

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 10 November 2022

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	Sally Barton (deputy)
National Association of Mathematics Advisors	Ruth Trudley
National Numeracy	–
NRICH	Ems Lord
Operational Research Society	–
Royal Academy of Engineering	–
Royal Statistical Society	–
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

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

Department for Education [England]	Alex Smith; Catherine MacKenzie
Department of Education [Northern Ireland]	Julie Harris
Education Scotland	John Neeson
Education and Training Foundation	Julie Baxter
National Centre for Excellence in the Teaching of Mathematics	Sue Madgwick
Office for Standards in Education	Hannah Stoten
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 of the rail strikes 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: Charlie Stripp (MEI), Graham Griffiths (NANAMIC), Paul Milner (National Numeracy), Fay Moore (OR Society), Alan Walker (SMC) and Steve Wren (Ofsted)
A particular welcome was given to new representatives Ruth Trundley ((NAMA), Julie Baxter (ETF) and John Neeson (Education Scotland) who each introduced themselves. Deputies attending the meeting were also welcomed.
A warm welcome was also extended to Nigel Campbell (Chair, Executive Committee, NAMS) who joined the meeting as a guest and to give an update on NAMS (item 9.1)

2 Annual business

- 2.1 **Reception of the Annual Report** The Annual Report was received.
- 2.2 **Reception of the Annual Accounts** The Treasurer presented the Annual Accounts. She explained that a higher spend had been intended, but that the lower number of meetings had reduced expenditure.
The Annual Accounts were received.
- 2.3 **Approval of the Budget** The budget was approved unanimously as presented. This would still allow the funding of other activities.
Funds are still being held for BCME.
- 2.4 **Approval of the Subscription Rates** Approval was given for subscriptions for 2022-2023 being held at the same level as 2021-2022.
- 2.5 **Election of Secretary** It was noted that at the June meeting Chris Chipperton had been elected Secretary to serve from the end of the annual business until the end of the AGM in November 2025.
- 2.6 **Election of Trustee** The Secretary reported that one nomination for Elected Trustee had been received, this being from ALM. As a result, Beth Kelly was elected unopposed to serve from the end of the annual business until the end of the AGM in November 2025.
- 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 2023. This was approved unanimously.
- 2.8 **Co-option of ICMI Bursaries Committee Representative** Paul Glaister informed Council that he had taken over from Chris Budd as the UK Representative to the International Commission on Mathematics Instruction. Consequently, it was requested that he be co-opted as the Co-opted Member to serve until the end of the AGM in November 2023. There was discussion around one individual being on Council in two roles. Given that only one role carries voting rights, this was not thought to be an issue. The co-option was approved unanimously.

3 Minutes of the meeting held on Thursday 9 June 2022

- 3.1 **Approval** Subject to two small amendments relating to the venue item 5 and 9, the minutes of the meeting held on Thursday 9 June 2022 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 2022 was taking place over the course of the week.

4 Reports from Trustees

- 4.1 **Chair** The Chair's report was noted. In addition, he remarked that the period between the June and November meetings had seen five Secretaries of State for Education and the return of familiar faces. Interesting things appeared to be happening across numeracy, applications, etc. through different routes.
- 4.2 **Deputy Chair** There was no report.
- 4.3 **Secretary** The Secretary's report was noted. Attention was drawn to the upcoming vacancy for Treasurer and that the Chair's role would become vacant in 2024. The Secretary thanked Graham Griffiths for his time and efforts as Elected Trustee.
- 4.4 **Treasurer** The Treasurer's report (circulated separately) was noted. It was clarified that the accounting year runs from the start of August. Spend has been low although there are some commitments outstanding. The overall position is good.
- Requests for subscriptions are to be sent out soon after the meeting.
- 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 **BCME** The report was noted. It was agreed that Kevin Houston should proceed with the creation of a small group of interested parties in the establishment of an organising committee for BCME10.
- 5.2 **ICME-14 Bursaries Committee** There was no report from the ICME Bursaries Committee.
- 5.3 **MMSA** There was no report from MMSA.

6 Reports from Participating Bodies

The Chair thanked those representatives who had submitted reports. He stated that he was aware of how busy people were and that reports are an additional commitment. However, the reports are really interesting and indicate matters of importance.

All representatives were encouraged to submit reports. Is there a way that we can better support the submission?

A number of items from individual reports were highlighted:

- 6.1 **ALM** It was good to note information about the annual conference. It was not huge due to Covid, but had 50-60 participants. It is spreading internationally. There will be a joint online session in the summer.
- 6.2 **AMET** Involvement in teacher training is being reconsidered by many HEIs; universities have been significant providers in the past. The Government has asked for everyone to reapply. Many experienced providers have been unsuccessful.
- 6.8 **IMA** It was clarified that the Year 10 target is current. The contact is for next year. Scholarships are £29,000 with the additional benefit of access to organisations and resources.
- 6.9 **LMS** It was questioned how effective/successful Teaching Mathematics as a Career (TeMaC) is being. There is continuing engagement from university departments. The DfE have promised to provide more materials.
- 6.10 **MA** There has been a surge in entries for the Maths Challenge.
- 6.12 **NANAMIC** There is a new framework for teacher training qualifications in FE. Some changes are small. Mathematics has been lost as a specialism. This will be kept under review.

7 Reports from Observing Bodies

The written reports were noted.

Additional oral reports were received from DfE, Ofqual, Education Scotland, Ofsted and Ofqual. By agreement these were not minuted.

