Programme for International Student Assessment (PISA) 2009

Performance of Youth in Reading, Mathematics and Science

Results for
Québec Students
Aged 15

Éducation, Loisir et Sport
Québec

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Performance of Québec 15-Year-Olds in Reading, Mathematics and Science

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Introduction

Overview of the assessment

The member countries of the Organisation for Economic Co-operation and Development (OECD) launched the Programme for International Student Assessment (PISA) to provide policy-oriented international indicators on the knowledge and skills of 15-year-old students.[1] PISA is based on a dynamic model of lifelong learning in which new knowledge and skills necessary for successful adaptation to a changing world are continuously acquired throughout life.[2] PISA assesses what 15-year-olds are capable of accomplishing with what they have learned at school, at home or in their communities. As such, PISA examines young people's ability to think and to apply their knowledge and skills.

PISA was first conducted in 2000 and follows a three-year cycle. It assesses the reading literacy, mathematical literacy and scientific literacy of 15-year-old students. Every three years, PISA reports on the results achieved in these three domains and presents more detailed results for the major domain assessed in each particular round. As was the case in 2000, reading was the major domain of PISA in 2009 when the focus was on both overall (or combined) reading literacy and the three reading subdomains: Accessing and Retrieving, Integrating and Interpreting and Reflecting and Evaluating. Although only basic measures for mathematical literacy and scientific literacy are provided, more detailed results for mathematical literacy were made available in 2003 and will be provided again in 2012; those for scientific literacy were made available in 2006 and will be provided again in 2015.

[1] OECD, *Measuring Student Knowledge and Skills: A New Framework for Assessment* (Paris: 1999).
[2] OECD, *PISA 2003 Assessment Framework: Mathematics, Reading, Science and Problem Solving Knowledge and Skills* (Paris: 2003).

A total of 65 countries and economies,[3] took part in PISA 2009, including all 33 OECD member countries.[4] Statistics Canada put together a national sample representative of schools and classes from the ten Canadian provinces. Québec provided a sample that was large enough for its results to appear separately from those for Canada as a whole. In Québec, more than 4000 15-year-olds in over 200 schools took part in the assessment.

The PISA 2009 assessment was administered in schools during regular school hours in April and May 2009. The assessment was a two-hour paper-and-pencil test. Students also completed a 20-minute background questionnaire providing information about themselves and their home, a 10-minute questionnaire on information and communications technology, a 20-minute questionnaire on their school experiences, work activities and relationships with others, while school principals filled out a 20-minute questionnaire about their schools.

Objectives and organization of the report

This report is the first of two reports that provide the initial results from the PISA 2009 assessment for Québec's 15-year-old students and compares their achievements with those of their counterparts in the rest of Canada and around the world. Each province over-sampled the number of students participating in PISA in order to obtain results comparable to those from other countries.

[3] In this report, the term "countries" will also include "economies," which are economic or geographic entities participating in PISA. Also, although, the OECD mean score will be used as a benchmark in this report, references will be made to non-OECD countries in certain analyses.

[4] OECD countries include Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.
Partner countries and economies are: Albania, Argentina, Azerbaijan, Brazil, Bulgaria, Chinese Taipei Colombia, Croatia, Dubai, Estonia, Hong Kong – China, Indonesia, Jordan, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Macao-China, Montenegro, Panama, Peru, Qatar, Romania, Russian Federation, Serbia, Shanghai-China, Singapore, Thailand, Trinidad and Tobago, Tunisia and Uruguay.

The data are taken from the Canadian report entitled *Measuring Up: Canadian results of the OECD PISA Study – The performance of Canada's youth in reading, mathematics and science – PISA 2009 first results for Canadians aged 15*,[5] which can be downloaded free of charge from the following Web sites: www.pisa.gc.ca, www.statcan.ca, www.cmec.ca et www.hrdc-drhc.gc.ca/arb.

The results presented in this report complement the information presented in the PISA 2009 International report.[6] Part 1 provides information on the performance of Québec 15-year-old students on the PISA 2009 assessment in reading, Part 2 reports on their performance in mathematics, and Part 3 on their performance in science. A summary of the results concludes the report.

Based on the information gathered from the background questionnaire, a second report will be published in Spring 2011 regarding the relationship between student background characteristics, school factors, student engagement and reading achievement.

Note: The international report and the Canadian report group countries and economies according to their average test score, but do not rank them. The Québec report provides rankings for Québec as follows: countries and economies are ranked according to the scores obtained, but the provinces are not; they have the same ranking as the country below it or equal to it. To determine Québec's ranking, Canada is removed from the list and Québec is added.

[5] This report is based on the Canadian report and occasionally includes passages from this report. The tables and graphs were also taken from the Canadian report but may have been changed to better illustrate Québec's relative position.

[6] The PISA 2009 International report is released in five volumes. Results presented in this report correspond to the results presented in Volume 1, OECD *Tomorrow's skills today – Student performance in PISA 2009 (*Paris: 2010) and Volume 5, OECD, *Learning Curves, From PISA 2000 to PISA 2009* (Paris: 2010).

Part 1: Québec student performance in reading in an international context

1.1 Assessment context

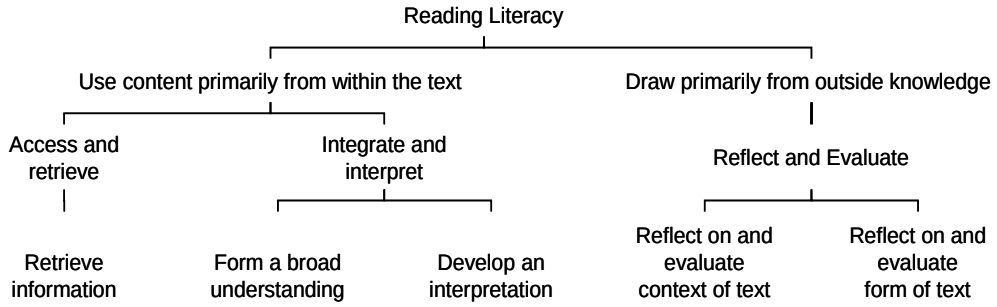
In the PISA context, the term "reading" is used for "reading literacy" which focuses more specifically on the active, purposeful and functional application of reading in a range of situations and for various purposes: "Reading literacy is understanding, using, reflecting on and engaging with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society."[7]

With reading being the first of the PISA domains to be reassessed as a major domain, the reading framework developed in 2000 was revised to account for changes in the field in the past decade. Much of the substance of the PISA 2000 reading framework has been retained in 2009, which allows reporting on trends over time. However, two major modifications in the 2009 framework focus on the incorporation of reading of electronic texts, and the elaboration of the constructs of reading engagement and metacognition. In 2009, the assessment of reading of electronic texts was implemented as an international option in which Québec and Canada elected not to participate. This expanded definition of reading literacy for 2009 does not prevent the reporting on reading trends, since the same reading scales are relevant to all PISA participating countries.

As was the case in PISA 2000, PISA 2009 reports results globally and for the three reading aspects indentified in the framework (Accessing and Retrieving, Integrating and Interpreting, and Reflecting and Evaluating) as well as for the two text formats used in PISA (Continuous Texts and Non-Continuous Texts). The main features of the reading subscales are described in Figure 1.

[7] OECD, *PISA 2009 Assessment Framework, Key competencies in reading, mathematics and science* (Paris: 2009).

Figure 1 Main features of the reading subscales



One way to summarize student performance and to compare the relative standing of various countries is by examining their average test scores. However, simply ranking countries based on their average scores can be misleading, because there is a margin of error associated with each average score. This margin of error should be taken into account in order to determine whether significant differences in average scores exist when comparing countries. When interpreting average performances, only those differences that are *statistically significant*[8] should be taken into account.

1.2 Reading results of Québec students

Québec students continue to perform well in reading in a global context. As shown in Graph 1, Québec had a mean reading score of 522 with a standard error of 3.1, well above the OECD average of 496[9] and significantly below that of only four countries. Québec students ranked sixth among 65 participating countries and economies and fourth among the Canadian provinces. Only one Canadian province—Ontario—significantly outperformed Québec, with a mean score of 531 and a standard error of 3.0.

[8] Only statistically significant differences at the 0.05 level are noted in this report, unless otherwise stated. This means averages did not differ when the 95% confidence intervals for the averages being compared did not overlap. Where confidence intervals did overlap, an additional t-test was conducted to confirm the statistical difference.

[9] The scores for reading and the reading subscales are expressed on a scale with an average or mean among OECD countries of 500 points and a standard deviation of 100 set in PISA 2000 when reading was first the major domain. Approximately two thirds of the students scored between 400 and 600 (i.e. within one standard deviation of the average) for the OECD countries. Due to a change in performance over time, the OECD mean score in subsequent cycles may not necessarily be 500.

Table 1 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Combined scale

Table 1 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Combined scale					
Country, province or economy	**Rank**	**Estimated average score**	**Standard error**	**Confidence interval – 95% lower limit**	**Confidence interval – 95% upper limit**
Shanghai-China	1	556	(2.4)	551	561
Korea	2	539	(3.5)	532	546
Finland	3	536	(2.3)	531	540
Hong Kong-China	4	533	(2.1)	529	537
Alberta	**5**	**533**	**(4.6)**	**524**	**542**
Ontario	**5**	**531**	**(3.0)**	**525**	**536**
Singapore	5	526	(1.1)	524	528
British Columbia	**6**	**525**	**(4.2)**	**516**	**533**
Canada	**6**	**524**	**(1.5)**	**521**	**527**
Québec	**6**	**522**	**(3.1)**	**516**	**528**
New Zealand	7	521	(2.4)	516	525
Japan	8	520	(3.5)	513	527
Nova Scotia	**9**	**516**	**(2.7)**	**510**	**521**
Australia	9	515	(2.3)	510	519
Netherlands	10	508	(5.1)	498	518
Belgium	11	506	(2.3)	501	511
Newfoundland and Labrador	**11**	**506**	**(3.7)**	**499**	**513**
Saskatchewan	**12**	**504**	**(3.3)**	**498**	**511**
Norway	12	503	(2.6)	498	508
Switzerland	13	501	(2.4)	496	505
Estonia	13	501	(2.6)	496	506
Iceland	15	500	(1.4)	498	503
Poland	15	500	(2.6)	495	506
United States	15	500	(3.7)	493	507
Liechtenstein	18	499	(2.8)	494	505
New Brunswick	**18**	**499**	**(2.5)**	**494**	**504**
Germany	19	497	(2.7)	492	503
Sweden	19	497	(2.9)	492	503
Ireland	21	496	(3.0)	490	501
France	21	496	(3.4)	489	502
Denmark	23	495	(2.1)	491	499
Chinese Taipei	23	495	(2,6)	490	500
Manitoba	**23**	**495**	**(3.6)**	**488**	**502**
United Kingdom	25	494	(2.3)	490	499
Hungary	26	494	(3.2)	488	500
Portugal	27	489	(3.1)	483	495

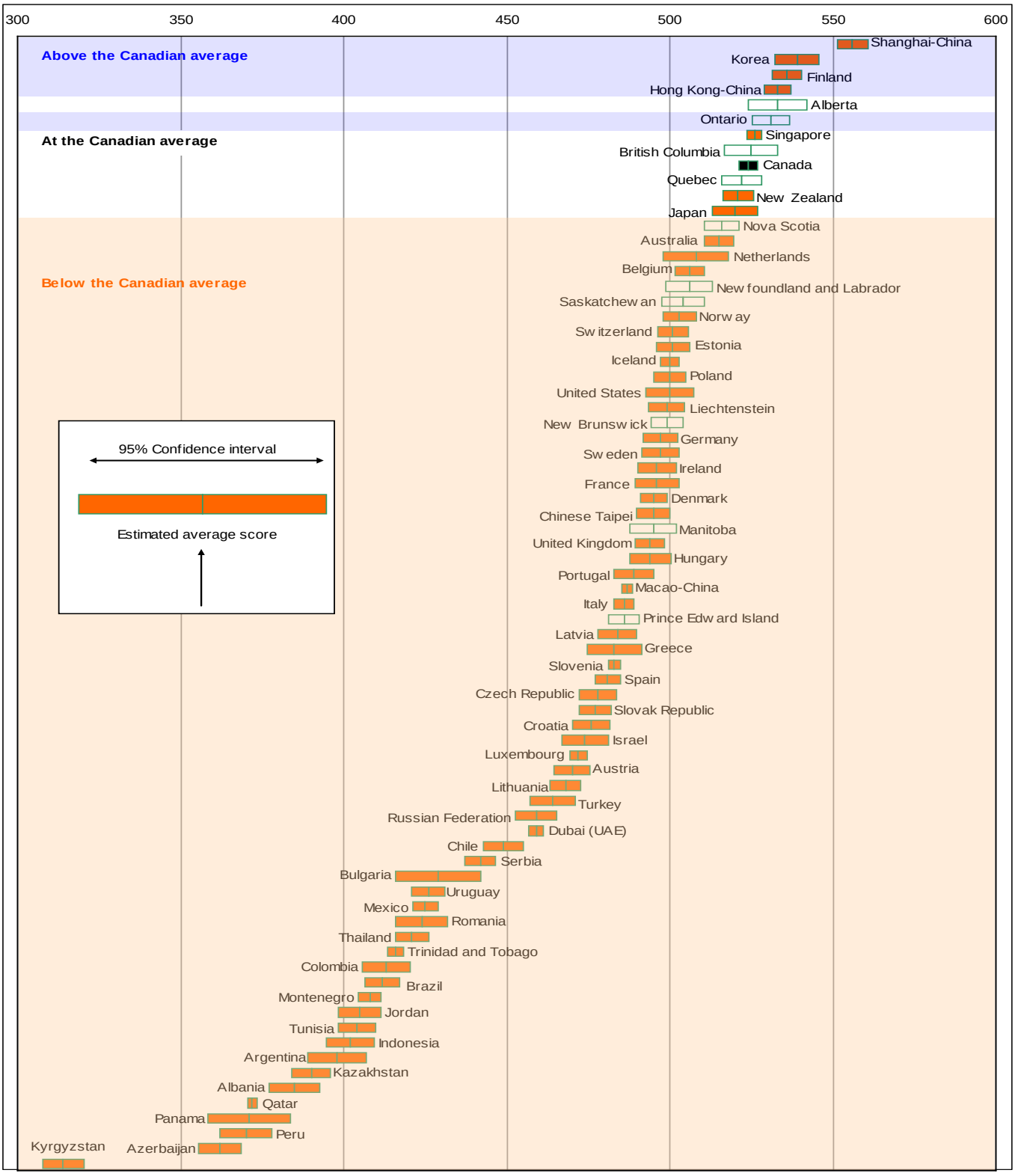
Macao-China	28	487	(0.9)	485	488
Italy	29	486	(1.6)	483	489
Prince Edward Island	**29**	**486**	**(2.4)**	**481**	**490**
Latvia	30	484	(3.0)	478	490
Greece	31	483	(4.3)	474	491
Slovenia	32	483	(1.0)	481	485
Spain	33	481	(2.0)	477	485
Czech Republic	34	478	(2.9)	473	484
Slovak Republic	35	477	(2.5)	472	482
Croatia	36	476	(2.9)	470	481
Israel	37	474	(3.6)	467	481
Luxembourg	38	472	(1.3)	470	475
Austria	39	470	(2.9)	465	476
Lithuania	40	468	(2.4)	464	473
Turkey	41	464	(3.5)	457	471
Russian Federation	42	459	(3.3)	453	466
Dubai	42	459	(1.1)	457	462
Chile	44	449	(3.1)	443	455
Serbia	45	442	(2.4)	437	447
Bulgaria	46	429	(6.7)	416	442
Uruguay	47	426	(2.6)	421	431
Mexico	48	425	(2.0)	421	429
Romania	49	424	(4.1)	416	432
Thailand	50	421	(2.6)	416	427
Trinidad and Tobago	51	416	(1.2)	414	419
Colombia	52	413	(3.7)	406	421
Brazil	53	412	(2.7)	406	417
Montenegro	54	408	(1.7)	404	411
Jordan	55	405	(3.3)	399	411
Tunisia	56	404	(2.9)	398	409
Indonesia	57	402	(3.7)	394	409
Argentina	58	398	(4.6)	389	407
Kazakhstan	59	390	(3.1)	384	396
Albania	60	385	(4.0)	377	393
Qatar	61	372	(0.8)	370	373
Panama	62	371	(6.5)	358	384
Peru	63	370	(4.0)	362	377
Azerbaijan	64	362	(3.3)	355	368
Kyrgyzstan	65	314	(3.2)	308	320

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Graph 1 Estimated average scores and confidence intervals for provinces and countries:
Reading – Combined scale



1.3 Results by reading aspect and text format

1.3.1 Reading aspect – Accessing and Retrieving

Accessing and retrieving involves going to the information space provided and navigating in that space to locate and retrieve one or more distinct pieces of information.

