

MEDIA RELEASE

Australian teens persist at thinking it through: PISA

24 September 2014: A report released today by the Australian Council for Educational Research (ACER) reveals Australian 15-year-olds are more likely to persevere with challenging problems than some of their peers in high-performing countries.

Conducted in 2012 as part of the OECD Programme for International Student Assessment (PISA), the supplementary PISA problem-solving assessment measured 15-year-olds' general reasoning skills, and their willingness and ability to regulate problem-solving processes. A total of 85 000 students from 44 countries and economies participated in the assessment, including approximately 14 500 Australian students from 775 schools.

ACER today released the national report, *Thinking it through: Australian students' skills in creative problem solving*, allowing closer examination of problem-solving achievement within Australia, including performance in each state and territory.

Australian students achieved an average score of 523 points, above the OECD average of 500 points. After accounting for insignificant differences between countries and economies, three countries and four economic regions performed at a higher level than Australia, and three countries performed at a similar level to Australia.

Releasing the report, ACER's Director of Educational Monitoring and Research, Dr Sue Thomson said that, while Australian students performed better than expected in problem solving based on their performance in mathematics in the main survey conducted at the same time, more work needs to be done to ensure that all students are equipped for life beyond school.

"In problem solving, 84 per cent of Australian students achieved or exceeded the baseline proficiency level, where students begin to demonstrate the competencies that will enable them to participate effectively in life situations, compared to 93 per cent in high-performing countries Korea, Singapore and Japan," Dr Thomson said.

Encouragingly, Australian students reported slightly higher levels of perseverance when problem solving compared to students across the OECD, and to students in Japan and Korea.

"Approximately two-thirds of Australian students indicated it was not like them to give up easily when confronted with a problem and almost half indicated it was not like them to put off difficult problems," Dr Thomson said.

Nevertheless, students from Australia scored below the OECD average when it came to willingness to engage with problems and be open to new challenges, Dr Thomson said, with only one-third reporting that they liked solving complex problems.

All Australian states and territories performed at a statistically similar level, with the exception of Tasmania, which performed significantly* lower than all other jurisdictions. Western Australia, the Australian Capital Territory, New South Wales, Victoria, Queensland and South Australia performed at a significantly higher level than the OECD average, while the Northern Territory performed at a similar level to the OECD average and Tasmania performed at a significantly lower level than the OECD average.

The report also examined whether the variation in performance within countries is attributed to within-school (student-level) or between-school (school-level) differences. In Australia, the

amount of variation in performance within schools was 75 per cent, compared to the OECD average of 61 per cent. The amount of variation in performance between schools in Australia was 28 per cent, compared to the OECD average of 38 per cent.

“While school choice in Australia has less of an impact on problem solving achievement than across the OECD, there is considerable variation within Australia depending on which state or territory you live in,” Dr Thomson said. “Based on average results from PISA 2012, between-school differences range from 19 per cent in South Australia to 39 per cent in Tasmania, suggesting that school choice in Tasmania will influence student problem-solving performance more than school choice in other jurisdictions.”

Australia’s participation in the PISA 2012 problem-solving assessment was managed by ACER with funding from the Commonwealth, and state and territory governments.

The national report, *Thinking it through: Australian students’ skills in creative problem solving*, is available from the Australian PISA website < <http://www.acer.edu.au/ozpisa/> >.

** Note: The term ‘significantly’ is used to indicate that the difference is real and would be found in at least 95 analyses out of 100 if the comparison were to be repeated. It is not to be confused with the term ‘substantial’.*

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