There was no report from the ICME Bursaries Committee.
- 5.2 **MMSA** There was no report from MMSA.

6 Reports from Participating Bodies

The Chair thanked those representative who had submitted reports. From these he noted the consideration being given to the future balance between online and face-to-face conferences. Another common theme concerned disadvantage and diversity which will be looked at as a potential future discussion topic for JMC.

A number of items from individual reports were highlighted:

6.3 ATM: With the MA, a joint primary group has produced a response to the Ofsted research review which is available on the websites of both organisations.

6.5 BSHM: With the LMS, IMA and RSS, a joint two-day workshop is scheduled for 25-26 January with the title *Is Mathematics Inclusive or Exclusive? Colour, Culture and Context in the Curriculum*. The programme should be out soon.

6.9 LMS: There is a good quote from Jon Keating. The *Levelling Up Scheme* funded by Tony Hill aims to widen participation in mathematics at university.

6.11 MEI: There are interesting comments from teachers regarding online and face-to-face events. New contracts for AMSP and NCETM are to be awarded by DfE.

6.12: NANAMIC: Core maths has been added to the programme available for adult level 3 funding.

6.20 STEM Learning: The National STEM Learning Centre is available as a venue for CPD events.

7 Reports from Observing Bodies

The written reports were noted.

Additional oral reports were received from DfE, Ofqual, RS, RS ACME and SQA. By agreement these were not minuted.

8 Discussion of Reports

There were no reports.

9 Projects and Working Group

- 9.1 **Mathematics Education and Gender** The draft long report on ages 5-14 is imminent. The report relating to 14-18 age group is in process and has been able to include the outcomes from summer 2021.

- 9.2 **Digital Technology and Mathematics Education** It had been hoped to establish a working group of around twelve members with about half being from Council. So far, membership was from nominees by JMC organisations together with Alison Clark-Wilson. Further membership from Council representatives is encouraged and anyone wishing to do so should contact the Chair. **Action: All**

Digital technology in mathematics education continues to be an area of interest for RS ACME and it is hoped JMC's work in the area will continue to complement that of RS ACME.

10 **Ofsted Research Review Series: Mathematics**

As had been agreed at the June meeting, an additional meeting of JMC was held with a number of representatives including those from MMSA organisations and BSRLM in attendance. Following this, the Chair had been involved in a number of individual and collective meetings with Sean Harford (National director of Education until August 2021), Hannah Stoten and Steve Wren. These had been constructive and one outcome was the prospect of holding meetings with a JMC sub-group.

Steve Wren echoed that there had been constructive conversations with the Chair. He hopes to give Council an oral report on the upcoming Subject Report at the February meeting.

11 **Communication**

This was covered in the Deputy Chair's report.

12 **Any other business not elsewhere on the agenda**

No other business was raised.

13 **Discussion: Where next for JMC?**

A summary of feedback

JMC is an effective forum for discussion of mathematics education between diverse member organisations – who are themselves member organisations - from across the mathematical sciences landscape. Issues of concern are diverse and include longstanding structural issues (e.g. teacher supply, uneven CPD opportunities), the impact of change (e.g. in assessment), contested curriculum principles (e.g. the place of mathematical literacy), EDI concerns (e.g. gender), new pedagogies (e.g. digital technology), education policy (e.g. post-16 mathematics pathways) and emerging issues (e.g. entrance exams for, and participation in, UG maths).

Although JMC is often concerned with 5-18 and higher education its full remit is lifelong learning. Similarly, although the membership is disproportionately from England, it has effective representation from, and exchange between, the four nations of the UK. There remain questions about whether key organisational influencers are missing from the Council, and what new criteria for membership might be appropriate.

Although JMC communicates reasonably effectively horizontally (i.e. across the network of represented organisations) JMC could facilitate more dynamic knowledge exchange across the JMC member community. This matter arises repeatedly at Council yet the solution is unclear.

JMC should aspire to speak more boldly to policymakers and other influencers, and perhaps more widely to the mathematics community, though informing the public is not currently part of its activity. Stronger positioning of, and representation by the JMC, might necessitate reconsideration of the evolving JMC-ACME relationship, and wider development in mathematical sciences (e.g. NAMS).

JMC could do more but has limited resources. Being better known, more widely represented, being more proactive on a wider range of issues, having greater impact etc. all require more time and finance. If this were available, the democratic, inclusive nature of the JMC would be a strong platform on which to build an influential and genuinely community-wide body for mathematics education in all its forms, phases, and functions.

Group Feedback

Part 1 discussion points

What does JMC do well?

What does it not do very well?

What should it do more/less?

How could it achieve its objectives more effectively?^[1]

What works well in JMC meetings and processes?

How well is the community represented on Council? Who is missing? How do bodies engage?

What can we do better?