For this aspect, Québec ranked ninth out of 65 countries and fourth out of the Canadian provinces. Six countries significantly outperformed Québec. (See Table 1.1 in Appendix B.)

1.3.2 Reading aspect – Integrating and Interpreting

Integrating and interpreting involves processing what is read to make internal sense of a text.

For this aspect, Québec ranked sixth out of 65 countries and fourth out of the Canadian provinces. Four countries significantly outperformed Québec. (See Table 1.2 in Appendix B.)

1.3.3 Reading aspect – Reflecting and Evaluating

Reflecting and evaluating involves drawing upon knowledge, ideas or attitudes beyond the text in order to relate the information provided within the text to one's own conceptual and experiential frames of reference.

For this aspect, Québec ranked seventh out of 65 countries and fifth out of the Canadian provinces. Four countries significantly outperformed Québec, as did two Canadian provinces—Ontario and Alberta. This is the reading aspect in which Québec students obtained their best scores. (See Table 1.3 in Appendix B.)

1.3.4 Text format – Continuous Texts

In this reading aspect, *continuous texts*[10] are formed by sentences organized into paragraphs. Texts include newspaper articles, essays, short stories, reviews or letters.

For this aspect, Québec ranked seventh out of 65 countries and fourth out of the Canadian provinces. Students from four countries and two Canadian provinces—Ontario and Alberta—scored significantly higher than Québec students. (See Table 1.4 in Appendix B.)

1.3.5 Text format – Non-Continuous Texts

In this reading aspect, *non-continuous texts* are documents that combine several text objects, such as lists, tables, graphs, diagrams, advertisements, schedules, catalogues, indexes and forms.

For this aspect, Québec ranked seventh out of 65 participating countries and fourth out of the Canadian provinces. Students from five countries and two Canadian provinces—Ontario and Alberta—scored significantly higher than Québec students. (See Table 1.4 in Appendix B.)

1.4 Level of proficiency in reading

PISA summarizes student performance for combined reading and for each reading aspect. Additional insight can be obtained from the results if the abilities that correspond to given proficiency levels are described. PISA also summarizes student performance on the reading scale by dividing it into levels based on the tasks that are located within each level. Descriptions are provided for each of these levels in order to provide an overall picture of students' accumulated knowledge and skills required to complete these tasks. Tasks at the lower end of the PISA reading scale are deemed easier and less complex than tasks at the higher end, and this progression in task difficulty and complexity applies to both the combined reading scale and each aspect and text format subscale.

The reading scale was divided into seven levels of proficiency rather than the five levels in 2000 (see Figure 2). The PISA 2009 reading assessment included additional items at the lower and at the higher end, so that performance on PISA could be more fully described at the lower and higher ends.

[10] It should be noted that continuous texts represented approximately 60% of the reading tasks in PISA 2009.

Table 2 shows the distribution of students by proficiency level by country and for the Canadian provinces on the combined reading scale. Tables 2.1 to 2.5 in Appendix B show the distribution for each reading aspect. So as not to be too large, these tables do not show all 65 countries that participated in PISA 2009, but only those whose performance is comparable to that of Québec and most of the other Canadian provinces. Results for countries and provinces are presented in descending order according to the proportion of 15-year-olds who performed at Level 2 or higher. According to the OECD, Level 2 can be considered a baseline level of proficiency, at which students begin to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life.[11] It is at Level 2 that students begin to demonstrate the reading knowledge and skills that will enable them to use reading literacy competencies actively and efficiently.

On the other hand, students performing at the lowest levels (below Level 2) can still accomplish some reading tasks successfully, but they lack some fundamental skills preparing them to either enter the work force or pursue postsecondary education. As shown in Table 2, the proportion of Québec students performing at or below Level 1 was approximately 10%, almost half the proportion of the OECD average (19%). Only two countries—Shanghai-China and Korea—had a statistically smaller proportion of students below Level 2, and both of these countries also had higher average scores. In addition, the proportion of students below Level 2 in Shanghai-China and Korea was at least half of that observed for Québec (see Table 2). And while the proportion of Québec students who performed below Level 3 was much lower compared to other participating countries, still one in ten Québec students do not possess some of the fundamental skills in reading (below Level 2, according to OECD).

Table 2 Percentage of students at each reading proficiency level by country, province or economy: Reading – Combined scale

[11] OECD, *Volume 5: Learning Curves, From PISA 2000 to PISA 2009* (Paris: 2010).

Table 2
Percentage of students at each proficiency level, by country, province and economy: Reading – Combined Scale

Country, economy and province	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	standard error	%	standard error	%	standard error	%	standard error	%	standard error	%	standard error	%	standard error	%	standard error
Shanghai-China	0.1	(0.0)	0.6	(0.1)	3.4	(0.5)	13.3	(0.9)	28.5	(1.2)	34.7	(1.0)	17.0	(1.0)	2.4	(0.5)
Korea	0.2	(0.2)	0.9	(0.3)	4.7	(0.6)	15.4	(1.0)	33.0	(1.2)	32.9	(1.4)	11.9	(1.0)	1.1	0.2
Finland	0.2	(0.1)	1.5	(0.2)	6.4	(0.4)	16.7	(0.6)	30.1	(0.9)	30.6	(0.9)	12.9	(0.7)	1.6	0.2
Hong Kong-China	0.2	(0.1)	1.5	(0.3)	6.6	(0.6)	16.1	(0.8)	31.4	(0.9)	31.8	(0.9)	11.2	(0.7)	1.2	(0.3)
Ontario	0.3	(0.2)	1.6	(0.3)	6.6	(0.6)	19.6	(1.1)	30.1	(1.3)	27.7	(1.2)	12.3	(0.9)	1.9	(0.4)
Alberta	0.3	(0.2)	1.7	(0.6)	8.1	(1.1)	19.0	(1.3)	27.5	(1.2)	27.3	(1.4)	12.6	(1.2)	3.5	(0.9)
Canada	0.4	(0.1)	2.0	(0.2)	7.9	(0.3)	20.2	(0.6)	30.0	(0.7)	26.8	(0.6)	11.0	(0.4)	1.8	(0.2)
Québec	0.4	(0.1)	1.9	(0.4)	8.1	(0.8)	19.8	(1.1)	31.2	(1.3)	27.9	(1.1)	9.6	(0.8)	1.2	(0.3)
British Columbia	0.4	(0.2)	2.2	(0.5)	8.2	(0.9)	19.7	(1.2)	29.8	(1.3)	26.4	(1.2)	11.4	(1.1)	1.9	(0.5)
Nova Scotia	0.6	(0.3)	2.2	(0.5)	8.3	(1.0)	22.3	(1.4)	31.9	(1.5)	24.5	(1.5)	8.7	(0.8)	1.5	(0.4)
Singapore	0.4	(0.1)	2.7	(0.3)	9.3	(0.5)	18.5	(0.6)	27.6	(0.8)	25.7	(0.7)	13.1	(0.5)	2.6	0.3
Estonia	0.3	(0.1)	2.4	(0.4)	10.6	(0.9)	25.6	(1.3)	33.8	(1.0)	21.2	(0.8)	5.4	(0.5)	0.7	(0.2)
Japan	1.3	(0.4)	3.4	(0.5)	8.9	(0.7)	18.0	(0.8)	28.0	(0.9)	27.0	(1.0)	11.5	(0.7)	1.9	(0.4)
Newfoundland and Labrador	0.4	(0.3)	2.6	(0.7)	10.8	(1.5)	24.5	(2.1)	30.7	(2.0)	22.6	(1.9)	7.4	(1.1)	1.1	(0.6)
Australia	1.0	(0.1)	3.3	(0.3)	10.0	(0.4)	20.4	(0.6)	28.5	(0.7)	24.1	(0.7)	10.7	(0.5)	2.1	(0.3)
New Zealand	0.9	(0.2)	3.2	(0.4)	10.2	(0.6)	19.3	(0.8)	25.8	(0.8)	24.8	(0.8)	12.9	(0.8)	2.9	(0.4)
Saskatchewan	0.8	(0.3)	3.2	(0.6)	11.5	(1.1)	22.9	(1.5)	30.1	(1.6)	22.8	(1.8)	7.8	(1.1)	0.9	(0.4)
New Brunswick	0.4	(0.2)	3.5	(0.5)	12.3	(0.9)	25.5	(1.3)	29.8	(1.6)	20.8	(1.3)	6.6	(0.8)	1.1	0.5
Manitoba	0.9	(0.3)	4.1	(0.8)	12.6	(1.2)	25.7	(1.6)	27.4	(1.8)	21.2	(1.4)	7.1	(0.8)	1.0	(0.3)
Prince Edward Island	1.2	(0.4)	5.6	(0.8)	14.4	(1.1)	25.3	(1.4)	27.9	(1.4)	18.7	(1.2)	6.0	(0.6)	0.9	(0.4)

Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.

Figure 2 Summary descriptions for the seven levels of proficiency in reading

Level	Lower score limit	Percentage of students able to perform tasks at this level or above[1]	Characteristics of tasks
6	698.32	0.8% of students across the OECD, 1.8% in Canada and 1.2% in Québec can perform tasks at least at Level 6 on the reading scale	• Requires the reader to make multiple inferences, comparisons and contrasts that are both detailed and precise. • Requires demonstration of a full and detailed understanding of one or more texts and may involve integrating information from more than one text. • May require the reader to deal with unfamiliar ideas, in the presence of prominent competing information, and to generate abstract categories for interpretations. • Reflective and evaluation tasks may require the reader to hypothesize about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives, and applying sophisticated understandings from beyond the text. • Access and retrieve tasks: there is limited data about these tasks at this level, but it appears that a salient condition is precision of analysis and fine attention to detail that is inconspicuous in the texts.
5	625.61	7.7% of students across the OECD, 12.8% in Canada and10.8% in Québec can perform tasks at least at Level 5 on the reading scale	• For all aspects of reading, tasks at this level typically involve dealing with concepts that are contrary to expectations. • Retrieving tasks require the reader to locate and organize several pieces of deeply embedded information, inferring which information in the text is relevant. • Reflective tasks require critical evaluation or hypothesis, drawing on specialized knowledge. Both interpretative and reflective tasks require a full and detailed understanding of a text whose content or form is unfamiliar.
4	552.89	28.6% of students across the OECD, 39.6% in Canada and 38.7% in Québec can perform tasks at least at Level 4 on the reading scale	• Retrieving information tasks require the reader to locate and organize several pieces of embedded information. • Some interpretive tasks at this level require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context. • Reflective tasks at this level require readers to use formal or public knowledge to hypothesize about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.

3	480.18	57.4% of students across the OECD, 69.6% in Canada and 69.9% in Québec can perform tasks at least at Level 3 on the reading scale	• Tasks at this level require the reader to locate, and in some cases, recognize the relationship between several pieces of information that must meet multiple conditions. • Interpretative tasks at this level require the reader to integrate several parts of a text in order to identify a main idea, understand a relationship or construe the meaning of a word or phrase. They need to take into account many features in comparing, contrasting or categorizing. Often the required information is not prominent or there is much competing information; or there are other text obstacles, such as ideas that are contrary to expectation or negatively worded. • Reflective tasks at this level may require connections, comparisons and explanations, or they may require the reader to evaluate a feature of the text. Some reflective tasks require readers to demonstrate a fine understanding of the text in relation to familiar, everyday knowledge. Other tasks do not require detailed text comprehension but require the reader to draw on less common knowledge.
2	407.47	81.4% of students across the OECD, 89.8% in Canada and 89.7% in Québec can perform tasks at least at Level 2 on the reading scale	• Some tasks at this level require the reader to locate one or more pieces of information, which may need to be inferred and may need to meet several conditions. • Others tasks require recognizing the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low-level inferences. • Tasks at this level may involve comparisons or contrasts based on a single feature in the text. • Typical reflective tasks at this level require readers to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes.
1a	334.75	94.4% of students across the OECD, 97.7% in Canada and 97.8% in Québec can perform tasks at least at Level 1a on the reading scale	• Tasks at this level require the reader to locate one or more independent pieces of explicitly stated information; to recognize the main theme or author's purpose in a text about a familiar topic, or to make a simple connection between information in the text and common, everyday knowledge. • Typically the required information in the text is prominent and there is little, if any, competing information. • The reader is explicitly directed to consider relevant factors in the task and in the text.
1b	262.04	98.9% of students across the OECD and 99.7% in both Canada and Québec can perform tasks at least at Level 1b on the reading scale	• Tasks at this level require the reader to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text with a familiar context and text type, such as a narrative or a simple list. • The text typically provides support to the reader, such as repetition of information, pictures or familiar symbols. • There is minimal competing information. In tasks requiring interpretation, the reader may need to make simple connections between adjacent pieces of information.

1.5 Comparison of the reading results of boys and girls

Past PISA assessments have established a clear pattern of significant gender differences in reading favouring girls. This gender gap in performance continued in PISA 2009 in Québec, in all the Canadian provinces and in all countries participating in PISA.

In PISA 2009 in Québec, girls outperformed boys by 31 points on the combined reading scale. This is similar to the average gap of 33 points in OECD countries. The gap was least pronounced (27 points) in Integrating and Interpreting and most pronounced (37 points) in Reflecting and Evaluating. It was in Accessing and Retrieving that both girls and boys scored lowest (532 points and 499 points, respectively). Girls achieved their highest scores in Reflecting and Evaluating (543 points), while boys achieved theirs in Non-Continuous Texts (509 points).

See Table 3.

