

Media Release

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Attention news editors/education reporters

Why girls under-participate in maths

Too few girls are represented at the top of the corporate ladder in maths-related careers because too few aspire to be involved in maths, according to new research conducted at Monash University.

After a three-year study, Dr Helen Watt has found that the imbalance between men and women in science and maths careers is due in large part because girls are not interested in maths – not because of any difference in ability. The research indicates that further work is required to improve girls' perceptions of their abilities.

Dr Watt conducted research on secondary students in Sydney over a three-year period to determine the causes of the imbalance between girls and boys in mathematical attitudes and aspirations.

"Among a large sample of Sydney secondary school students who I followed over a three-year period, there were no gender differences in measured mathematical achievement, but males undertook higher levels of senior high maths, and further, aspired to more maths-related careers," Dr Watt said.

"Since lower female maths achievement therefore could not be the reason for this imbalance in maths participation, I examined whether females were less interested in maths, and whether they considered themselves less able at maths."

Dr Watt's research found that females saw themselves as significantly less able at maths than males, and were also less interested.

"But can this explain girls' under-participation? To a significant extent – yes. Girls' lower self-concept and interest in maths subsequently led to their lower senior high maths enrolments, and less maths-related career plans," she said.

"We need to be particularly concerned about girls' and women's lower interest and self-concept in maths, since this has substantial flow-on effects to maths participation – and a significant impact on our workforce."

The research was part of an international study that looked at gender imbalance in maths participation between boys and girls in Australia and America.

Dr Watt's research paper "The leaky mathematics pipeline for girls: a motivational analysis of high school enrolments in Australia and the USA", with Jacquelynne S. Eccles and Amanda M. Durik, was published in the most recent edition of Equal Opportunities International. She is also the invited keynote speaker on the topic at the Dutch national VHTO conference next month.

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