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Saskatchewan's Student Achievement: The Programme for International Student Assessment (PISA) 2009

CORE ISSUE: 16% OF SASKATCHEWAN'S 15 YEAR OLDS ARE FUNCTIONALLY ILLITERATE AND IT'S GETTING WORSE.

Education's Importance to Business

Education relates to economic productivity, civic engagement, personal well-being and improved quality of life¹, the viability and growth potential of Saskatchewan's economy depends on the strength and capabilities of students exiting the K-12 education system. Employers and post-secondary institutions rely on the K-12 system to provide young people with the knowledge and skills necessary to allow them to enhance Saskatchewan's economic competitiveness by actively participating in the workforce and/or engaging in additional training.

Students coming out of the K-12 system who do not have the workplace skills, knowledge and abilities employers/post-secondary institutions expect result in additional costs and delays as deficits need to be addressed prior to the commencement of additional training.

About the Programme for International Student Assessment (PISA) 2009

Developed by the Organisation for Economic Co-operation and Development (OECD), the PISA measures the skill levels of 15-year olds in 65 countries in three key subject areas – reading, mathematics and science. Implemented every three years since 2000, the 2009 PISA marks the fourth time that a comprehensive set of information on skills of 15-year olds has been available. Reading was the major domain of PISA 2009 which means a smaller proportion of students were assessed in mathematics and science. The PISA results allow for international as well as interprovincial comparisons.

The PISA Results

Overview

Although Canada was one of the top performing countries in the 2009 PISA, its results remained statistically similar between 2000 and 2009. This stable performance, coupled with the

¹ Canadian Council on Learning, *The State of Learning in Canada: No Time for Complacency- Summary Report on Learning in Canada*, (Canada: 2007).

improvements made by other countries and the addition of new high-performing countries to the assessment process, meant that Canada's performance and ranking declined relative to other countries in all three domains.²

In reading, four countries outperformed Canada while three countries had a similar performance. In mathematics, seven countries outperformed Canada while six countries outperformed the nation in science.³ As with previous PISA results, females continue to outperform males in reading in Canada and across the provinces.

Canada had a strong overall ranking in reading with the PISA results showing a high proportion of high achievers (Level 5 or above) and a low proportion of low achievers (below Level 2) compared to the OECD average. However, the Canadian results indicate a decrease in the proportion of high achievers between 2000 and 2009. Due to the nature of the global economy, this decrease may be one indication of potential loss of future competitiveness.⁴

Additionally PISA 2009 found that 1 in 10 Canadian students perform at a low reading level and lack some fundamental skills necessary to prepare them to enter the workforce or pursue post-secondary education.⁵

Saskatchewan Specifics

Although Saskatchewan students performed above the OECD average in PISA 2009, the province was below the Canadian average in all three domains. This result is similar to those observed in previous PISA assessments.⁶

In reading, Saskatchewan ranked 7th among the 10 provinces.⁷ Unfortunately the PISA results show a significant decrease in Saskatchewan's reading scores, a trend also seen in four other provinces. Saskatchewan's reading score has consistently fallen in each assessment since the PISA was introduced. Between 2000 and 2009 Saskatchewan's score has fallen by 25 points and the province's proportion of low achievers (a reading proficiency below level 2 or functionally illiterate) increased between 2000 and 2009 by 6 percentage points to approximately 16%.⁸

In Mathematics Saskatchewan ranked 6th and in science the province ranked 7th. Saskatchewan's score in mathematics remained stable in PISA 2009, although five other Canadian provinces experienced a significant decrease in mathematics scores.⁹

² Statistics Canada. *Performance of Canadian Youth in Reading, Mathematics and Science*, The Daily- Tuesday December 7, 2010.

³ Knighton, T., P. Brochu, T. Gluszynski, 2010. *Measuring Up: Canadian Results of the OECD PISA Study: The Performance of Canada's Youth in Reading, Mathematics and Science – 2009 First Results for Canadians Aged 15*, <http://www.statcan.gc.ca/pub/81-590-x/81-590-x2010001-eng.pdf>, (accessed 02.01.2011).

⁴ Ibid.

⁵ Ibid.

⁶ Bussière, P., T. Knighton, D. Pennock, 2007. *Measuring up: Canadian Results of the OECD PISA Study: The Performance of Canada's Youth in Science, Reading and Mathematics - 2006 First Results for Canadians Aged 15*, <http://www.statcan.gc.ca/pub/81-590-x/81-590-x2007001-eng.pdf>, (accessed 02.01.2011).

⁷ Knighton, T., P. Brochu, T. Gluszynski, 2010. *Measuring Up: Canadian Results of the OECD PISA Study: The Performance of Canada's Youth in Reading, Mathematics and Science – 2009 First Results for Canadians Aged 15*, <http://www.statcan.gc.ca/pub/81-590-x/81-590-x2010001-eng.pdf>, (accessed 02.01.2011).

⁸ Ibid.

⁹ Ibid.

As there was no statistically significant difference in Saskatchewan mathematics and science scores between 2003 and 2009, PISA 2006's finding that 14% of those assessed did not demonstrate the scientific competencies sufficient to enable full participation in life situations related to science and technology is still a significant concern for Saskatchewan's future competitive position in a knowledge-based economy.¹⁰

Saskatchewan Chamber of Commerce Position

The K-12 education system must provide young people with the knowledge and skills necessary to allow them to actively participate in the workforce and enhance Saskatchewan's economic competitiveness. A high school diploma should represent a standard level of education and students must have sufficient literacy and numeracy skills when exiting grade 12. Post-secondary institutions and employers should not experience additional costs and delays because they are teaching basics skills that should have been acquired prior to earning a high school diploma.

The results of PISA 2009 show that additional enhancements to Saskatchewan's K-12 education system, particularly with regards to the province's literacy levels, are still needed to ensure Saskatchewan is successful and competitive in the global economy.

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¹⁰ Bussière, P., T. Knighton, D. Pennock, 2007. *Measuring up: Canadian Results of the OECD PISA Study: The Performance of Canada's Youth in Science, Reading and Mathematics - 2006 First Results for Canadians Aged 15*, <http://www.statcan.gc.ca/pub/81-590-x/81-590-x2007001-eng.pdf>, (accessed 02.01.2011).