1.6 Comparison of the reading results of Anglophone and Francophone students

In Québec, there were no significant differences between the results of Anglophone students and those of Francophone students on the combined reading scale and on each of the subscales. Anglophone students outperformed Francophone students by roughly 3 points in Reflecting and Evaluating and in Continuous Texts, while Francophone students outperformed Anglophone students by 2 to 5 points on the three other subscales and on the combined reading scale. Only one other Canadian province—Manitoba—saw no significant differences in results. In the five other provinces (Nova Scotia, New Brunswick, Ontario, Alberta and British Columbia), where population groups could be sampled separately and where the sample was sufficiently large to allow for separate reporting, Anglophone students significantly outperformed Francophone students on all the scales.

See Table 4.

Table 3

Estimated average scores and gender differences for combined reading scale and reading subscales, by province

Canada and the provinces	Gender differences						Gender differences					
	Girls		Boys		Difference between girls and boys		Girls		Boys		Difference between girls and boys	
	Average score	Standard error	Average score	Standard error	Difference	Standard error	Average score	Standard error	Average score	Standard error	Difference	Standard error
	Combined Reading						**Integrating and Interpreting**					
Canada	542	(1.7)	507	(1.8)	**34**	**(1.9)**	537	(1.8)	507	(1.9)	**30**	**(2.2)**
Newfoundland and Labrador	529	(4.5)	483	(4.7)	**45**	**(5.3)**	524	(5.1)	479	(4.6)	**45**	**(6.0)**
Prince Edward Island	510	(3.3)	462	(4.0)	**48**	**(5.5)**	505	(3.3)	459	(4.0)	**46**	**(5.6)**
Nova Scotia	530	(3.2)	501	(3.9)	**29**	**(4.7)**	529	(3.8)	500	(3.8)	**29**	**(5.0)**
New Brunswick	515	(2.9)	483	(3.6)	**32**	**(4.4)**	513	(2.9)	485	(4.2)	**28**	**(5.0)**
Québec	537	(3.3)	506	(3.9)	**31**	**(3.9)**	535	(3.7)	507	(4.2)	**27**	**(4.5)**
Ontario	549	(3.3)	513	(3.6)	**36**	**(3.9)**	542	(3.5)	513	(3.6)	**30**	**(4.2)**
Manitoba	511	(5.4)	479	(4.6)	**32**	**(7.2)**	506	(5.9)	479	(4.9)	**28**	**(7.5)**
Saskatchewan	524	(3.2)	486	(4.5)	**37**	**(4.6)**	519	(3.5)	486	(4.7)	**33**	**(4.8)**
Alberta	549	(5.7)	517	(4.6)	**32**	**(4.9)**	547	(6.0)	517	(4.7)	**30**	**(5.0)**
British Columbia	543	(4.1)	507	(5.4)	**36**	**(4.5)**	539	(4.6)	506	(5.8)	**32**	**(4.7)**
	Accessing and Retrieving						**Reflecting and Evaluating**					
Canada	536	(1.6)	498	(1.9)	**38**	**(2.0)**	555	(1.9)	516	(1.9)	**38**	**(2.0)**
Newfoundland and Labrador	524	(4.9)	477	(5.3)	**47**	**(6.4)**	541	(4.3)	496	(4.3)	**44**	**(5.3)**
Prince Edward Island	506	(3.4)	457	(4.1)	**49**	**(5.7)**	520	(3.1)	474	(3.8)	**46**	**(5.3)**
Nova Scotia	522	(3.8)	491	(4.9)	**31**	**(5.6)**	541	(3.6)	513	(4.2)	**28**	**(5.1)**
New Brunswick	504	(3.4)	470	(4.3)	**34**	**(5.0)**	524	(2.6)	486	(3.8)	**37**	**(4.6)**
Québec	532	(3.8)	499	(4.3)	**33**	**(4.0)**	543	(3.4)	506	(4.0)	**37**	**(3.5)**
Ontario	542	(3.2)	504	(4.0)	**38**	**(4.0)**	567	(3.6)	525	(3.8)	**43**	**(4.1)**
Manitoba	517	(5.2)	476	(5.6)	**41**	**(7.7)**	520	(5.9)	487	(5.1)	**34**	**(7.8)**
Saskatchewan	528	(3.2)	478	(5.1)	**50**	**(5.0)**	537	(3.5)	498	(4.6)	**39**	**(4.7)**
Alberta	540	(5.3)	504	(4.9)	**37**	**(5.0)**	563	(5.9)	529	(4.2)	**33**	**(5.5)**
British Columbia	537	(4.3)	496	(5.9)	**42**	**(5.0)**	554	(4.1)	519	(5.4)	**35**	**(4.7)**

Table 3 (cont.)

Estimated average scores and gender differences for combined reading and reading subscales, by province

Canada and the provinces	Gender differences						Gender differences					
	Girls		Boys		Difference between girls and boys		Girls		Boys		Difference between girls and boys	
	Average score	Standard error	Average score	Standard error	Difference	Standard error	Average score	Standard error	Average score	Standard error	Difference	Standard error
	Continuous Texts						Non-Continuous Texts					
Canada	543	(1.7)	506	(1.9)	**37**	**(2.1)**	544	(1.9)	511	(1.8)	**33**	**(2.0)**
Newfoundland and Labrador	533	(4.5)	483	(5.1)	**50**	**(5.6)**	534	(4.8)	487	(4.7)	**47**	**(5.4)**
Prince Edward Island	512	(3.3)	461	(4.0)	**51**	**(5.5)**	512	(3.1)	468	(4.0)	**44**	**(5.3)**
Nova Scotia	531	(3.7)	502	(4.1)	**30**	**(5.3)**	532	(3.7)	505	(4.3)	**27**	**(5.6)**
New Brunswick	517	(3.0)	482	(3.6)	**35**	**(4.4)**	505	(2.8)	479	(3.7)	**27**	**(4.6)**
Québec	536	(3.4)	501	(3.9)	**35**	**(3.8)**	536	(3.7)	509	(4.1)	**28**	**(3.9)**
Ontario	551	(3.4)	513	(3.9)	**38**	**(4.3)**	552	(3.7)	516	(3.8)	**36**	**(4.1)**
Manitoba	514	(6.0)	479	(5.0)	**35**	**(7.6)**	513	(4.9)	481	(4.8)	**32**	**(6.7)**
Saskatchewan	527	(3.2)	488	(4.5)	**39**	**(5.0)**	526	(3.5)	489	(4.6)	**38**	**(4.9)**
Alberta	550	(5.7)	516	(4.7)	**34**	**(4.8)**	553	(5.7)	524	(4.8)	**30**	**(4.9)**
British Columbia	543	(4.6)	505	(5.8)	**38**	**(5.3)**	549	(4.1)	513	(5.1)	**36**	**(4.5)**

Note: Statistically significant differences appear in bold.

Table 4

Estimated average scores and language of instruction differences for combined reading scale and reading subscales, by province

	Anglophone		Francophone		Difference between English and French language of instruction			Anglophone		Francophone		Difference between English and French language of instruction	
Province	**Average score**	**Standard error**	**Average score**	**Standard error**	**Difference**	**Standard error**		**Average score**	**Standard error**	**Average score**	**Standard error**	**Difference**	**Standard error**
	Combined Reading							**Reflecting and Evaluating**					
Nova Scotia	517	(2.7)	479	(8.5)	**38**	**(9.0)**		527	(3.0)	491	(8.0)	**37**	**(8.6)**
New Brunswick	511	(3.1)	469	(3.3)	**41**	**(4.8)**		517	(3.0)	476	(2.8)	**41**	**(4.2)**
Québec	520	(4.1)	522	(3.5)	-2	(5.4)		527	(4.0)	525	(3.7)	3	(5.4)
Ontario	533	(3.1)	475	(2.4)	**58**	**(3.9)**		548	(3.3)	493	(2.4)	**55**	**(4.1)**
Manitoba	496	(3.6)	487	(9.2)	8	(10.0)		504	(4.1)	499	(10.1)	5	(10.8)
Alberta	533	(4.6)	475	(7.0)	**58**	**(8.5)**		546	(4.4)	492	(6.8)	**54**	**(8.1)**
British Columbia	525	(4.2)	475	(9.1)	**49**	**(9.9)**		536	(4.2)	497	(11.6)	**39**	**(12.3)**
	Accessing and Retrieving							**Continuous Texts**					
Nova Scotia	507	(3.4)	474	(8.4)	**32**	**(9.1)**		517	(2.9)	471	(8.8)	**47**	**(9.4)**
New Brunswick	497	(4.1)	463	(3.3)	**34**	**(5.4)**		513	(3.2)	467	(2.9)	**46**	**(4.5)**
Québec	513	(4.3)	515	(4.0)	-2	(5.8)		519	(3.9)	519	(3.6)	0	(5.3)
Ontario	525	(3.2)	465	(2.9)	**61**	**(4.3)**		534	(3.2)	471	(2.6)	**64**	**(3.9)**
Manitoba	497	(3.9)	485	(9.1)	12	(10.1)		497	(4.1)	485	(9.0)	12	(10.1)
Alberta	523	(4.5)	456	(11.3)	**66**	**(12.2)**		534	(4.8)	472	(7.4)	**61**	**(8.9)**
British Columbia	516	(4.5)	465	(9.0)	**51**	**(10.2)**		524	(4.5)	470	(10.5)	**54**	**(11.4)**
	Integrating and Interpreting							**Non-Continuous Texts**					
Nova Scotia	516	(2.9)	470	(8.4)	**45**	**(8.8)**		519	(2.9)	499	(10.1)	**20**	**(10.5)**
New Brunswick	512	(3.4)	468	(3.0)	**45**	**(4.8)**		502	(3.2)	469	(2.8)	**33**	**(4.4)**
Québec	517	(3.7)	522	(3.7)	-5	(5.3)		520	(4.1)	523	(3.9)	-3	(5.7)
Ontario	530	(3.1)	471	(2.6)	**59**	**(4.0)**		536	(3.4)	487	(2.9)	**49**	**(4.4)**
Manitoba	493	(4.1)	486	(8.4)	7	(9.3)		498	(3.6)	494	(8.5)	3	(9.4)
Alberta	532	(4.8)	476	(6.8)	**56**	**(8.5)**		539	(4.7)	480	(6.9)	**59**	**(8.5)**
British Columbia	522	(4.7)	469	(8.9)	**53**	**(10.3)**		531	(4.0)	490	(11.0)	**41**	**(11.5)**

Note: Statistically significant differences appear in bold.

1.7 Comparison of reading performance since 2000

For the first time, PISA 2009 enables countries to compare their own performance over time from 2000 to 2009. This will provide important information to inform educational policy and instructional practices on the evolution of skills.

PISA 2009 provides the fourth assessment of reading and second full assessment of reading since 2000, when it was first introduced as the major domain. Consequently, it is possible to obtain detailed comparisons about how student performance in reading changed over this nine-year period. While this section looks at change over time, performance differences should be interpreted with caution for several reasons. First, while the measurement approach used in PISA is consistent across cycles, minor refinements were made to the assessment framework so small changes should be interpreted prudently. Second, in order to allow for comparability over time, some common assessment items were used in each survey. However, because there are a limited number of common items, an additional measurement error must be taken into account for these comparisons over time. Consequently, only changes that are indicated as statistically significant should be considered. In this section, data are reported for the 39 countries that participated in both the 2000 and 2009 PISA assessments.

Among OECD countries considered as a whole, reading performance remained unchanged. The OECD average for the 27 countries that participated in PISA in 2000 and 2009[12] of 495 points in reading in 2009 was not significantly different from the average score of 496 in 2000. However, changes in performance were observed across countries. Reading performance increased in 13 countries, remained unchanged in 21 countries and decreased in 5 countries. Québec's mean score in reading decreased from 536 in 2000 to 522 in 2009, a decrease that is statistically significant.

In order to understand how Québec's performance level has evolved, Québec's change in relative performance should be considered alongside with its overall performance. Québec was one of ten participants whose performance in reading was above the OECD average in both 2000 and 2009. However, because Québec did not improve its performance, the number of countries who statistically outperformed Québec increased from one in 2000 to three in 2009.[13] Only Finland outperformed Québec in 2000, and although Finland saw a decrease in performance in 2009, its relative score remained higher than Québec's. In contrast, Korea's performance increased between 2000 and

[12] Three OECD countries (The Netherlands, the Slovak Republic and Turkey) were not included in the PISA 2000 assessment.
[13] Although Shanghai-China outperformed Québec in PISA 2009, it is not included in this comparison since it did not participate in PISA 2000.

2009, leading it to outperform Québec in 2009, while Hong Kong-China[14] outperformed Québec because it did not have a significant decrease in performance between 2000 and 2009.

Table 5 Comparison of performance in reading, PISA 2000, 2003, 2006 and 2009, Canada and the provinces

Table 5

Comparison of performance in reading, PISA 2000, 2003, 2006 and 2009
Canada and the provinces

	PISA combined reading score							
	2000		2003		2006		2009	
	Average score	Standard error	Average score	Standard error with linkage error	Average score	Standard error with linkage error	Average score	Standard error with linkage error
Newfoundland and Labrador	517	(2.8)	521	(4.9)	514	(5.4)	506	(6.2)
Prince Edward Island	517	(2.4)	**495**	(4.4)	**497**	(5.1)	**486**	**(5.5)**
Nova Scotia	521	(2.3)	513	(4.4)	**505**	(5.7)	516	(5.6)
New Brunswick	501	(1.8)	503	(4.3)	497	(5.0)	499	(5.5)
Québec	536	(3.0)	525	(5.7)	522	(6.7)	**522**	**(5.8)**
Ontario	533	(3.3)	530	(5.1)	534	(6.4)	531	(5.8)
Manitoba	529	(3.5)	520	(5.0)	516	(5.7)	**495**	**(6.1)**
Saskatchewan	529	(2.7)	**512**	**(5.6)**	**507**	**(6.3)**	**504**	**(5.9)**
Alberta	550	(3.3)	543	(5.7)	535	(6.1)	**533**	**(6.7)**
British Columbia	538	(2.9)	535	(4.5)	528	(7.1)	525	(6.5)
Canada	534	(1.6)	528	(4.1)	527	(5.1)	524	(5.2)

Note: The linkage error is incorporated into the standard error for 2003, 2006 and 2009. Statistically significant differences compared to PISA 2000 appear in bold.

[14] Hong Kong - China participated in PISA + 2001 and its results were added to the PISA 2000 report.

Part 2: Québec student performance in mathematics in an international context

2.1 Assessment context

Throughout this report, "mathematics" is used to signify "mathematical literacy," which PISA defines as follows:

Mathematical literacy: The capacity to identify, to understand, and to engage in mathematics and make well-founded judgments about the role that mathematics plays, as needed for individuals' current and future private life, occupational life, social life with peers and relatives and as a constructive, concerned and reflective citizen.[15]

Since mathematics was a minor domain in the 2009 PISA assessment, a smaller amount of assessment time was given to this domain compared to the major domain of reading. Consequently, PISA 2009 allows only an update on overall performance and not on the subdomains that were possible when mathematics was the major domain in 2003.

2.2 Mathematics results of Québec students

Québec students continue to perform very well in mathematics in a global context. As Graph 2 shows, Québec had a mean mathematics score of 543 points (with a standard error of 3.4), well above the OECD average of 497 and significantly below that of only three countries. Québec students ranked fifth (with Chinese Taipei) among the 65 participating countries and first among the Canadian provinces, significantly outperforming all of them.

[15] OECD, *PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science* (Paris: 2010).