Group 1

- A better use of meetings might be to discuss a particular theme relevant to issues of the day. It is hard to know how to prepare for meetings – with a theme and/or a short paper to discuss this would be easier and more beneficial.
- The observing bodies obviously take the meetings seriously – it might be good to find out why and hear from them more often.
- Communication between key groups in JMC is key to getting appropriate influence.
- Perhaps we need to be bolder – when we have something to say we should say it.

Group 2

- Can JMC encourage Welsh Assembly to attend? Can we work with Welsh Assembly to make JMC more accessible to them? What could JMC do to facilitate this?
- Encourage members to submit information beforehand that can then be discussed at meetings rather than 'new' at the meeting.
- What is the criteria for membership of JMC - how is this communicated more widely?
- Disappointment at JMC response to National Academy - where will it get its expertise?
- Where does JMC sit with the National Academy? Could it be outsourced?
- Positives: All here meeting together, making time during a very busy term. Multiple bodies involved - joining together the mathematical community. Cross-border exchange. Interesting hearing about Scotland and vice versa. Opportunity to catch up on whole maths education community.
- Perception of ACME versus JMC. Barriers between core ACME contact groups
- Lack of impact of JMC versus Royal Society. Does government listen to both?
- What about JMC representation at national, strategic level?
- Are the JMC systems/methods of informing members of actions/knowledge robust. Knowledge exchange?
- Fantastic that we are the first port of call for Ofqual.
- Good representation for ages 0-21 in mathematics education.
- Forum: consensus versus exec

Group 3

- Deals with the diversity within the mathematics education community. It provides the chance to meet and be a little more coherent.
- There is engagement/involvement across the 4 jurisdictions of the UK.
- Re objectives: JMC doesn't inform the public or it is very limited in this. Should we even be trying?
- JMC doesn't include many of today's major players, e.g. ResearchEd, trust bodies, Hubs.
- ACME is less effective now that it is solely under the auspices of the RS.

Group 4

- Useful for sharing knowledge eg around the 4 nations and new initiatives
- Liaison with groups has been helpful
- Communicates well among members but not outside of the group
- Should be better known
- ACME may have clouded the situation and NAMS might make things worse
- Member organisations could communicate issues that JMC are involved with to their own groups – different 'members' might want to distribute different things
- JMC could produce a short digest which could be further distributed
- Are there individuals (powerful voices) who might usefully be asked on to JMC?
- Should JMC be represented elsewhere

Part 2 discussion points

Priorities for mathematics education over the next 3 years.

Organisations' priorities over the next 3 years.

What should JMC be doing?

Group 1

- There are not enough maths teachers. Communicating the fact that you don't need a first class maths degree to become a maths teacher (Note from NAB: I would add that you don't need a top grade at A-level maths to do a maths degree).
- Use of technology in maths teaching.
- Assessment – not fit for purpose.

Group 2

- Is there a role for JMC to influence policy in the Welsh Assembly?
- Should JMC be more proactive?
- Should JMC be doing more research such as gender or technology-digital education?
Is there a role for JMC in teacher education?
- Should it have more of a campaigning role?

Group 3

- Review of the need for GCSEs.
- Review of GCSE resits.
- Looking at the maths to 18 agenda – move to maths to 25. Consider the step up to the next qualification/level.
- Advocating for all children/young people.
- The reduction in the number of places to study mathematics at university.
- Universities adapting to the new qualifications.
- Expanding the membership base (into new areas such as psychology); supporting the community; strengthening publications.
Representation of a wide-ranging body with other priorities such as research, REF. Community has an interest in what is happening, but not necessarily an engagement.

Group 4

- Data literacy and digital literacy for mathematical (T&L) purposes have an enhanced importance. They need to be engaged with actively and urgently if our young people, including those who have already 'failed' at mathematics pre-16, are to be mathematically equipped for current, let alone future, needs. *For JMC:* It's important the digi tools in maths education WG goes ahead with urgency and vigour, but we should also engage with the range of data literacy needs – for whom, when, and with input from those who use data at range of levels.
- It would be useful to engage with what are core numeracy needs, for whom, for what purposes, and how education might be organised for that AND
- Pathways to higher mathematics should be revisited and re-thought
- Young people need to become effective meaning-makers and users of mathematics, not just doers of mathematical exercises – as we see in Core Maths. Do we need a level 2 Core Maths focus for pre-16 learners?
- Valuable moves will include proper provision for the weakest learners of mathematics, throughout their mathematics education, addressing the current deficit discourse.

14 Conclusion

The Chair thanked everyone for their attendance and participation, and closed the meeting.

15 Dates of future meetings

Thursday 24 February 2022, online (deadline for papers: Thursday 10 February 2022)

Thursday 9 June 2022, venue tba (deadline for papers: Thursday 12 May 2022)

Thursday 10 November 2022, venue tba (deadline for papers: Thursday 27 October 2022)

These meetings are scheduled to begin at 11.00am