Singapore and Korea top OECD’s first PISA problem-solving test

01/04/2014 - Students from Singapore and Korea have performed best in the OECD PISA first assessment of creative problem-solving. Students in these countries are quick learners, highly inquisitive and able to solve unstructured problems in unfamiliar contexts.

85,000 students from 44 countries and economies took the computer-based test, involving real-life scenarios to measure the skills young people will use when faced with everyday problems, such as setting a thermostat or finding the quickest route to a destination.

Japan, Macao-China, Hong Kong-China, Shanghai-China and Chinese Taipei were also among the top-performing economies.

Students from Canada, Australia, Finland, England, Estonia, France, the Netherlands, Italy, the Czech Republic, Germany, the United States and Belgium all scored above the OECD average.

Not all countries that did well in school subjects like mathematics or science did well on the problem-solving test. Conversely, students in the United Kingdom, the United States and Japan did better on problem-solving than in key school subjects.

“Today’s 15-year-olds with poor problem-solving skills will become tomorrow’s adults struggling to find or keep a good job,” said Andreas Schleicher, acting Director of Education and Skills at the OECD. “Policy makers and educators should reshape their school systems and curricula to help students develop their problem-solving skills which are increasingly needed in today’s economies.”

Around one in nine (11.4%) of 15-year-old students across OECD countries are able to solve the most complex problems, compared to one in five in Singapore, Korea and Japan. But on average across OECD countries about one in five students are able to solve only the simplest problems, meaning they lack the skills the modern workplace needs.

Gender gaps in problem solving are small, particularly among low-performing students, the report finds. But the highest-performing students are largely boys, except in Australia, Finland and Norway. On average across OECD countries, there are three top-performing boys for every two top-performing girls in problem solving.

The impact of socio-economic status on problem-solving is much weaker than for the other PISA subjects of mathematics, reading and science: in France and Spain, for example, the relationship between socio-economic background and performance is only half as strong as in maths. But disadvantaged students are still twice as likely on average to score at the very lowest level compared to their more advantaged peers.

Notes to editors:

The OECD’s PISA results reveal what is possible in education by showing what students in the highest-performing and most rapidly improving education systems can do. The findings allow policy makers around the world to gauge the knowledge and skills of students in their own countries in comparison with those in other countries, set policy targets against measurable goals achieved by other education systems, and learn from policies and practices applied elsewhere.

Country notes are available for England, France, Germany, Japan (in Japanese), Singapore, Spain and the United States.

Participating countries and economies were: Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Chinese Taipei, Colombia, Croatia, Cyprus, Czech Republic, Denmark, England, Estonia, Finland, France, Germany, Hong Kong-China, Hungary, Ireland, Israel, Italy, Japan, Korea, Macao-China, Malaysia, Montenegro, the Netherlands, Norway, Poland, Portugal, Russia, Serbia, Shanghai-China, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Turkey, United Arab Emirates, Uruguay, United States.

Regional results are also available for Australia, Belgium, Brazil, Canada, Colombia, Italy, Spain and United Arab Emirates.

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