Table 6 Estimated average scores and confidence intervals for countries, provinces and economies: Mathematics

Table 6 Estimated average scores and confidence intervals for countries, provinces and economies: Mathematics					
Country, province or economy	**Rank**	**Estimated average score**	**Standard error**	**Confidence interval – 95% lower limit**	**Confidence interval – 95% upper limit**
Shanghai-China	1	600	(2.8)	595	606
Singapore	2	562	(1.4)	559	565
Hong Kong-China	3	555	(2.7)	549	560
Korea	4	546	(4.0)	538	554
Chinese Taipei	5	543	(3.4)	537	550
Québec	**5**	**543**	**(3.4)**	**536**	**550**
Finland	6	541	(2.2)	536	545
Liechtenstein	7	536	(4.1)	528	544
Switzerland	8	534	(3.3)	527	540
Japan	9	529	(3.3)	522	536
Alberta	**10**	**529**	**(4.4)**	**520**	**538**
Canada	**10**	**527**	**(1.6)**	**524**	**530**
Netherlands	11	526	(4.7)	517	535
Ontario	**11**	**526**	**(3.2)**	**519**	**532**
Macao-China	12	525	(0.9)	523	527
British Columbia	**13**	**523**	**(4.6)**	**514**	**532**
New Zealand	13	519	(2.3)	515	524
Belgium	14	515	(2.3)	511	520
Australia	15	514	(2.5)	509	519
Germany	16	513	(2.9)	507	518
Estonia	17	512	(2.6)	507	517
Nova Scotia	**18**	**512**	**(2.3)**	**508**	**517**
Iceland	18	507	(1.4)	504	509
Saskatchewan	**19**	**506**	**(3.2)**	**499**	**512**
New Brunswick	**19**	**504**	**(2.2)**	**499**	**508**
Denmark	19	503	(2.6)	498	508
Newfoundland and Labrador	**19**	**503**	**(2.8)**	**497**	**508**
Slovenia	20	501	(1.2)	499	504
Manitoba	**20**	**501**	**(3.6)**	**494**	**509**
Norway	21	498	(2.4)	493	503
Slovak Republic	22	497	(3.1)	491	503
France	22	497	(3.1)	491	503
Austria	24	496	(2.7)	491	501
Poland	25	495	(2.8)	489	500
Sweden	26	494	(2.9)	489	500
Czech Republic	27	493	(2.8)	487	498

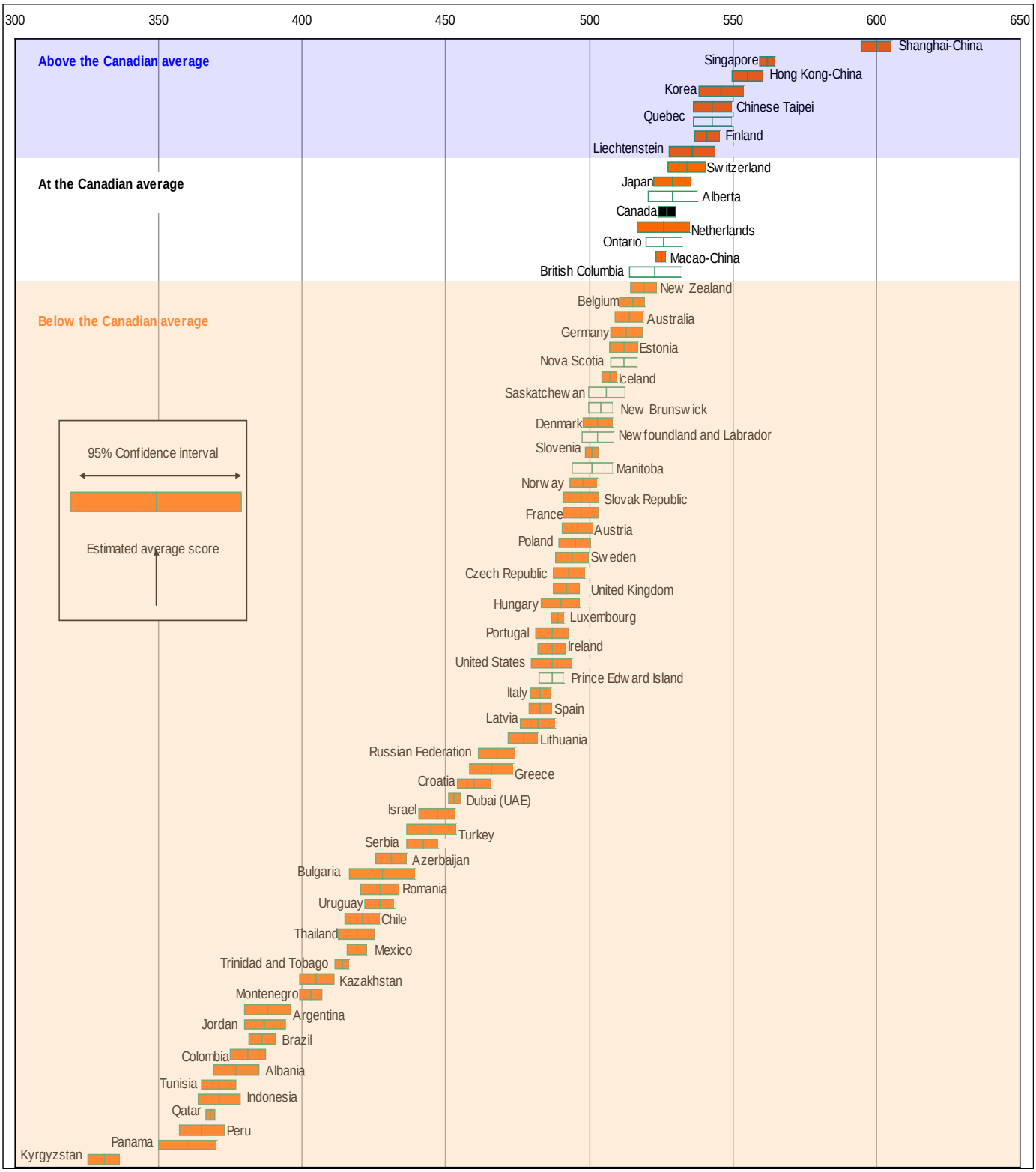
United Kingdom	28	492	(2.4)	488	497
Hungary	29	490	(3.5)	483	497
Luxembourg	30	489	(1.2)	487	491
Portugal	31	487	(2.9)	481	493
Ireland	31	487	(2.5)	482	492
United States	31	487	(3.6)	480	494
Prince Edward Island	**31**	**487**	**(2.3)**	**483**	**492**
Italy	34	483	(1.9)	479	487
Spain	34	483	(2.1)	479	488
Latvia	36	482	(3.1)	476	488
Lithuania	37	477	(2.6)	471	482
Russian Federation	38	468	(3.3)	461	474
Greece	39	466	(3.9)	458	474
Croatia	40	460	(3.1)	454	466
Dubai	41	453	(1.1)	450	455
Israel	42	447	(3.3)	440	453
Turkey	43	445	(4.4)	437	454
Serbia	44	442	(2.9)	437	448
Azerbaijan	45	431	(2.8)	426	436
Bulgaria	46	428	(5.9)	417	440
Romania	47	427	(3.4)	420	434
Uruguay	47	427	(2.6)	422	432
Chile	49	421	(3.1)	415	427
Thailand	50	419	(3.2)	412	425
Mexico	50	419	(1.8)	415	422
Trinidad and Tobago	52	414	(1.3)	412	417
Kazakhstan	53	405	(3.0)	399	411
Montenegro	54	403	(2.0)	399	406
Argentina	55	388	(4.1)	380	396
Jordan	56	387	(3.7)	379	394
Brazil	57	386	(2.4)	381	390
Colombia	58	381	(3.2)	374	387
Albania	59	377	(4.0)	370	385
Tunisia	60	371	(3.0)	366	377
Indonesia	61	371	(3.7)	364	379
Qatar	62	368	(0.7)	367	369
Peru	63	365	(4.0)	357	373
Panama	64	360	(5.2)	349	370
Kyrgyzstan	65	331	(2.9)	326	337

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Graph 2 Estimated average scores and confidence intervals for provinces and countries: Mathematics



2.3 Comparison of the mathematics results of boys and girls

On average across OECD countries in mathematics, boys outperformed girls by 12 points. In Québec, this difference was greater, with boys scoring approximately 18 points higher than girls, a significant difference. In Canada, boys also outperformed girls by 12 points. However, the gender gap in mathematics was much less pronounced than the gender gap in reading.

Table 7 Estimated average scores and gender differences for mathematics

Table 7
Estimated average scores and gender differences for mathematics, by province

Canada and the provinces	Gender differences					
	Girls		Boys		Difference between girls and boys	
	Average score	Standard error	Average score	Standard error	Difference	Standard error
Canada	521	(1.7)	533	(2.0)	**-12**	**(1.8)**
Newfoundland and Labrador	501	(3.7)	504	(3.9)	-4	(4.9)
Prince Edward Island	485	(3.5)	490	(3.9)	-4	(5.8)
Nova Scotia	504	(3.0)	520	(3.4)	**-17**	**(4.5)**
New Brunswick	495	(3.1)	513	(3.2)	**-18**	**(4.4)**
Québec	534	(3.7)	552	(4.3)	**-17**	**(3.8)**
Ontario	522	(3.4)	529	(4.0)	-7	(3.7)
Manitoba	497	(4.9)	506	(4.4)	-9	(6.0)
Saskatchewan	503	(3.8)	508	(3.9)	-5	(4.1)
Alberta	521	(5.3)	537	(4.5)	**-17**	**(4.5)**
British Columbia	515	(4.7)	531	(5.4)	**-16**	**(4.5)**
OECD (Total)	481	(1.3)	496	(1.3)	**-15**	**(1.3)**

Note: Statistically significant differences appear in bold.

2.4 Comparison of the mathematics results of Anglophone and Francophone students

In Québec, there was a significant difference of 11 points between the results of Francophone students and those of Anglophone students. Only in one other province—Manitoba—did Francophone students obtain better results than Anglophone students; however, the difference was not significant (6 points). In the five other provinces, Anglophone students scored higher than their Francophone counterparts, with differences ranging from 8 to 41 points. Only in Nova Scotia was the difference not significant (8 points). In the other provinces, the differences were more pronounced and statistically significant.

Table 8 Estimated average scores and language of instruction differences for mathematics, by province

Table 8

Estimated average scores and language of instruction differences for mathematics, by province

Province	Anglophone		Francophone		Difference between English and French language of instruction	
	Average score	Standard error	Average score	Standard error	Difference	Standard error
Nova Scotia	512	(2,3)	505	7.2	8	(7.8)
New Brunswick	508	(3.2)	494	3.1	**14**	**(5.0)**
Québec	533	(4.3)	544	3.8	**-11**	**(5.6)**
Ontario	527	(3.3)	500	2.3	**27**	**(3.8)**
Manitoba	501	(3.7)	508	7.6	-6	(8.6)
Alberta	529	(4.4)	490	7.1	**39**	**(8.3)**
British Columbia	524	(4.6)	483	11.1	**41**	**(12.0)**

Note: Statistically significant differences appear in bold.

2.5 Comparison of mathematics performance over time

PISA 2009 is the third assessment of mathematics since PISA 2003, when the first major assessment of mathematics took place. Since comparisons over time can only be made from the point at which a major assessment of the domain took place, comparisons in mathematics are more limited since there have not yet been two full assessments of the area in the nine years of PISA testing. While this section looks at changes over time, performance differences should be interpreted with caution for several reasons. First, since data are available for three points in time for mathematics, it is not possible to determine the extent to which observed differences are indicative of longer-term changes. Second, in order to allow for comparability over time, some common assessment items were used in each survey. However, because there are a limited number of common items, particularly when the domain was a minor focus, an additional measurement error must be taken into account for these comparisons over time. Consequently only changes that are indicated as statistically significant should be considered.

Across OECD countries as a whole, mathematics performance remained unchanged between PISA 2003 and PISA 2009. However, there were changes in performance in some of the 40 countries that participated in both PISA 2003 and 2009. In 8 countries mathematics performance improved, in 22 countries mathematics performance remained unchanged and in 10 countries mathematics performance was slightly lower. In Québec, there was a small non-significant increase from 537 points in 2003, to 540 points in 2006 and 543 points in 2009. In Canada, performance in mathematics did not change significantly, decreasing slightly from 532 points in 2003 to 527 points in 2006 and 2009. Québec is the only province where mathematics test scores increased.

In order to understand how Québec's performance level in mathematics has evolved, Québec's change in performance should be considered alongside with its overall performance. Although Québec continues to have very strong performance in mathematics and experienced no significant change over time, the number of countries that statistically outperformed Québec decreased from two in 2003 to one in 2009.[16] Only Hong Kong-China outperformed Québec in 2003 and again in 2009.

[16] Although Shanghai-China and Singapore outperformed Québec in mathematics in PISA 2009, they are not included in this comparison since they did not participate in PISA 2003.

Table 9 Comparisons of average performance in mathematics in PISA 2003, 2006 and 2009, Canada and the provinces, since the 2003 major assessment

Table 9

Comparisons of average performance in mathematics in PISA 2003, 2006 and 2009
Canada and the provinces, since the 2003 major assessment

	PISA mathematics score					
	2003		2006		2009	
	Average score	Standard error	Average score	Standard error with linkage error	Average score	Standard error with linkage error
Newfoundland and Labrador	517	-2.5	507	-3.1	**503**	**-3.4**
Prince Edward Island	500	-2	501	-2.7	**487**	**-3**
Nova Scotia	515	-2.2	506	-2.8	512	-3
New Brunswick	512	-1.8	506	-2.5	**504**	**-3**
Québec	537	-4.7	540	-4.4	543	-3.9
Ontario	530	-3.6	526	-4	526	-3.8
Manitoba	528	-3.1	521	-3.6	**501**	**-4.1**
Saskatchewan	516	-3.9	507	-3.7	506	-3.8
Alberta	549	-4.3	**530**	**-4**	**529**	**-4.8**
British Columbia	538	-2.4	**523**	**-4.7**	**523**	**-5**
Canada	532	-1.8	527	-2.4	527	-2.6

Note: The linkage error is incorporated into the standard error for 2006 and 2009.
Statistically significant differences compared to PISA 2003 appear in bold.

Part 3: Québec student performance in science in an international context

3.1 Assessment context

Throughout this report, "science" is used to signify "scientific literacy," which PISA defines as follows:

Scientific literacy: The capacity to use scientific knowledge, to identify questions and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity.[17]

Since science was a minor domain in the 2009 PISA assessment, a smaller amount of assessment time was given to this domain compared to the major domain of reading. Consequently, PISA 2009 allows only an update on overall performance and not on the subdomains that were possible when science was the major domain in 2006.

3.2 Science results of Québec students

Québec students continue to perform well in science in a global context. As Graph 3 shows, Québec had a mean science score of 524 points (with a standard error of 3.2), well above the OECD average of 501 and significantly below that of only six countries. Québec students ranked tenth among the 65 participating countries and fourth among the Canadian provinces. Only Alberta obtained significantly higher results.

[17] OECD, *PISA 2009 Assessment Framework: Key competencies in reading, mathematics and science* (Paris: 2009).

