President Professor John Shine AC PresAA

Australian Academy of Science

The Hon Dan Tehan MP
Minister for Education
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

By email: dan.tehan.mp@aph.gov.au
CC: karen.andrews.mp@aph.gov.au

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Dear Minister

I am writing to you regarding the recent publication of data from the 2018 Programme for International Student Assessment (PISA). As you are aware, the results reveal an alarming steady decline in the performance of Australian students in reading, mathematics and science. To remain globally competitive, I am sure you agree that this declining trend must be addressed.

The Australian Academy of Science supports and plays a leading role in Science, Technology, Engineering and Mathematics (STEM) education. For over 15 years, the Academy has a proven track-record and unparalleled experience in developing and delivering evidence-based education programs to support effective science and mathematics teaching and learning in Australian schools from Foundation to Year 10. These programs enable pre-service and in-service teachers to develop competencies to teach science and mathematics with confidence and in a way that inspires and guides students to inquire and learn. The programs also enable students to develop those basic skills and further equip them with the ability to form deep understanding and comprehension, become knowledgeable and imaginative thinkers, and mathematically and scientifically literate citizens. The Academy's programs embody Australian content and contexts, are aligned to the Australian Curriculum, and are recognised as quality resources developed by a trusted source. The programs are award winning and independent evaluations undertaken to date show that they have an impact on teaching and learning.

Teachers, schools and classrooms that have implemented Academy programs attest to their impact. The resources and training are widely available to schools at low or no cost to them. The programs reach hundreds of rural and remote students and teachers.

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The Academy is calling on the COAG Education Council to continue its commitment to implementing learning progressions, as recommended by the Gonski review. The Academy is developing learning progressions in its reSolve program (mathematics) and is extending this to its Primary Connections program, which models how to teach science through literacy.

Never has there been a more important time for quality science and mathematics teaching and learning in Australia. More than ever, we need a mathematically and scientifically-literate community to engage in debates about issues that affect us all. We also need imaginative thinkers to discover the opportunities in our exponentially expanding knowledge base.

All students in Australia need to be equipped with foundational skills, which must include science literacy and mathematics. Teacher-led guided inquiry approaches build students' basic skills and equip them with crucial thinking skills. The Academy's research based, guided inquiry-based education programs equip students with these skills with an increasing focus on using digital technologies to maximise educational outcomes.

On Wednesday there is opportunity for Australia's Education Ministers to take decisive action so that guided inquiry-based approaches can be implemented in all Australian schools. Evidence shows us that those schools implementing this approach have positive teaching and learning results. Effective teaching and learning programs need to be scaled up so that we can address Australian education performance nationally.

To ensure that our schools build tomorrow's economy and society, the Australian Academy of Science calls on the COAG Education Council to take steps to ensure that scientific literacy remains at the top of our national educational policy agenda.

Yours sincerely

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