

ENHANCING THE TRAINING OF MATHEMATICS AND SCIENCE TEACHERS



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Abstract

All governments are investing in improving STEM education. There is significant activity underway across the country in schools and education systems, by industry and universities to lift student engagement and attainment in STEM and to support teachers to improve student outcomes. The Chief Scientist's report *Science, Technology, Engineering and Mathematics: Australia's Future* highlighted the trends that our system is grappling with including the declining performance of Australian students against international benchmarks and the decline in participation in senior secondary sciences and advanced mathematics. As acknowledged in The National STEM School Education Strategy, reversing the trends in STEM performance will take time and considerable, collaborative effort.

But what of the role of Universities in addressing this challenge? In 2013, 12 million dollars of federal grant funding was awarded to five major projects over three years that committed to take a lead role in Enhancing the Training of Mathematics and Science Teachers (ETMST). These projects sought to identify where significant change and impact can be made - going beyond traditional approaches that have involved providing more content, method and resources, and reconceiving what is possible through renewed collaborations between practising scientists, mathematicians and teacher educators - as we prepare the next generation of our nation's science and mathematics teachers.

<http://www.olt.gov.au/maths-and-science-teachers>

Objectives

- Discuss shifts in higher education practice that can effect and support change through our preparation of the next generation of mathematics and science teachers nationally
- Explore key findings and implications of *Enhancing the Training of Mathematics and Science Teachers* projects nationally.

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