Table 10 Estimated average scores and confidence intervals for countries, provinces and economies: Science

Table 10 Estimated average scores and confidence intervals for countries, provinces and economies: Science					
Country, province or economy	**Rank**	**Estimated average score**	**Standard error**	**Confidence interval – 95% lower limit**	**Confidence interval – 95% lower limit**
Shanghai-China	1	575	(2.3)	570	579
Finland	2	554	(2.3)	550	559
Hong Kong-China	3	549	(2.8)	544	554
Alberta	**4**	**545**	**(4.2)**	**536**	**553**
Singapore	4	542	(1.4)	539	544
Japan	5	539	(3.4)	533	546
Korea	6	538	(3.4)	531	545
British Columbia	**7**	**535**	**(4.1)**	**527**	**543**
New Zealand	7	532	(2.6)	527	537
Ontario	**8**	**531**	**(3.3)**	**525**	**538**
Canada	**8**	**529**	**(1.6)**	**526**	**532**
Estonia	9	528	(2.7)	523	533
Australia	10	527	(2.5)	522	532
Québec	**10**	**524**	**(3.2)**	**518**	**531**
Nova Scotia	**11**	**523**	**(2.7)**	**518**	**529**
Netherlands	11	522	(5.4)	512	533
Liechtenstein	12	520	(3.4)	513	527
Germany	13	520	(2.8)	515	526
Chinese Taipei	14	520	(2.6)	515	526
Newfoundland and Labrador	**15**	**518**	**(3.0)**	**512**	**524**
Switzerland	15	517	(2.8)	511	522
United Kingdom	16	514	(2.5)	509	519
Saskatchewan	**17**	**513**	**(3.7)**	**506**	**520**
Slovenia	17	512	(1.1)	510	514
Macao-China	18	511	(1.0)	509	513
Poland	19	508	(2.4)	503	513
Ireland	19	508	(3.3)	502	514
Belgium	21	507	(2.5)	502	512
Manitoba	**22**	**506**	**(4.0)**	**498**	**514**
Hungary	22	503	(3.1)	496	509
United States	23	502	(3.6)	495	509
New Brunswick	**24**	**501**	**(2.4)**	**496**	**505**
Norway	24	500	(2.6)	495	505
Czech Republic	24	500	(3.0)	495	506
Denmark	26	499	(2.5)	494	504
France	27	498	(3.6)	491	505
Iceland	28	496	(1.4)	493	498
Sweden	29	495	(2.7)	490	500

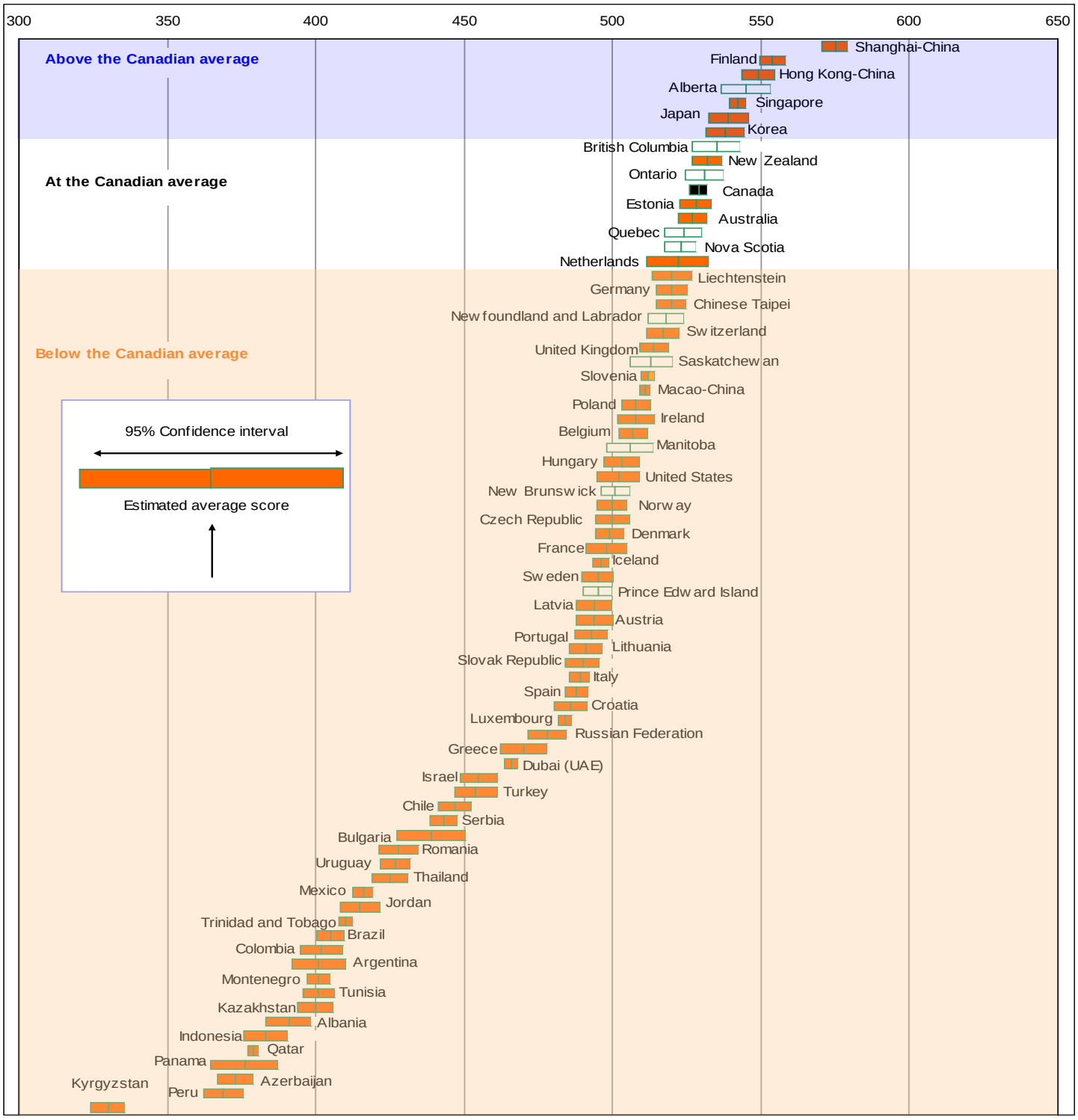
Prince Edward Island	**29**	**495**	**(2.4)**	**490**	**499**
Latvia	30	494	(3.1)	488	500
Austria	30	494	(3.2)	488	501
Portugal	32	493	(2.9)	487	499
Lithuania	33	491	(2.9)	486	497
Slovak Republic	34	490	(3.0)	484	496
Italy	35	489	(1.8)	485	492
Spain	36	488	(2.1)	484	492
Croatia	37	486	(2.8)	481	492
Luxembourg	38	484	(1.2)	482	486
Russian Federation	39	478	(3.3)	472	485
Greece	40	470	(4.0)	462	478
Dubai	41	466	(1.2)	464	469
Israel	42	455	(3.1)	449	461
Turkey	43	454	(3.6)	447	461
Chile	44	447	(2.9)	442	453
Serbia	45	443	(2.4)	438	447
Bulgaria	46	439	(5.9)	428	451
Romania	47	428	(3.4)	422	435
Uruguay	48	427	(2.6)	422	432
Thailand	49	425	(3.0)	419	431
Mexico	50	416	(1.8)	412	419
Jordan	51	415	(3.5)	408	422
Trinidad and Tobago	52	410	(1.2)	408	413
Brazil	53	405	(2.4)	401	410
Colombia	54	402	(3.6)	395	409
Argentina	55	401	(4.6)	392	410
Montenegro	55	401	(2.0)	397	405
Tunisia	55	401	(2.7)	395	406
Kazakhstan	58	400	(3.1)	394	407
Albania	59	391	(3.9)	383	398
Indonesia	60	383	(3.8)	375	390
Qatar	61	379	(0.9)	378	381
Panama	62	376	(5.7)	365	387
Azerbaijan	63	373	(3.1)	367	379
Peru	64	369	(3.5)	363	376
Kyrgyzstan	65	330	(2.9)	324	335

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Graph 3 Estimated average scores and confidence intervals for countries, provinces and economies: Science



3.3 Comparison of the science results of boys and girls

On average across OECD countries in science, boys and girls had similar performance. However, in Québec, boys scored 10 points higher than girls, a significant difference. In Canada, boys significantly outperformed girls by an average of 5 score points. In spite of this, the gender gap in science was much smaller than the gender gap in reading. Significant differences were also noted in New Brunswick, where boys outperformed girls by 12 points. Only two provinces—Newfoundland and Labrador and Prince Edward Island—showed non-significant differences favouring girls (3 and 6 points, respectively). In the other provinces, non-significant differences favouring boys varied between 1 and 6 points.

Table 11 Estimated average scores and gender differences for science

Table 11
Estimated average score and gender differences for science, by province

	Gender differences					
	Girls		Boys		Difference between girls and boys	
Canada and the provinces	Average score	Standard error	Average score	Standard error	Difference	Standard error
Canada	526	(1.9)	531	(1.9)	**-5**	**(1.9)**
Newfoundland and Labrador	520	(4.0)	516	(4.2)	3	(5.5)
Prince Edward Island	498	(3.5)	491	(3.9)	6	(5.7)
Nova Scotia	520	(3.2)	526	(3.9)	-6	(4.7)
New Brunswick	495	(2.9)	507	(3.4)	**-12**	**(4.1)**
Québec	519	(3.5)	529	(4.1)	**-10**	**(3.9)**
Ontario	530	(3.9)	533	(3.7)	-3	(3.9)
Manitoba	503	(5.2)	509	(5.2)	-6	(6.9)
Saskatchewan	512	(3.7)	515	(4.9)	-3	(4.9)
Alberta	543	(5.4)	547	(4.2)	-4	(4.8)
British Columbia	534	(4.0)	535	(5.4)	-1	(5.0)
OECD (Total)	494	(1.3)	498	(1.3)	-4	(1.3)

Note: Statistically significant differences appear in bold.

3.4 Comparison of the science results of Anglophone and Francophone students

In Québec, Francophone students scored higher in science than Anglophone students; however, this difference was not significant (4 points). Only one other province—Manitoba—saw a non-significant difference of 8 points in favour of Anglophone students. In the five other provinces, Anglophone students significantly outperformed their Francophone counterparts, with differences ranging from 34 to 64 points. The most pronounced difference was in Alberta, with a 64-point difference in favour of Anglophone students.

Table12 Estimated average scores and language of instruction differences for science, by province

Table 12

Estimated average scores and language of instruction differences for science, by province

Province	Anglophone		Francophone		Difference between English and French language of instruction	
	Average score	Standard error	Average score	Standard error	Difference	Standard error
Nova Scotia	524	(2.8)	490	10.2	**34**	**(10.8)**
New Brunswick	512	(3.2)	473	2.9	**40**	**(4.8)**
Québec	521	(3.8)	525	3.6	-4	(5.3)
Ontario	533	(3.4)	484	2.3	**49**	**(4.1)**
Manitoba	506	(4.0)	498	6.1	8	(7.5)
Alberta	545	(4.3)	481	7.8	**64**	**(8.9)**
British Columbia	535	(4.1)	482	8.7	**53**	**(9.7)**

Note: Statistically significant differences appear in bold.

3.5 Comparison of science performance over time

PISA 2009 is the second assessment of science since 2006, when the first major assessment of science took place. Since comparisons over time can only be made from the point at which a major assessment of the domain took place, comparisons in science are more limited as there have not yet been two full assessments of the area in the nine years of PISA testing. While this section looks at changes over time, performance differences should be interpreted with caution for several reasons. First, since data are available for two points in time for science, it is not possible to determine the extent to which observed differences are indicative of longer-term changes. Second, in order to allow for comparability over time, some common assessment items were used in each survey. However, because there are a limited number of common items, an additional measurement error must be taken into account for these comparisons over time. Consequently, only changes that are indicated as statistically significant should be considered.

Across OECD countries as a whole, science performance remained unchanged between PISA 2006 and PISA 2009, although changes in performance were observed in the 57 countries that participated in both PISA 2006 and 2009. Science performance increased in 11 countries, remained stable in 40 countries and decreased in 6 countries. In Québec, despite a slight decrease of 7 score points, science performance remained stable, since the difference between 2006 (531 points) and 2009 (524 points) is not significant. In Canada, science performance also remained stable, despite a non-significant decrease of 3 points between 2006 (532 points) and 2009 (529 points).

In order to understand how Québec's performance level in science has evolved, Québec's change in performance should be considered alongside with its overall performance. When science was first included as a major domain in PISA 2006, two countries outperformed Québec in science compared to four countries in 2009. [18] Finland and Hong Kong-China outperformed Québec in science in 2006 and continued to do so in 2009. Additionally, both Korea and Japan outperformed Québec in 2009 as a result of improved performance between 2006 and 2009.

[18] Although Shanghai-China and Singapore outperformed Canada in science in PISA 2009, they are not included in this comparison since they did not participate in PISA 2006.

Table 13 Comparisons of performance in science in PISA 2006 and 2009, Canada and the provinces, since the 2006 major assessment

Table 13

Comparisons of performance in science in PISA 2006 and 2009
Canada and the provinces, since the 2006 major assessment

	PISA science score			
	2006		2009	
	Average score	Standard error	Average score	Standard error with linkage error
Newfoundland and Labrador	526	-2.5	518	-3.9
Prince Edward Island	509	-2.7	**495**	**-3.5**
Nova Scotia	520	-2.5	523	-3.7
New Brunswick	506	-2.3	501	-3.5
Québec	531	-4.2	524	-4.1
Ontario	537	-4.2	531	-4.2
Manitoba	523	-3.2	**506**	**-4.8**
Saskatchewan	517	-3.6	513	-4.5
Alberta	550	-3.8	545	-4.9
British Columbia	539	-4.7	535	-4.8
Canada	534	-2	529	-3

Note: The linkage error is incorporated into the standard error for 2009.
Statistically significant differences compared to PISA 2006 appear in bold.

Summary

Skills and knowledge play a crucial role in determining the economic success of societies and individuals, and their importance is evident in today's global economic environment. Governments around the world recognize the importance of skills and invest heavily in their education systems. The Québec government invests a large share of its budget in education. The outcomes of these investments require monitoring and analysis to ensure that these outcomes are meeting governments' needs.

The Programme for International Student Assessment (PISA) was developed to provide a picture of the extent to which youth have acquired some of the knowledge and skills that are essential for full participation in modern societies. Developed by the Organisation for Economic Co-operation and Development, PISA 2009 measures the skill levels of 15-year-olds in 65 countries in three key subject areas: reading, mathematics and science.

In addition to providing information on skill levels of countries, PISA also enables countries to monitor change in their performance over time. Implemented every three years since 2000, PISA 2009 marks the fourth time that a comprehensive set of information on skills of 15-year-olds has been available and provides an opportunity to obtain in-depth comparisons of the major domain, since the focus of the cycle is once again on reading, as in the first assessment.

For Québec, not only does PISA provide insight on the skill levels of its 15-year-olds from an international perspective, it also provides an opportunity to compare its students' performance with that of other Canadian provinces and to monitor the change in performance over time.

The performance of Québec students in the major domain of reading is high

Only four countries and two Canadian provinces significantly outperformed Québec on the combined reading scale. One other country and one Canadian province also outperformed Québec, but the differences were not significant.

