Call for expressions of interest

Developing data skills across the mathematics curriculum

Background

In summer 2023 the Joint Mathematical Council of the UK published its working group report on Mathematics Education and Digital Technology. Building on that report, and following focused discussion amongst Council representatives, the JMC Trustees are now looking to commission a piece of research on how data skills are developed throughout the mathematics curriculum and how this might be improved.

The ongoing work of the RS/ACME Mathematical Futures Programme has also highlighted the growing importance of 'data education' in its recent discussion paper. They point to the growth of data sciences and the need for reimagining Mathematics and Data Education in schools. This concern is also reinforced by the sustained interest in mathematical and data literacy from all political parties, albeit with different priorities.

The JMC is interested in identifying current examples of good practice in this area, understanding barriers to change, possibilities for future development and approaches to improving data skills at scale. We want to learn about examples of transformative classroom practice and digital tool use, and how different jurisdictions are responding to the increased demand for data skills and literacies.

The questions that the commissioned individual/team might explore include:

- *What are the data skills and competences that learners should have developed by a) by the end of primary school, b) the age of 14, c) the end of formal education?*
- *What is the evidence base on effective practices in developing data skills in mathematics lessons (and elsewhere in the curriculum)? Are these small-scale insights and/or examples of effective system-wide data skills development?*
- *What curriculum and digital resources would be needed to achieve meaningful sustained improvement in data education?*
- *What associated teacher professional development is needed to improve data education and in what ways might this be delivered?*

These, or other questions that applicants consider to be pertinent, would need to draw on the best evidence in research and grey literatures.

January 2024

The project

The Trustees of the Joint Mathematical Council are seeking expressions of interest to undertake a piece of work that will:

- Undertake a high-level review of the policy and research evidence base;
- Synthesise recent, relevant, UK-focused education research, and noteworthy international studies;
- Produce a full report to include, where appropriate, meaningful comparisons between the four nations of the UK.
- Produce a summary report (maximum 4 pages) containing high-level patterns, findings and matters for further investigation. This should be presented in more of a 'policy brief' style and suitable to a wider readership of interested stakeholders.

The successful bidder will agree a delivery timeline with the JMC Trustees at the outset of the project and will engage in a progress review in the middle of the process. We expect the work to be completed by the end of the 2023-24 academic year.

It is estimated that this is around 20 days' work and a fee of up to £8000 is available.

Expressions of interest in the form of a short **CV and a 2-page statement setting out initial thoughts on the proposed approach and likely timeline** should be submitted to the Secretary of the JMC (secretary@jmc.org.uk) by 2359h on Thursday 29 February 2024. Outcomes will be communicated to applicants by Thursday 28 March 2024.