

# Issue in Focus

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## PISA 2015 Results

### The Performance of Saskatchewan Youth in Science, Reading, and Mathematics

**Core Issue:** Canada was one of the top performers in the 2015 Programme for International Student Assessment (PISA) with regard to science, math, and reading. However, Saskatchewan ranked last in all three subject areas when compared to other Canadian provinces. In fact, Saskatchewan 15-year-olds performed at the international average in science and reading, but performed below the international average in mathematics, the only Canadian province to do so. The education achievement of Saskatchewan students is lagging behind the rest of Canada and a significant portion of the world.

#### Background:

PISA is designed to provide policy-oriented international indicators of the skills and knowledge of 15-year-old students and shed light on a range of factors that contribute to successful students, schools, education systems, and learning environments. The project began in 2000 and it reports on mathematical, reading, and scientific literacy every three years. Each PISA selects one of those domains for more detailed study. In 2015 the focus was on science. 72 countries participated in PISA 2015 (up from 65 countries in 2012), including all 35 OECD countries. In Canada, approximately 20,000 15 year-olds from about 900 schools participated across the ten provinces.

The PISA scores for science, reading, and mathematics are expressed on a scale with an average among OECD countries of 500 and a standard deviation of 100 (i.e. approximately two-thirds of the students in OECD countries scored between 400 and 600). Because participating countries and performance have changed over time, the OECD average scores for science, reading, and mathematics in PISA 2015 differ slightly from 500. For science the average was reestablished at 493 in 2015.

In science, globally Canada ranked third among OECD countries and fourth among all participating countries and economies. In PISA 2015, 89% of Canadian students performed at or above Level 2 in science, which is the baseline level of science proficiency. This dropped to 83% in Saskatchewan, placing the province, tied with Manitoba, in last place in Canada. 17% of Saskatchewan students were low achievers on the science test, this is up from 14% in 2006, the last time science was the major focus of the PISA.

Canada's results in science have remained relatively stable since 2006, the Canadian mean score was 528. Unfortunately, Saskatchewan has seen its average score decrease by 21 points (from 517 to 496) comparatively, Canada's highest ranking provinces Quebec, Alberta, and British Columbia had average scores of 537, 541, and 539 respectively.

Among the 72 countries that participated in PISA 2015, only one outperformed Canada in reading while six outperformed Canada in mathematics. Regrettably, again Saskatchewan ranked last among the provinces in both these categories and Saskatchewan was the only province in Canada where scores declined in all three tests.

Saskatchewan reading scores dropped from 505 in 2012 to 496 in 2015, meanwhile British Columbia led the country in reading in 2015 with a score of 536. Saskatchewan and Manitoba were the only two provinces to score at the OECD average for reading, all other provinces scored above it.

Canada had seen a decline in math performance from 2003 to 2012, however, while not showing significant improvement, the country appears to have at least stabilized between 2012 and 2015. Canada's standing relative to other countries in mathematics actually improved in 2015. Saskatchewan's performance unfortunately has continued to decline; the province went from performing above the OECD average in 2012 to performing below the OECD average in 2015. Its score dropped from 506 in 2012 to 484 in 2015.

Unlike seven other provinces, Saskatchewan students (alongside Alberta and Quebec) did not take the one-hour optional assessment of financial literacy.

## **Conclusion**

The 2015 PISA revealed that the educational performance of Saskatchewan's youth has been declining and is lagging behind the rest of Canada. As education relates to economic productivity, civic engagement, personal well-being and improved quality of life; this issue is of significant concern. Furthermore, post-secondary institutions and employers continue to experience additional costs and delays as they are addressing deficits in literacy and numeracy prior to the commencement of additional training.

The failure of Saskatchewan to achieve high standards in education for its young people will hinder the economy over the long-term, this should be cause for concern by our Ministry of Education, educators, families and the business community; corrective action must be taken. Clearly the lack of tangible and public action around these outcomes is a reflection of the lack of importance student achievement has in the current leadership of education in Saskatchewan.

Questions around why Saskatchewan students did not take the financial literacy assessment also need to be brought forward to education leaders. Financial literacy has been almost unanimously deemed of critical value to students. To miss the opportunity to determine a base line through the 2015 PISA prevents stakeholders from monitoring progress, and hobbles future action in this area.

## **Source**

Council of Ministers of Education, Canada. (2016). *Measuring up: Canadian Results of the OECD PISA Study: The Performance of Canada's Youth in Science, Reading and Mathematics 2015 First Results for Canadians Aged 15*. Retrieved from <http://www.cmec.ca/Publications/Lists/Publications/Attachments/365/PISA2015-CdnReport-EN.pdf> .