PISA 2009 was designed to assess five aspects of reading: three subdomains—Accessing and Retrieving, Integrating and Interpreting, Reflecting and Evaluating—and two text formats—Continuous Texts and Non-Continuous Texts. It was in Reflecting and Evaluating that Québec students earned their best scores (525 points). Only four countries and two Canadian provinces scored statistically higher than Québec in this subdomain. Québec achieved its highest rank (6th place) in Integrating and Interpreting, and only three countries obtained results that were statistically higher than Québec's in this subdomain. Québec students earned their lowest scores (515 points) in Accessing and Retrieving and were significantly outperformed by six countries. Test scores for Québec students for the two text formats were comparable: 519 points in Continuous Texts and 523 points in Non-Continuous Texts. Their relative position was also comparable, with Québec students ranking seventh in the two subscales, four countries and two Canadian provinces significantly outperforming Québec in Continuous Texts, and five countries and two Canadian provinces significantly outperforming Québec in Non-Continuous Texts.

Students' reading aptitudes were also described according to seven levels of proficiency. At the two highest levels (Levels 5 and 6 on the combined reading scale), the proportion of Québec students (10.8%) was higher than the proportion of the OECD average (8%). At Levels 5 and 6 on the subscales, Québec achieved its highest ranking in Non-Continuous Texts, placing seventh. It achieved its lowest ranking (14th place) in the subdomain Accessing and Retrieving. However, the percentage of Québec students performing below Level 2 (10.3%) was almost half the proportion of the OECD average (19%). On the combined reading scale, Québec ranked fifth among countries with the lowest percentages of students below Level 2.[19] On each of the subscales, it ranked either fifth or sixth in terms of the percentage of students below Level 2.

In Québec, girls outperformed boys on every reading scale (combined reading, subdomains and text formats), with statistically significant differences ranging from 27 to 37 points. Although gender gaps varied among the countries participating in PISA 2009, there was a common theme: girls surpassed boys everywhere in the world in terms of reading proficiency. Québec was one of the provinces with the smallest gender gap, although the differences in Nova Scotia were smaller than Québec's in several areas.

[19] According to the OECD, Level 2 can be considered a baseline level of proficiency, at which students begin to demonstrate the reading literacy competencies that will enable them to participate effectively and productively in life.

In Québec, differences between Anglophone and Francophone students were the smallest in Canada on both the combined reading scale and the reading subscales. Differences in Québec were minimal and not statistically significant, ranging from 0 to 5 points in favour of either Francophone or Anglophone students. One might say that results were similar for all students in Québec. Manitoba was the only other Canadian province in which there was no statistical difference in the results of Anglophone and Francophone students, although differences ranged from 3 to 12 points in favour of Anglophones. In the other provinces, significant differences were noted in favour of Anglophone students, ranging from 20 to 66 points in the combined reading scale or in the reading subscales.

Since 2000, Québec's performance in reading has decreased slightly in the combined reading scale, from 536 points in 2000 to 522 points in 2009. This statistically significant difference of 14 points represents a decrease of under 3% over nine years. The downward trend had already been noted in the partial assessment of 2003 (525 points) and 2006 (522 points). Since the partial assessment of 2003, reading performance has remained unchanged. Overall, it has remained unchanged in OECD countries as well.

The performance of Québec students in the minor domains of mathematics and science is also high

In mathematics:

Québec shared fifth place with Chinese Taipei. Only three countries performed significantly better than Québec—Shanghai-China, Singapore and Hong Kong-China. Québec outperformed all the Canadian provinces, with significantly higher scores.

In Québec, boys outperformed girls by 17 points. Although significant, this gender difference cannot be compared to the gender difference favouring girls in reading.

Québec was the only province where a significant difference in mathematics performance favoured Francophone students. Test scores of Francophone students were 11 points higher than those of their Anglophone counterparts.

Québec continues to perform very well in mathematics, ranking fifth at the top of the list. Québec was the only province where performance has increased since 2003, although this increase was not significant. Only three countries significantly outperformed Québec: Shanghai-China, Singapore and Hong Kong-China. Performance remained unchanged across OECD countries as a whole.

In science:

Québec students ranked tenth. They were outperformed by six countries—Shanghai-China, Finland, Hong Kong-China, Singapore, Japan and Korea—and one Canadian province—Alberta. Two other provinces outperformed Québec, although the differences were not significant.

Across OECD countries, there was no significant difference between boys and girls in science performance. However, in Québec, boys outperformed girls by 10 points, a statistically significant difference. In one other province, statistically significant differences were observed; however, the difference was greater than in Québec and performance was lower. Two provinces had non-significant differences favouring girls.

Québec was the only province where Francophone students outperformed Anglophone students, although the difference was not significant (only 4 points). A non-significant difference of 8 points was observed in one other province, favouring Anglophone students. In the five other provinces, Anglophone students scored significantly higher than their Francophone counterparts, with differences ranging from 34 to 64 points.

Québec continues to perform well in science, ranking tenth overall. Like most Canadian provinces, Québec saw science performance decrease since 2006, although not in a statistically significant way. Only Nova Scotia saw a small non-significant increase in performance. Across OECD countries as a whole, science performance remained unchanged.

Appendix A: PISA 2009 sampling procedures, exclusion rates and response rates

The accuracy of PISA survey results depends on the quality of the information on which the sample is based as well as the sampling procedures. The PISA 2009 sample for Canada was based on a two-stage stratified sample. The first stage consisted of sampling individual schools in which 15-year-old students were enrolled. Schools were sampled systematically with probabilities proportional to size, the measure of size being a function of the estimated number of eligible (15-year-old) students enrolled in the school. While a minimum of 150 schools were required to be selected in each country, in Canada, a much larger sample of schools was selected in order to produce reliable estimates for each province and for each of the English- and French-language school systems in these provinces: Nova Scotia, New Brunswick, Québec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

The second stage of the selection process sampled students within sampled schools. Once schools were selected, a list of all 15-year-old students in each sampled school was prepared. From this list, up to 35 students were then selected with equal probability. All 15-year-old students were selected if fewer than 35 were enrolled. Additionally, in Prince Edward Island, Nova Scotia and New Brunswick and in the French-language school systems in Manitoba, Alberta and Saskatchewan, more than 35 students were selected where possible in order to meet sample size requirements.

Each country participating in PISA attempted to maximize the coverage of PISA's target population within the sampled schools. Within each sampled school, all eligible students, namely those 15 years of age, regardless of grade, were first listed. Sampled students who were to be excluded by the school had still to be included in the sampling documentation, and a list drawn up stating the reason for their exclusion. Tables A.1a and A.1b show the total number of excluded students by province, which is further described and classified into specific categories. Students could be excluded based on these three international categories: i) students with an intellectual disability: student has a mental or emotional disability and is cognitively delayed such that he/she cannot perform in the PISA testing situation; ii) students with a functional disability: student has a moderate to severe permanent physical disability such that he/she cannot perform in the PISA testing situation; and iii) students with a limited proficiency in the assessment language: student is unable to read or speak any of the languages of the assessment in the country and would be unable to overcome the language barrier in the testing situation (typically a student who has received less than one year of instruction in the language of the assessment may be excluded).

The weighted student exclusion rate for Canada overall was 5.6% and this proportion ranged from 3.8% in Saskatchewan to 6.5% in Ontario. Across all provinces, the vast majority of exclusions was a result of an intellectual disability.

Table A.1a PISA 2009 – Student exclusion rate

Canada and the provinces	Total number of eligible students sampled (participating, not participating and excluded)		Total number of students excluded		Student exclusion rate (%)	
	Unweighted*	Weighted**	Unweighted*	Weighted**	Unweighted*	Weighted**
Newfoundland and Labrador	1 808	5 442	103	339	5.7	6.2
Prince Edward Island	1 795	1 800	103	103	5.7	5.7
Nova Scotia	2 133	11 591	92	497	4.3	4.3
New Brunswick	2 355	10 028	135	633	5.7	6.3
Québec	6 283	85 814	331	4 288	5.3	5.0
Ontario	5 526	154 857	325	10 129	5.9	6.5
Manitoba	2 553	14 557	154	908	6.0	6.2
Saskatchewan	2 527	14 900	102	563	4.0	3.8
Alberta	3 239	35 452	117	1 573	3.6	4.4
British Columbia	3 094	46 427	145	2 216	4.7	4.8
Canada	31 313	380 866	1 607	21 249	5.1	5.6

* Based on students selected to participate.

** Weighted based on student enrollment such that the total weighted value represents all 15-year-olds enrolled in the province and not just those selected for PISA.

Table A.1b PISA 2009 – Student exclusion rate by type of exclusion

Canada and the provinces	Type of exclusion					
	Exclusion rate: Students with a physical disability		Exclusion rate: Students with an intellectual disability		Exclusion rate: Students with limited language skills	
	Unweighted* %	Weighted** %	Unweighted* %	Weighted** %	Unweighted* %	Weighted** %
Newfoundland and Labrador	5.6	6.2	0.0	0.0	0.1	0.1
Prince Edward Island	4.2	4.2	0.6	0.6	1.0	1.0
Nova Scotia	4.1	4.0	0.0	0.1	0.2	0.2
New Brunswick	5.4	5.8	0.3	0.3	0.1	0.2
Québec	4.7	4.5	0.2	0.1	0.4	0.3
Ontario	5.6	6.2	0.1	0.1	0.2	0.3
Manitoba	5.2	5.1	0.2	0.3	0.6	0.8
Saskatchewan	3.3	2.7	0.3	0.4	0.5	0.7
Alberta	3.1	3.4	0.2	0.1	0.3	0.9
British Columbia	4.7	4.7	0.0	0.0	0.0	0.0
Canada	4.7	5.1	0.2	0.1	0.3	0.4

* Based on students selected to participate.

** Weighted based on student enrollment such that the total weighted value represents all 15-year-olds enrolled in the province and not just those selected for PISA.

In order to minimize the potential for response bias, data quality standards in PISA require minimum participation rates for schools and students. At the national level, a minimum response rate of 85% was required for schools initially selected. School response rates were also considered acceptable where the initial school response rate was between 65% and 85% and replacement schools were selected to achieve a school response rate of 85% or higher. Schools with student participation rates between 25% and 50% were not counted as participating schools, but data for these schools were included in the database. Schools with student participation rates of less than 25% were not counted as participating and their data were excluded from the database.

PISA 2009 also requires a minimum student participation rate of 80% within all participating schools combined (original sample and replacements) at the national level.

Table A.2 shows the response rates for schools and students, before and after replacement for Canada and the ten provinces. At the national level, 1079 schools were selected to participate in PISA 2009, and 963 of these initially selected schools participated. Rather than calculating school participation rates by dividing the number of participating schools by the total number of schools, school response rates were weighted based on 15-year-old enrollment numbers in each school.

At the provincial level, school response rates ranged from 69% in Québec to 100% in Newfoundland and Labrador. It should be noted that Québec had 245 schools that participated in PISA but 52 schools were treated as non-responding schools according to the PISA criteria, because the student participation rates in these schools was less than 50%.

At the student level, Canada's response rate was 79.5%, which fell short of the international standard set by PISA of 80%. Apart from Québec, all provinces achieved a student response rate of 80% or higher. Québec did not meet the required student response rate, and this was primarily a result of the requirement in this province to obtain written parental consent in order for a student to participate in PISA.

Because Canada did not meet the international student response rates requirements (by less than 1%), it was required to conduct and submit to the PISA consortium a student non-response bias analysis in order to determine if the data were of acceptable quality for inclusion in the PISA dataset. This non-bias analysis was undertaken for Québec students only, as this was the only province where student response rates were below the international standard.

For Québec, two measures related to student achievement were used for this analysis: a measure of the student's socioeconomic environment, which was available for the entire PISA sample, and scores in the provincial language assessment, which were available only for students in grade 10 (representing approximately 59% of the student sample).

Results from the analysis showed that non-responding students[20] came from slightly less favourable socioeconomic environments, and while the mean values on the index of socioeconomic environment differed significantly between responding and non-responding students, the magnitude of the difference was not large (11.29 versus 12.02). Results from a logistic regression analysis revealed that the socioeconomic environment of students in Québec was not statistically related to non-response when gender, private/public school status, school-language system and school size were taken into consideration.

Results from the provincial language assessment showed that responding students had a slightly higher score on the provincial language assessment than non-responding students (74.9 versus 72.6 respectively on a 100 point scale based on unweighted data, and 74.0 versus 71.9 based on weighted data). This difference was significant, although the gap is small, and performance on the provincial language assessment test remained significant when logistic regression analysis was done including school-language system, school size, socioeconomic environment, gender, and the private/public school status in the model.

Based on the non-response analysis, the consortium judged that the Canadian data, including Québec, were of suitable quality to be included fully in the PISA datasets without restrictions.

[20] Internal analysis undertaken by the Ministère de l'Éducation, du Loisir et du Sport broke down non-response further by comparing those who did not participate because of parental refusal and those who did not participate for other reasons. Their results showed that students who did not participate because of parental refusal were more likely to come from more favourable socioeconomic neighbourhoods than both participating and other non-responding students.

Table A.2 PISA 2009 – School and student response rates

Canada and the provinces	Total number of selected schools (participating and not)	School response rate before replacement		School response rate after replacement		Total number of eligible students sampled (participating and not participating)		Total number of students participating		Weighted student participation rate after replacement
		Number	Weighted %	Number	Weighted %	Unweighted	Weighted	Unweighted	Weighted	
Newfoundland and Labrador	64	63	100.0	63	100.0	1 705	5 103	1 412	4 292	84.1
Prince Edward Island	26	25	99.7	25	99.7	1 692	1 696	1 443	1 447	85.3
Nova Scotia	72	69	97.1	70	98.1	2 011	10 979	1 634	8 788	80.0
New Brunswick	60	58	99.9	58	99.9	2 220	9 395	1 927	8 267	88.0
Québec	258	193	68.8	194	69.0	4 317	60 674	3 083	43 057	71.0
Ontario	182	171	95.3	171	95.3	5 031	139 963	4 083	112 412	80.3
Manitoba	91	85	97.3	85	97.3	2 314	13 288	1 928	10 955	82.5
Saskatchewan	102	97	96.3	99	97.7	2 347	13 952	1 965	11 686	83.8
Alberta	118	101	95.1	112	95.6	3 081	33 025	2 564	27 486	83.2
British Columbia	106	101	93.5	101	93.5	2 885	43 219	2 344	35 072	81.2
Canada	1079	963	88.0	978	89.6	27 603	331 293	22 383	263 460	79.5

* School response rates were weighted based on student enrollment.

