

The PISA 2015 scorecard: Must do better on inequality

Last update: 21 March 2017

Which country does best at reading and science? Are young students well equipped with the 21st-century skills they will need to face tomorrow’s challenges? The OECD’s Programme for International Student Assessment (PISA), which tests the skills and knowledge of 15-year-old students in science, reading and mathematics, intends to answer these questions.

The 2015 survey covered some 540,000 students in 72 countries and economies. This time, the main focus was on science, an increasingly important part of today’s economy. PISA is about a lot more than ranking though: its aim is not to encourage competition but to highlight the many social, economic and cultural factors that determine school performance, in order to improve education systems.

While spending per student in primary and secondary education increased by almost 20% since 2006 in OECD countries alone, only 12 of the 72 countries and economies assessed in PISA have seen their science performance improve over this period. These include high-performing education systems, such as Singapore and Macao (China), and low-performers, such as Peru and Colombia.

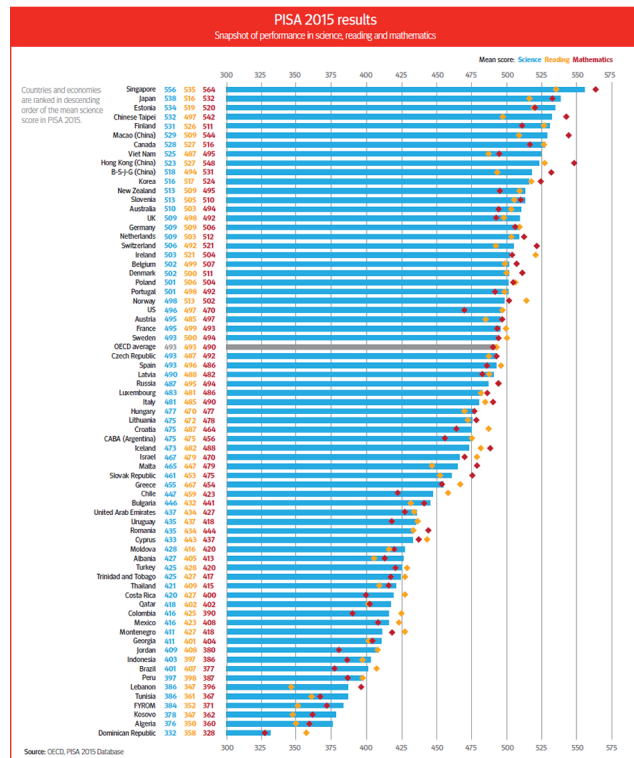
Singapore leads the field this time, with one in four students performing at the highest level in science, compared with one in ten in the OECD. In second place was Japan, which was the top OECD country, followed by Estonia in third, Finland in fifth behind Chinese Taipei, and Canada in seventh after Macao (China) and just ahead of Viet Nam.

The OECD PISA 2015 Survey focused on students’ performance in and attitudes towards science. As OECD director of education and skills, Andreas Schleicher, put it on his blog, only 20 short years ago, there was no such thing as a blog, or indeed any of the countless other gadgets, medicines, fibres and other tools that have become so central in our lives. Science and technology are therefore fundamental to people’s futures, including for quite ordinary situations. As Mr Schleicher points out, “obviously, we don’t all have to be scientists to live in the 21st century. But an understanding of some basic principles of science—like the importance of experiments in building a body of scientific knowledge—is essential

if we want to make informed decisions about the most pressing issues of our time (or even if we just want to choose the “healthiest” option for lunch).

In short, PISA 2015 shows that in the context of massive information flows and rapid digital change, everyone needs at least to be able to think like a scientist, that is: to be able to weigh evidence and come to a conclusion; to understand that scientific truth may change over time, as new discoveries are made, and as humans develop a greater understanding of natural forces and of technology’s capacities and limitations.

Compared with previous surveys, gender differences in science tend to be smaller than in reading and mathematics but, on average, in 33 countries and economies, the share of top performers in science is larger among boys than among girls. Only in Finland are girls more likely to be top performers than boys. Gender differences in science self-efficacy are particularly large in Denmark, France, Germany, Iceland and Sweden.



In Australia, the Czech Republic, Finland, Greece, Hungary, New Zealand and the Slovak Republic, the share of students performing at the highest levels fell as the share of low performers rose.

The problem of widening inequality remains striking in developed countries: although Canada, Denmark, Estonia, Hong Kong (China) and Macao (China) achieve high levels of equity in education outcomes, and while equity has improved in the US, poorer students are still three times more likely to be low performers than wealthier students. As for immigrant students, they are more

than twice as likely as non-immigrants to be low achievers. In the Czech Republic and France, the impact of socio-economic status on performance is particularly large.

But looked at the other way around, investing in education can also improve social outcomes. As OECD Chief of Staff and G20 Sherpa Gabriela Ramos writes, reconciling educational excellence and success for all is one of the best ways to tackle social inequalities at the root. Take France, for instance, where the number of high-performing students is higher than the OECD average, but also higher is the proportion of 15-year-olds having difficulty in science. In fact, students from the most disadvantaged backgrounds are three times less likely to succeed than advantaged students. Where people live in relation to good schools is a factor, and Ms Ramos urges current reforms to be persevered with and strengthened, and to ensure that success at school is no longer the result of a “postcode lottery”.

France is not alone, and PISA 2015 underlines the challenge that all countries, including some of the wealthiest ones, face in meeting the UN Sustainable Development Goal by 2030 of achieving “inclusive and equitable quality education and promote lifelong learning opportunities for all”. According to the report, policies that successful countries share include: having high and universal expectations for all students; focusing on great teaching; targeting struggling students and schools; and committing to coherent, long-term strategies.

For more on OECD PISA, contact Andreas Schleicher at the OECD

For more on PISA 2015, including country-related content and video streams, visit www.oecd.org/pisa

Schleicher, Andreas (2016), “Today’s the day”, on <http://oecdeducationtoday.blogspot.fr/2016/12/todays-day.html>

Ramos, Gabriela (2016), “Lessons for France from PISA 2015”, on <http://oecdeducationtoday.blogspot.fr/2016/12/lessons-for-france-from-pisa-2015.html>