8 Discussion of Reports

There were no reports.

9 Any other business not elsewhere on the agenda

9.1 Introduction to Nigel Campbell, Chair of the Executive Committee for the National Academy for Mathematical Sciences set-up phase

Nigel Campbell introduced himself to Council. He said that there was a family background of teaching. Nigel is retired from the civil service and now has some involvement in university teaching. His own background is in mathematics, economics and climate change engaging in policy and was Chief Analyst with the Cabinet Office between 2013 and 2020.

Christie Marr has been appointed as Executive Director.

NAMS is seeking to be a single voice for the mathematics community. This is seen as particularly important for academics and researchers.

The nomination process for members of the Executive Committee for the 'proto-academy' produced eighty responses of which sixty could easily have been appointed; fourteen have been appointed. Many others have been invited to sit on the sub-committees looking at the different workstreams. The education sub-committee is being led by Lynne McClure and has a number of individuals that will be recognised by many, including Jil Matheson, Cathy Hobbs, Sophie Carr, Michael Grove, Anthony Tomei, Rachel Beardon and Andy Noyes.

Consideration is being given to what it is that NAMS can, should, could do. Where does it fit into the landscape?

Seedcorn funding is in place to 2025. A decision as to whether to launch the academy will need to be taken by October 2024.

10 Discussion: Mathematics Education and Digital Technology

For this item, Council was joined by Tom Button, Iona Coutts and Viv Townsend who are some of the members of the working group who are not on Council.

Council was reminded that a working group had been established to look at mathematics Education and Digital Technology. The intention of the session was to update Council on the progress of the working group, and to get feedback on the work done and to shape possible recommendations. A Jamboard was to be used to assist with this.

The history to the work is:

- The 2011 report by JMC
- The decision to revisit this a decade on
- There had been a joint JMC/RS ACME session on the topic in May 2021
- The JMC briefing paper (Golding and Lyakhova)
- A call for working group members during summer 2021
- A parallel interest in the area through the RS ACME Mathematical Futures programme

It is questioned why the 2011 recommendations have made so little progress. Most could still be written today.

The working group is looking into five areas. It is expected that the final report will have a key recommendation for each. There is still considerable work to do on each area.

To date, there has been:

- 8 meetings
- Conversations with edu-business representatives
- A review of key publications
- A survey of teachers
- A commissioned rapid review of international cases
- Conversations with curriculum leaders
- Case studies

The outline structure for the report is:

- Executive summary – 2 pages
- Introduction – 3-4 pages
- Digital technology in classrooms – 5-6 pages
- Digital technology in assessment and the curriculum – 3-4 pages
- Digital technology and systemic change – 3-4 pages
- Implications and conclusions – 3-4 pages

- References – 1-2 pages
- Appendices
- Technical reports

It is expected that the report will be seen by Council before it goes out.

The principles that are underpinning the work are:

- The report should be UK wide and phase inclusive
- Look for small change at scale ('low-hanging fruit')
- Look for the possible against the desirable
- Be realistic against aspirational

Viv Townsend gave an update on the work she and Alison Clark-Wilson had been undertaking on the survey of teachers. The survey had taken place in June and July and covered views of teachers on their uses, goals and perceptions of digital technology for the teaching and learning of mathematics. There had been 228 valid responses.

Analysis was in the early stages. What should the foci be?

Steve Lyon reported on the informal interviews that had taken place with teachers and curriculum leaders. There had been a wide range of input, differences in the topics discussed, and examples of different experiences. Every school is different and there are variations within schools. However, some common themes are emerging. There is a question as to how to best use anecdotes.

Tom Button talked about his focus on assessment and the curriculum. The work was covering four sections:

- Calculators in primary schools
- Embedding digital technology in the online assessment of mathematics at secondary level
- The use of digital technology for working with data (mainly post-16)
- The use of digital technology in HE mathematics courses

Jeremy Hodgen spoke about the rapid review of international cases being undertaken by Marie Joubert. This had been frustrating with practice not matching much of the rhetoric. A high-level rapid review of policy is required to see how challenges and barriers have been overcome.

A number of countries which appear interesting have been identified. These include Estonia, Ireland, Germany, Denmark and Australia (Victoria).

Findings so far indicate that:

- There is very little research being carried out. Ireland is the only country to evaluate what is being implemented
- There is little widespread use apart from in upper secondary when specified in exams
- There are national/regional initiatives involving hardware, internet access, the generic use of IT and often professional development
- The use of digital technology by teachers and students may not align with expectations
- There are unintended consequences

Areas for recommendations being considered are:

- The importance of aligning the curriculum, assessment, materials, professional development, etc.
- Evaluation should be built in from the development stage
- The focus of implementation and professional development should be on the digital technologies that teachers already use

Council broke into groups to discuss and respond to prompts arising from the inputs. Feedback was collected using Jamboard. This would be fed into the next meeting of the working group.

11 Conclusion

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

12 Dates of future meetings

Thursday 23 February 2023, (deadline for papers: Thursday 9 February 2023)

It was intended that the February meeting would be online. In the light of the November 2022 meeting having been changed to online, it was agreed that this meeting would be face-to-face, venue tba.

Thursday 8 June 2023, venue tba (deadline for papers: Thursday 25 May 2023)

Thursday 9 November 2023, venue tba (deadline for papers: Thursday 26 October 2023)

These meetings are scheduled to begin at 11.00am