Appendix B: Additional tables

Table 1.1 **Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Accessing and Retrieving**

Table 1.1 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Accessing and Retrieving

Country, province or economy	Rank	Estimated average score	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit
Shanghai-China	1	549	(2.9)	544	555
Korea	2	542	(3.6)	535	549
Finland	3	532	(2.7)	527	538
Japan	4	530	(3.8)	522	537
Hong Kong-China	4	530	(2.7)	524	535
Singapore	6	526	(1.4)	524	529
Ontario	**7**	**523**	**(3.1)**	**517**	**529**
Alberta	**7**	**522**	**(4.5)**	**513**	**531**
New Zealand	7	521	(2.4)	516	526
Netherlands	8	519	(5.1)	509	529
Canada	**9**	**517**	**(1.5)**	**514**	**520**
British Columbia	**9**	**516**	**(4.5)**	**507**	**524**
Québec	**9**	**515**	**(3.6)**	**508**	**522**
Belgium	10	513	(2.4)	509	518
Australia	10	513	(2.4)	509	518
Norway	12	512	(2.8)	506	517
Liechtenstein	13	508	(4.0)	500	515
Iceland	14	507	(1.6)	503	510
Nova Scotia	**15**	**506**	**(3.3)**	**499**	**513**
Switzerland	15	505	(2.7)	500	511
Sweden	15	505	(2.9)	499	510
Estonia	17	503	(3.0)	497	509
Denmark	18	502	(2.6)	497	507
Germany	19	501	(3.5)	494	507
Hungary	19	501	(3.7)	494	509
Newfoundland and Labrador	**19**	**501**	**(3.8)**	**493**	**508**
Saskatchewan	**19**	**501**	**(3.7)**	**494**	**508**
Poland	21	500	(2.8)	495	506
Ireland	22	498	(3.3)	492	505
Chinese Taipei	23	496	(2.8)	491	501
Manitoba	**24**	**496**	**(3.8)**	**489**	**504**
Macao-China	24	493	(1.2)	491	495
Croatia	25	492	(3.1)	485	498
United States	25	492	(3.6)	485	499
France	25	492	(3.8)	484	499
United Kingdom	28	491	(2.5)	486	496
Slovak Republic	28	491	(3.0)	485	497

Slovenia	30	489	(1.1)	487	491
Portugal	31	488	(3.3)	482	495
New Brunswick	**32**	**487**	**(3.1)**	**481**	**493**
Italy	32	482	(1.8)	478	485
Prince Edward Island	**33**	**481**	**(2.5)**	**476**	**486**
Spain	33	480	(2.1)	476	484
Czech Republic	34	479	(3.2)	473	485
Austria	35	477	(3.2)	471	484
Lithuania	36	476	(3.0)	471	482
Latvia	36	476	(3.6)	469	483
Luxembourg	38	471	(1.3)	468	473
Russian Federation	39	469	(3.9)	461	476
Greece	40	468	(4.4)	459	477
Turkey	41	467	(4.1)	459	475
Israel	42	463	(4.1)	455	471
Dubai	43	458	(1.4)	456	461
Serbia	44	449	(3.1)	443	455
Chile	45	444	(3.4)	437	451
Mexico	46	433	(2.1)	429	437
Thailand	47	431	(3.5)	424	438
Bulgaria	48	430	(8.3)	413	446
Uruguay	49	424	(2.9)	419	430
Romania	50	423	(4.7)	414	432
Trinidad and Tobago	51	413	(1.6)	410	417
Montenegro	52	408	(2.3)	403	412
Brazil	53	407	(3.3)	400	413
Colombia	54	404	(3.7)	397	411
Indonesia	55	399	(4.7)	390	408
Kazakhstan	56	397	(3.7)	390	405
Argentina	57	394	(4.8)	385	403
Jordan	57	394	(4.0)	386	402
Tunisia	59	393	(3.3)	387	400
Albania	60	380	(4.7)	371	389
Peru	61	364	(4.3)	355	372
Panama	62	363	(7.7)	348	378
Azerbaijan	63	361	(4.5)	352	370
Qatar	64	354	(1.0)	352	356
Kyrgyzstan	65	299	(4.0)	291	307

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Table 1.2 **Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Integrating and Interpreting**

Table 1.2 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Integrating and Interpreting

Country, province or economy	Rank	Estimated average score	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit
Shanghai-China	1	558	(2.5)	553	563
Korea	2	541	(3.4)	534	547
Finland	3	538	(2.3)	534	543
Alberta	**4**	**532**	**(4.8)**	**522**	**541**
Hong Kong-China	4	530	(2.2)	526	534
Ontario	**5**	**528**	**(3.0)**	**522**	**533**
Singapore	5	525	(1.2)	522	527
Canada	**6**	**522**	**(1.5)**	**519**	**525**
British Columbia	**6**	**522**	**(4.6)**	**513**	**531**
Québec	**6**	**521**	**(3.3)**	**515**	**528**
Japan	7	520	(3.5)	513	526
New Zealand	8	517	(2.4)	512	522
Nova Scotia	**9**	**514**	**(2.9)**	**509**	**520**
Australia	9	513	(2.4)	508	517
Netherlands	10	504	(5.4)	494	515
Belgium	10	504	(2.5)	499	509
Iceland	12	503	(1.5)	500	505
Poland	12	503	(2.8)	498	508
Norway	14	502	(2.7)	497	507
Switzerland	14	502	(2.5)	497	507
Newfoundland and Labrador	**14**	**502**	**(3.7)**	**495**	**509**
Saskatchewan	**14**	**502**	**(3.5)**	**495**	**508**
Germany	16	501	(2.8)	495	506
Estonia	17	500	(2.8)	495	506
Chinese Taipei	18	499	(2.5)	494	504
New Brunswick	**18**	**499**	**(2.6)**	**494**	**504**
Liechtenstein	19	498	(4.0)	490	505
France	20	497	(3.6)	490	504
Hungary	21	496	(3.2)	490	502
United States	22	495	(3.7)	488	502
Sweden	23	494	(3.0)	488	500
Ireland	23	494	(3.0)	488	500
Manitoba	**25**	**493**	**(4.0)**	**485**	**501**
Denmark	25	492	(2.1)	488	496
United Kingdom	26	491	(2.4)	486	495
Italy	27	490	(1.6)	487	493
Slovenia	28	489	(1.1)	487	491

Macao-China	29	488	(0.8)	487	490
Czech Republic	29	488	(2.9)	482	493
Portugal	31	487	(3.0)	481	493
Latvia	32	484	(2.8)	479	490
Greece	32	484	(4.0)	477	492
Prince Edward Island	**34**	**482**	**(2.3)**	**477**	**486**
Spain	34	481	(2.0)	477	485
Slovak Republic	34	481	(2.5)	476	486
Luxembourg	36	475	(1.1)	473	477
Israel	37	473	(3.4)	466	480
Croatia	38	472	(2.9)	467	478
Austria	39	471	(2.9)	466	477
Lithuania	40	469	(2.4)	464	473
Russian Federation	41	467	(3.1)	461	473
Turkey	42	459	(3.3)	453	466
Dubai	43	457	(1.3)	454	459
Chile	44	452	(3.1)	446	458
Serbia	45	445	(2.4)	440	450
Bulgaria	46	436	(6.4)	424	449
Romania	47	425	(4.0)	417	433
Uruguay	48	423	(2.6)	418	428
Montenegro	49	420	(1.6)	417	424
Trinidad and Tobago	50	419	(1.4)	416	421
Mexico	51	418	(2.0)	415	422
Thailand	52	416	(2.6)	411	421
Colombia	53	411	(3.8)	404	418
Jordan	54	410	(3.1)	404	416
Brazil	55	406	(2.7)	401	412
Argentina	56	398	(4.7)	388	407
Kazakhstan	57	397	(3.0)	391	403
Indonesia	57	397	(3.5)	390	404
Albania	59	393	(3.8)	386	401
Tunisia	59	393	(2.7)	388	399
Qatar	61	379	(0.9)	377	380
Azerbaijan	62	373	(2.9)	367	379
Panama	63	372	(5.9)	361	384
Peru	64	371	(4.0)	363	379
Kyrgyzstan	65	327	(2.9)	321	333

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Table 1.3 **Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Reflecting and Evaluating**

Table 1.3 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Reflecting and Evaluating

Country, province or economy	Rank	Estimated average score	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit
Shanghai-China	1	557	(2.4)	552	561
Ontario	**2**	**546**	**(3.2)**	**540**	**552**
Alberta	**2**	**546**	**(4.4)**	**537**	**554**
Korea	2	542	(3.9)	534	550
Hong Kong-China	3	540	(2.5)	535	544
Finland	4	536	(2.2)	531	540
British Columbia	**4**	**536**	**(4.2)**	**528**	**544**
Canada	**5**	**535**	**(1.6)**	**532**	**538**
New Zealand	6	531	(2.5)	526	536
Singapore	7	529	(1.1)	527	531
Nova Scotia	**7**	**527**	**(3.0)**	**521**	**532**
Québec	**7**	**525**	**(3.3)**	**518**	**531**
Australia	8	523	(2.5)	518	528
Japan	9	521	(3.9)	513	528
Newfoundland and Labrador	**10**	**519**	**(3.3)**	**512**	**525**
Saskatchewan	**10**	**517**	**(3.5)**	**510**	**524**
United States	10	512	(4.0)	504	520
Netherlands	11	510	(5.0)	501	520
Norway	12	505	(2.7)	500	510
Belgium	12	505	(2.5)	501	510
New Brunswick	**14**	**505**	**(2.3)**	**500**	**509**
Manitoba	**14**	**504**	**(4.0)**	**496**	**512**
United Kingdom	14	503	(2.4)	498	508
Estonia	14	503	(2.6)	497	508
Sweden	16	502	(3.0)	496	508
Ireland	16	502	(3.1)	496	509
Liechtenstein	18	498	(3.2)	491	504
Poland	18	498	(2.8)	492	503
Switzerland	20	497	(2.7)	492	503
Prince Edward Island	**20**	**497**	**(2.3)**	**492**	**501**
Iceland	21	496	(1.4)	493	499
Portugal	21	496	(3.3)	490	503
France	23	495	(3.4)	488	502
Denmark	24	493	(2.6)	488	498
Chinese Taipei	24	493	(2.8)	487	498
Latvia	26	492	(3.0)	486	498
Germany	27	491	(2.8)	486	496

Greece	28	489	(4.9)	480	499
Hungary	28	489	(3.3)	482	495
Israel	30	483	(4.0)	475	491
Spain	30	483	(2.2)	479	488
Italy	32	482	(1.8)	478	485
Macao-China	33	481	(0.8)	479	482
Turkey	34	473	(4.0)	465	480
Croatia	35	471	(3.5)	464	478
Luxembourg	35	471	(1.1)	469	473
Slovenia	37	470	(1.2)	468	473
Dubai	38	466	(1.1)	463	468
Slovak Republic	38	466	(2.9)	460	472
Lithuania	40	463	(2.5)	458	468
Austria	40	463	(3.4)	456	470
Czech Republic	42	462	(3.1)	456	468
Chile	43	452	(3.2)	446	459
Russian Federation	44	441	(3.7)	433	448
Uruguay	45	436	(2.9)	430	441
Mexico	46	432	(1.9)	428	436
Serbia	47	430	(2.6)	425	435
Tunisia	48	427	(3.0)	421	433
Romania	49	426	(4.5)	418	435
Brazil	50	424	(2.7)	418	429
Colombia	51	422	(4.2)	413	430
Thailand	52	420	(2.8)	415	426
Bulgaria	53	417	(7.1)	403	431
Trinidad and Tobago	54	413	(1.3)	411	416
Indonesia	55	409	(3.8)	401	416
Jordan	56	407	(3.4)	400	414
Argentina	57	402	(4.8)	393	412
Montenegro	58	383	(1.9)	379	387
Panama	59	377	(6.3)	365	389
Albania	60	376	(4.6)	367	385
Qatar	60	376	(1.0)	374	378
Kazakhstan	62	373	(3.4)	366	380
Peru	63	368	(4.2)	360	376
Azerbaijan	64	335	(3.8)	327	342
Kyrgyzstan	65	300	(4.0)	292	308

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Table 1.4 **Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Continuous Texts**

Table 1.4 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Continuous Texts

Country, province or economy	Rank	Estimated average score	Standard error	Confidence interval – 95% lower limit	Confidence interval – 95% upper limit
Shanghai-China	1	564	(2.5)	559	569
Korea	2	538	(3.5)	531	545
Hong Kong-China	2	538	(2.3)	534	543
Finland	4	535	(2.3)	531	540
Alberta	**5**	**533**	**(4.7)**	**524**	**543**
Ontario	**5**	**532**	**(3.1)**	**526**	**538**
Canada	**5**	**524**	**(1.5)**	**521**	**527**
British Columbia	**5**	**524**	**(4.5)**	**515**	**533**
Singapore	6	522	(1.1)	520	524
Japan	7	520	(3.6)	513	528
Québec	**7**	**519**	**(3.2)**	**512**	**525**
New Zealand	8	518	(2.4)	513	523
Nova Scotia	**9**	**516**	**(2.9)**	**511**	**522**
Australia	9	513	(2.5)	508	518
Newfoundland and Labrador	**10**	**508**	**(3.8)**	**501**	**516**
Netherlands	10	506	(5.0)	497	516
Saskatchewan	**10**	**506**	**(3.2)**	**500**	**512**
Norway	11	505	(2.6)	500	510
Belgium	12	504	(2.4)	500	509
Poland	13	502	(2.7)	497	507
Iceland	14	501	(1.6)	497	504
United States	15	500	(3.7)	492	507
New Brunswick	**15**	**500**	**(2.5)**	**495**	**505**
Sweden	16	499	(3.0)	493	505
Switzerland	17	498	(2.5)	493	503
Hungary	18	497	(3.3)	490	503
Estonia	18	497	(2.7)	492	503
Ireland	18	497	(3.3)	490	503
Manitoba	**18**	**497**	**(4.0)**	**489**	**505**
Germany	21	496	(2.7)	491	501
Denmark	21	496	(2.1)	492	501
Chinese Taipei	21	496	(2.6)	491	502
Liechtenstein	24	495	(3.0)	489	500
United Kingdom	25	492	(2.4)	487	496
Portugal	25	492	(3.2)	486	498
France	25	492	(3.5)	485	499
Italy	28	489	(1.6)	486	492

Macao-China	29	488	(0.9)	486	490
Greece	30	487	(4.3)	478	495
Prince Edward Island	**31**	**486**	**(2.4)**	**481**	**490**
Latvia	31	484	(3.0)	478	490
Spain	31	484	(2.1)	480	489
Slovenia	31	484	(1.1)	482	486
Czech Republic	34	479	(2.9)	473	485
Slovak Republic	35	479	(2.6)	474	484
Croatia	36	478	(2.9)	472	484
Israel	37	477	(3.6)	470	484
Luxembourg	38	471	(1.2)	469	474
Lithuania	39	470	(2.5)	465	475
Austria	39	470	(2.9)	464	476
Turkey	41	466	(3.5)	459	473
Russian Federation	42	461	(3.1)	455	467
Dubai	42	461	(1.2)	458	463
Chile	44	453	(3.1)	447	459
Serbia	45	444	(2.3)	439	448
Bulgaria	46	433	(6.8)	419	446
Uruguay	47	429	(2.7)	424	434
Mexico	48	426	(2.0)	422	430
Thailand	49	423	(2.8)	418	428
Romania	49	423	(4.0)	415	431
Trinidad and Tobago	51	418	(1.3)	415	420
Jordan	52	417	(3.2)	410	423
Colombia	53	415	(3.7)	408	422
Brazil	54	414	(2.8)	409	420
Montenegro	55	411	(1.8)	408	415
Tunisia	56	408	(2.9)	402	413
Indonesia	57	405	(3.7)	398	413
Argentina	58	400	(4.6)	391	409
Kazakhstan	59	399	(3.1)	393	405
Albania	60	392	(4.1)	384	400
Qatar	61	375	(0.9)	374	377
Peru	62	374	(3.9)	367	382
Panama	63	373	(6.7)	360	387
Azerbaijan	64	362	(3.3)	355	368
Kyrgyzstan	65	319	(3.2)	313	325

