



## Executive Summary

The design of PISA does not just allow for a comparison of the relative standing of countries in terms of their learning outcomes; it also enables each country to monitor changes in those outcomes over time. Such changes indicate how successful education systems have been in developing the knowledge and skills of 15-year-olds.

Indeed, some countries have seen impressive improvements in performance over the past decade, sometimes exceeding the equivalent of an average school year's progress for the entire 15-year-old student population. Some of these countries have been catching up from comparatively low performance levels while others have been advancing further from already high levels. All countries seeking to improve their results can draw encouragement – and learn lessons – from those that have succeeded in doing so in a relatively short period of time.

Changes in student performance over time prove that a country's performance in reading is not set in stone. In both absolute and relative terms, educational results can improve, and they cannot be regarded either as part of fixed “cultural” differences between countries or as inevitably linked to each country's state of economic development.

Since both PISA 2000 and PISA 2009 focused on reading, it is possible to track how student performance in reading changed over that period. Among the 26 OECD countries with comparable results in both assessments, Chile, Israel, Poland, Portugal, Korea, Hungary and Germany as well as the partner countries Peru, Albania, Indonesia, Latvia, Liechtenstein and Brazil all improved their reading performance between 2000 and 2009, while performance declined in Ireland, Sweden, the Czech Republic and Australia.

***Between 2000 and 2009, the percentage of low performers in Chile dropped by more than 17 percentage points, while the share of top performers in Korea grew by more than 7 percentage points.***

In many countries, improvements in results were largely driven by improvements at the bottom end of the performance distribution, signalling progress towards greater equity in learning outcomes. Among OECD countries, variation in student performance fell by 3%. On average across the 26 OECD countries with comparable data for both assessments, 18% of students performed below the baseline reading proficiency Level 2 in 2009, while 19% did so in 2000. Among countries where between 40% and 60% of students performed below Level 2 in 2000, Chile reduced that proportion by the largest amount, and Mexico and the partner country Brazil also show important decreases in their share of low performers. Among countries where the proportion of students performing below Level 2 was smaller than 40% but still above the OECD average of 19%, the partner country Latvia reduced the proportion by 13 percentage points, while Portugal, Poland, Hungary, Germany, Switzerland and the partner country Liechtenstein reduced the share by smaller amounts. In Denmark, the percentage of students below Level 2 fell from an already below-average level.

The share of top performers – those students who attain reading proficiency Level 5 or 6 in reading – increased in Japan, Korea and the partner economy Hong Kong-China such that these countries now have the largest proportions of high-achieving students among the countries participating in the 2009 assessment. Several countries that had above-average proportions of top performers in 2000 saw those proportions decrease in 2009. Notable among them was Ireland, where the proportion of top performers fell from 14% to 7%, which is below the OECD average.

Between 2000 and 2009, Poland, Portugal, Germany, Switzerland and the partner countries Latvia and Liechtenstein raised the performance of their lowest-achieving students while maintaining the performance level among their highest-achieving students. Korea, Israel and the partner country Brazil raised the performance of their highest-achieving students while maintaining the performance level among their lowest-achieving students. Chile and the partner countries Indonesia, Albania and Peru showed improvements in reading performance among students at all proficiency levels.

On average, OECD countries narrowed the gap in scores between their highest- and lowest-performing students between 2000 and 2009; some also improved overall performance. In Chile, Germany, Hungary, Poland, Portugal, and the partner countries Indonesia, Latvia and Liechtenstein, overall performance improved while the variation in performance decreased. In many cases, this was the result of improvements among low-achieving students.

***The gender gap in reading performance did not narrow in any country between 2000 and 2009.***

The gender gap in reading performance widened in Israel, Korea, Portugal, France and Sweden, and in the partner countries and economies Romania, Hong Kong-China, Indonesia and Brazil between 2000 and 2009. The fact that girls outperform boys in reading is most evident in the proportion of girls and boys who perform below baseline proficiency Level 2. Across OECD countries, 24% of boys perform below Level 2 compared to only 12% of girls. The proportion of girls performing below this level decreased by two percentage points between 2000 and 2009, while the share of low-achieving boys did not change during the period.

Across the OECD area, the percentage of students with an immigrant background increased by an average of two percentage points between 2000 and 2009. The performance gap between students with and without an immigrant background remained broadly similar over the period. However, some countries noted large reductions in the performance advantage of students without an immigrant background. In Belgium, Switzerland and Germany, the gap narrowed by between 28 and 38 score points due to improvements in reading proficiency among students with an immigrant background. However, the gap is still relatively wide in these countries.

***Across OECD countries, overall performance in mathematics remained unchanged between 2003 and 2009, as did performance in science between 2006 and 2009.***

In mathematics, students in Mexico, Turkey, Greece, Portugal, Italy, Germany and the partner countries Brazil and Tunisia improved their mathematics scores considerably, while students in the Czech Republic, Ireland, Sweden, France, Belgium, the Netherlands, Denmark, Australia and Iceland saw declines in their performance. On average across the 28 OECD countries with comparable results in the 2003 and 2009 assessments, the share of students below mathematics proficiency Level 2 remained broadly similar over the period, with a minor decrease from 21.6% to 20.8%. Among the OECD countries in which more than half of students performed below mathematics proficiency Level 2 in 2003, Mexico shrunk this proportion by 15 percentage points, from 66% to 51%, by 2009 while Turkey reduced it from 52% to 42% during the same period. Meanwhile, the percentage of top performers in mathematics in those 28 OECD countries decreased slightly, from 14.7% in 2003 to 13.4% in 2009. Portugal showed the largest increase – four percentage points – in top performers in mathematics.

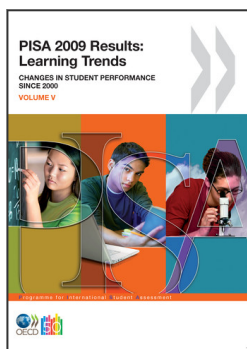
In science, 11 of the 56 countries that participated in both the 2006 and 2009 assessments show improvements in student performance. Turkey, for example, saw a 30 score point increase, nearly half a proficiency level, in just three years. Turkey also reduced the percentage of students below science proficiency Level 2 by almost 17 percentage points, from 47% to 30%. Portugal, Chile, the United States, Norway, Korea and Italy all reduced the share of lowest performers in science by around five percentage points or more, as did the partner countries Qatar, Tunisia, Brazil and Colombia. Performance in science declined considerably in five countries.

***On average across OECD countries, the percentage of students who report reading for enjoyment daily dropped by five percentage points.***

Enjoyment of reading tends to have deteriorated, especially among boys, signalling the challenge for schools to engage students in reading activities that 15-year-olds find relevant and interesting. On average across OECD countries, the percentage of students who said they read for enjoyment every day fell from 69% in 2000 to 64% in 2009. On the other hand, changes in student-teacher relations and classroom climate have generally been favourable or, at least, they have not deteriorated as many would have expected. Generally, students have become more confident that they can get help from their teachers. Across the 26 OECD countries that participated in both assessments, 74% of students in 2000 agreed or strongly agreed with the statements, “If I need extra help, I will



receive it from my teachers” or “Most of my teachers treat me fairly”, while in 2009, 79% of students agreed or strongly agreed with those statements. Overall, aspects of classroom discipline have also improved. Thus there is no evidence to justify the notion that students are becoming progressively more disengaged from school.



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