



NCMS News

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Mathematics by Inquiry

The Mathematics by Inquiry Request for Tender (RFT) was opened by the Australian Government on 29 July 2015. By the time you are reading this column, the call for tender would have closed; it closes on 24 August 2015. In this column, I would like to (i) highlight elements of the tender document, which make interesting reading; and, (ii) ask you to reflect on whether this will resolve the troublesome issues in Australia's mathematical education pointed out by many organisations.

The Department of Education and Training website [1] summarises the tender's purpose:

The RFT is seeking tenders to develop, disseminate and ensure widespread awareness and uptake of a suite of mathematics teaching and learning resources for Foundation to Year 10 students, teachers and school leaders. These resources will support an inquiry based approach to the teaching of mathematics in Australian schools.

The detailed tender document is available from AusTender [2].

The major part of the document contains standard tender requirements. The matters concerning services on mathematics education are outlined in the appendices. Appendix A provides the background, related projects and actions. The following item is particularly interesting:

A.2.5 "There is a general consensus among mathematics education experts that the traditional 'teach by the text-book' pedagogical approach needs to change to focus much more on problem-solving and reasoning in order to better equip students with the STEM skills they need for their future employment."
(p. 24)

As a result of the two Desktop Reviews of Mathematics School Education, Pedagogical Approaches and Learning Resources, carried out by the Australian Association of Mathematics Teachers and the Australian Academy of Science, and the Mathematics by Inquiry policy roundtable, held 7 May 2015, the department has already commissioned the following initiatives:

- (a) Education Services Australia (ESA) has been engaged to undertake a curation and annotation of Australian Curriculum: Mathematics resources listed

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on Scootle to describe these resources more specifically and to give teachers a better sense of which resources can support their needs;

- (b) The Australian Curriculum, Assessment and Reporting Authority (ACARA) has been engaged to develop annotated work samples to support the Australian Curriculum: Mathematics proficiencies, focusing on problem-solving and reasoning. (p. 24)

Appendix B details the services requested and essential requirements. Item B.1.1 gives a detailed set of requirements starting with “a vision for mathematics education in schools” (item B.1.1.a.i.A., p. 26). The remainder of B.1.1 outlines an ambitious and challenging set of requirements covering not only “innovative, high quality mathematics teaching and learning resources” to be developed, and key risks, but also addressing “individual teacher learning, classroom practice and whole of school culture” in a way that “increases student engagement, performance and retention in mathematics.”

There are two phases to the work requested by the current tender. Each phase is expected to take 12–18 months. While the successful tenderer will be offered a contract for phase 1, the continuation to phase 2 is an option available at the sole discretion of the department or agency overseeing the tender on behalf of the Australian government. The aim is to develop resources that will be “readily discoverable and freely accessible online to Australian teachers.” The successful tender will result in a contract which is expected to commence on 1 October 2015.

I am looking forward to the announcement of the outcome of this call for tender and also to the very important work expected to be carried out by the successful contractor. Let’s hope that in three years time this initiative will have resulted in a game-changer for mathematics education in Australia.

References

- [1] Request for Tender in relation to Mathematics by Inquiry, <http://www.studentsfirst.gov.au/restoring-focus-stem-schools-initiative>, accessed 08 August 2015.
- [2] Available under RFT PRN AD15003424, from <https://www.tenders.gov.au/>.



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