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Maths graduates fall to lowest level since 2001, says report





Our failure to engage young people in maths threatens to kill innovation, says Geoff Prince. James Davies



advanced maths continues to fall.

by Tim Dodd

The number of maths graduates from Australian universities has fallen to its lowest level since 2001 and the push for girls to take advanced maths courses in high school are not working, a new report has found.

The report, from the Australian Institute of Mathematical Sciences (AMSI), found the proportion of students entering maths degrees is half the OECD average and the proportion of year 12 school students doing

The efforts to bring more girls into advanced maths courses are not paying off, with 6.8 per cent of year 12 girls studying it in year 12 in 2014, compared with 13.4 per cent of boys.

"An entrenched gender divide and a critical failure to engage younger generations continue to pose a very real threat to Australia's innovation future," AMSI director Geoff Prince said.

"There is a real shortage [of skills] in the mathematical sciences at a time when data sciences are so important."

He said the low level of business investment in the mathematical sciences – only 0.2 per cent of overall R&D spending - represented "a significant lost opportunity for

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Australian industry innovation".

"Mathematical sciences research underpins almost all other research and has farreaching impacts for industry, from analysing and modelling data to forecasting and systems management," Professor Prince said.

The report shows the number of maths graduates from Australian universities continues to fall and went below 300 in 2014, the lowest since 2001, although these figures do not pick up students who do maths majors in science degrees.

Professor Prince warned that the declining interest in maths among young people would have a critical impact on business because workers with maths skills already had a high age profile, with the smallest proportion of workers under 34 of any of the science, technology, engineering and maths (STEM) disciplines.

He said universities were partly to blame for the decline in advanced maths enrolments in year 12 because many of them had stopped making maths a prerequisite for taking degrees in maths-heavy fields such as science, engineering and commerce.

The paper shows intermediate maths is at present a year 12 requirement for enrolling in a science degree in 14 per cent of universities, in a commerce degree in 13 per cent of universities, and in an engineering degree in 59 per cent of universities.

"A lack of university prerequisites continues to send a strong message to our classrooms that maths is not valued,' Professor Prince said.

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