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

Table 1.5 **Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Non-Continuous Texts**

Table 1.5 Estimated average scores and confidence intervals for countries, provinces and economies: Reading – Non-Continuous Texts					
Country, province or economy	**Rank**	**Estimated average score**	**Standard error**	**Confidence interval – 95% lower limit**	**Confidence interval – 95% upper limit**
Korea	1	542	(3.6)	535	549
Singapore	2	539	(1.1)	536	541
Shanghai-China	2	539	(2.4)	535	544
Alberta	**2**	**539**	**(4.7)**	**529**	**548**
Finland	4	535	(2.4)	530	540
Ontario	**5**	**534**	**(3.3)**	**527**	**540**
New Zealand	5	532	(2.3)	528	537
British Columbia	**6**	**531**	**(4.0)**	**523**	**538**
Canada	**6**	**527**	**(1.6)**	**524**	**530**
Australia	7	524	(2.3)	520	529
Québec	**7**	**523**	**(3.5)**	**516**	**529**
Hong Kong-China	8	522	(2.3)	518	527
Japan	9	518	(3.5)	511	524
Nova Scotia	**9**	**518**	**(2.8)**	**513**	**524**
Netherlands	10	514	(5.1)	505	524
Estonia	11	512	(2.7)	507	517
Belgium	12	511	(2.2)	507	515
Newfoundland and Labrador	**12**	**511**	**(3.8)**	**503**	**518**
Liechtenstein	13	506	(3.2)	500	512
United Kingdom	13	506	(2.3)	501	510
Saskatchewan	**13**	**506**	**(3.5)**	**500**	**513**
Switzerland	15	505	(2.5)	500	510
United States	16	503	(3.5)	496	510
Chinese Taipei	17	500	(2.8)	495	506
Iceland	18	499	(1.5)	496	502
Norway	19	498	(2.6)	492	503
Sweden	19	498	(2.8)	492	503
France	19	498	(3.4)	492	505
Manitoba	**19**	**498**	**(3.5)**	**491**	**504**
Germany	22	497	(2.8)	492	503
Poland	23	496	(2.8)	490	501
Ireland	23	496	(3.0)	490	502
Denmark	25	493	(2.3)	488	497
New Brunswick	**26**	**492**	**(2.4)**	**487**	**497**
Prince Edward Island	**26**	**490**	**(2.4)**	**485**	**494**
Portugal	26	488	(3.2)	482	494
Latvia	27	487	(3.4)	480	494

Hungary	27	487	(3.3)	481	494
Macao-China	29	481	(1.1)	478	483
Italy	30	476	(1.7)	473	480
Slovenia	30	476	(1.1)	474	478
Czech Republic	32	474	(3.4)	468	481
Spain	33	473	(2.1)	468	477
Croatia	34	472	(3.0)	466	478
Luxembourg	34	472	(1.2)	469	474
Austria	34	472	(3.2)	466	479
Greece	34	472	(4.3)	464	480
Slovak Republic	38	471	(2.8)	466	477
Israel	39	467	(3.9)	459	475
Lithuania	40	462	(2.6)	457	467
Turkey	41	461	(3.8)	454	468
Dubai	42	460	(1.3)	457	462
Russian Federation	43	452	(3.9)	445	460
Chile	44	444	(3.2)	437	450
Serbia	45	438	(2.9)	432	443
Romania	46	424	(4.5)	416	433
Mexico	46	424	(2.0)	421	428
Thailand	48	423	(2.7)	418	428
Bulgaria	49	421	(7.2)	407	435
Uruguay	49	421	(2.7)	416	426
Trinidad and Tobago	51	417	(1.4)	414	420
Colombia	52	409	(4.1)	401	417
Brazil	53	408	(2.8)	403	414
Indonesia	54	399	(4.5)	390	407
Montenegro	55	398	(1.9)	394	401
Tunisia	56	393	(3.3)	386	399
Argentina	57	391	(5.2)	381	401
Jordan	58	387	(4.1)	379	395
Kazakhstan	59	371	(3.9)	363	378
Albania	60	366	(4.6)	357	375
Qatar	61	361	(0.9)	360	363
Panama	62	359	(6.5)	346	372
Peru	63	356	(4.4)	348	365
Azerbaijan	64	351	(4.2)	342	359
Kyrgyzstan	65	293	(3.7)	285	300

Significantly higher than Québec

Same as Québec

Significantly lower than Québec

1

Table 2.1 Percentage of students at each proficiency level, by country, province and economy: Reading – Accessing and Retrieving

Country, province or economy	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Korea	0.3	(0.1)	1.2	(0.3)	5.6	(0.7)	15.9	(1.0)	30.1	(1.0)	30.3	(1.2)	13.9	(1.1)	2.7	0.4
Shanghai-China	0.5	(0.1)	1.5	(0.3)	5.7	(0.6)	14.8	(0.8)	26.1	(0.9)	29.5	(1.1)	17.3	(0.9)	4.6	(0.5)
Ontario	0.7	(0.2)	2.1	(0.4)	7.7	(0.7)	20.2	(1.2)	30.6	(1.4)	26.4	(1.1)	10.8	(0.8)	1.6	(0.4)
Hong Kong-China	0.8	(0.2)	2.3	(0.3)	7.5	(0.6)	17.5	(0.7)	28.3	(0.9)	29.5	(0.9)	12.2	(0.7)	2.1	(0.4)
Finland	0.8	(0.2)	2.5	(0.3)	7.8	(0.5)	17.2	(1.0)	27.0	(0.9)	27.4	(0.8)	14.2	(0.7)	3.1	(0.4)
Netherlands	0.2	(0.1)	2.1	(0.4)	10.0	(1.0)	21.4	(1.7)	27.4	(1.3)	26.7	(1.5)	10.8	(1.2)	1.4	(0.3)
Canada	0.9	(0.1)	2.7	(0.2)	9.1	(0.4)	20.7	(0.6)	29.8	(0.6)	24.9	(0.5)	10.1	(0.4)	1.8	(0.2)
Québec	0.9	(0.3)	2.6	(0.5)	9.4	(0.9)	20.5	(1.0)	30.7	(1.5)	24.8	(1.1)	9.6	(1.0)	1.5	(0.3)
British Columbia	1.1	(0.3)	2.9	(0.6)	9.0	(1.1)	21.4	(1.3)	29.3	(1.3)	24.1	(1.4)	10.3	(0.9)	2.0	(0.4)
Japan	1.9	(0.4)	3.2	(0.5)	8.0	(0.7)	16.2	(0.7)	25.4	(1.0)	27.0	(1.0)	14.1	(0.7)	4.2	(0.5)
Singapore	0.9	(0.2)	3.3	(0.4)	9.0	(0.6)	17.7	(1.0)	25.8	(0.7)	26.8	(0.9)	13.5	(0.6)	3.0	0.3
Alberta	0.9	(0.3)	3.0	(0.5)	9.3	(1.1)	19.1	(1.2)	27.5	(1.3)	25.2	(1.8)	11.5	(1.0)	3.3	(0.6)
…																
Australia	1.3	(0.1)	3.5	(0.3)	9.7	(0.5)	19.8	(0.6)	29.0	(0.6)	24.5	(0.6)	10.2	(0.6)	2.0	(0.3)
New Zealand	1.4	(0.2)	3.4	(0.4)	10.0	(0.6)	18.4	(0.7)	26.0	(0.8)	24.6	(0.8)	13.3	(0.7)	3.0	(0.3)
Nova Scotia	1.2	(0.4)	3.0	(0.6)	10.4	(1.1)	22.5	(1.3)	30.7	(1.4)	22.3	(1.4)	8.7	(1.2)	1.1	(0.4)
Norway	1.0	(0.2)	3.5	(0.4)	10.2	(0.6)	20.5	(0.8)	29.6	(0.8)	23.4	(0.9)	9.9	(0.6)	1.9	(0.3)
Newfoundland and Lab.	0.8	(0.4)	3.9	(0.8)	11.6	(1.6)	24.1	(1.8)	29.9	(1.8)	20.8	(1.6)	7.6	(0.9)	1.3	0.6
Sweden	1.8	(0.3)	4.4	(0.5)	10.3	(0.7)	21.5	(0.8)	28.6	(0.8)	22.3	(1.1)	9.2	(0.9)	1.9	(0.3)
Saskatchewan	1.8	(0.5)	4.0	(0.7)	11.3	(1.2)	23.2	(1.7)	28.2	(1.7)	21.2	(1.3)	8.3	(1.1)	2.0	0.5
Manitoba	1.8	(0.4)	4.5	(0.7)	13.3	(1.1)	23.0	(1.3)	26.9	(1.4)	20.8	(1.3)	8.4	(0.9)	1.5	(0.4)

Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.

Table 2.2 Percentage of students at each proficiency level, by country, province and economy: Reading – Integrating and Interpreting

Country, province or economy	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Shanghai-China	0.0	(0.0)	0.5	(0.2)	3.4	(0.5)	13.3	(0.8)	28.3	(1.2)	33.2	(0.9)	18.0	(0.9)	3.1	(0.4)
Korea	0.2	(0.1)	0.9	(0.4)	4.8	(0.6)	15.7	(1.1)	31.7	(1.1)	32.4	(1.3)	12.9	(1.2)	1.4	(0.2)
Finland	0.2	(0.1)	1.3	(0.2)	6.3	(0.4)	16.8	(0.7)	29.7	(0.8)	30.0	(0.9)	13.6	(0.7)	2.2	(0.3)
Hong Kong-China	0.4	(0.2)	2.0	(0.3)	7.0	(0.6)	17.8	(0.9)	30.2	(1.0)	29.3	(1.2)	11.5	(0.7)	1.8	(0.2)
Ontario	0.3	(0.2)	1.8	(0.4)	8.2	(0.7)	20.2	(1.2)	29.3	(1.2)	25.3	(1.0)	12.6	(0.9)	2.4	0.4
Alberta	0.2	(0.1)	2.0	(0.5)	8.6	(1.1)	19.9	(1.4)	26.3	(1.2)	25.9	(1.5)	13.0	(1.1)	4.1	(0.9)
Nova Scotia	0.6	(0.3)	2.3	(0.5)	9.0	(0.8)	22.6	(1.7)	31.1	(2.0)	24.1	(1.4)	9.0	(1.2)	1.5	(0.4)
Québec	0.5	(0.1)	2.4	(0.5)	9.0	(0.9)	20.1	(1.1)	29.2	(1.0)	26.2	(1.1)	10.8	(0.8)	1.9	(0.4)
Canada	0.4	(0.1)	2.3	(0.2)	9.1	(0.4)	20.7	(0.6)	28.8	(0.6)	25.0	(0.5)	11.4	(0.4)	2.3	(0.2)
British Columbia	0.3	(0.2)	2.6	(0.5)	9.2	(1.0)	20.2	(1.3)	28.7	(1.3)	25.1	(1.3)	11.7	(1.1)	2.2	(0.6)
Singapore	0.6	(0.1)	3.1	(0.3)	9.9	(0.5)	19.2	(0.7)	26.2	(0.7)	24.8	(0.9)	12.9	(0.6)	3.5	(0.3)
Japan	1.2	(0.3)	3.4	(0.5)	9.3	(0.7)	18.9	(0.8)	27.1	(0.9)	26.2	(1.1)	11.3	(0.7)	2.6	(0.5)
Estonia	0.2	(0.1)	2.4	(0.4)	11.6	(0.8)	25.4	(1.1)	33.2	(1.1)	20.9	(0.9)	5.6	(0.5)	0.7	0.2
Macao-China	0.2	(0.1)	2.5	(0.2)	12.4	(0.5)	30.4	(0.7)	33.7	(0.7)	17.5	(0.5)	3.3	(0.3)	0.1	(0.1)
…																
Newfoundland and Labrador	0.4	(0.4)	3.1	(0.6)	11.7	(1.5)	25.2	(1.5)	29.8	(1.6)	21.1	(1.4)	7.7	(0.9)	1.0	(0.5)
New Zealand	1.0	(0.3)	3.6	(0.5)	10.9	(0.6)	20.3	(0.7)	25.2	(0.8)	23.3	(0.8)	12.5	(0.8)	3.1	0.4
Australia	1.0	(0.1)	3.8	(0.3)	10.9	(0.5)	20.7	(0.5)	27.6	(0.7)	22.9	(0.6)	10.5	(0.5)	2.7	0.4
Saskatchewan	0.7	(0.3)	3.4	(0.6)	12.5	(1.4)	23.7	(1.9)	29.2	(1.7)	21.8	(1.8)	7.5	(0.8)	1.2	(0.3)
New Brunswick	0.6	(0.2)	3.2	(0.5)	13.1	(1.3)	24.7	(1.8)	29.2	(1.6)	20.4	(1.6)	7.3	(0.8)	1.4	(0.5)
Manitoba	0.8	(0.3)	4.3	(0.8)	14.3	(1.5)	26.1	(1.5)	26.3	(1.6)	19.8	(1.3)	7.4	(1.1)	1.0	(0.3)
Prince Edward Island	1.4	(0.4)	6.2	(0.8)	15.1	(1.3)	25.4	(1.9)	27.0	(1.5)	18.1	(1.3)	5.9	(0.7)	0.9	(0.4)

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Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.

Table 2.3 Percentage of students at each proficiency level, by country, province and economy: Reading – Reflecting and Evaluating

Country, province or economy	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		(Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Shanghai-China	0.2	(0.1)	0.6	(0.2)	4.2	(0.5)	13.2	(0.7)	27.6	(0.9)	32.9	(0.8)	17.9	(0.8)	3.4	(0.4)
Korea	0.3	(0.1)	1.1	(0.4)	5.3	(0.7)	15.5	(1.1)	30.1	(1.4)	31.7	(1.3)	14.0	(1.1)	2.0	(0.4)
Ontario	0.3	(0.1)	1.2	(0.3)	5.2	(0.6)	16.1	(1.0)	28.1	(1.2)	29.9	(1.4)	15.7	(0.9)	3.4	(0.6)
Finland	0.4	(0.1)	1.3	(0.2)	6.3	(0.6)	16.9	(0.7)	30.5	(0.9)	30.0	(0.9)	12.8	(0.7)	1.8	0.3
Hong Kong-China	0.2	(0.1)	1.6	(0.3)	6.2	(0.5)	14.7	(0.7)	29.9	(1.3)	32.0	(1.2)	13.5	(0.9)	1.9	(0.2)
Canada	0.3	(0.1)	1.8	(0.1)	6.5	(0.4)	17.6	(0.5)	29.4	(0.6)	28.5	(0.6)	13.2	(0.4)	2.7	(0.3)
Alberta	0.2	(0.1)	1.5	(0.4)	7.0	(1.1)	16.0	(1.3)	26.6	(1.1)	27.9	(1.2)	15.9	(1.4)	4.9	(0.9)
Nova Scotia	0.4	(0.2)	2.2	(0.4)	6.1	(0.8)	19.6	(1.7)	32.1	(2.0)	27.2	(1.4)	10.5	(1.0)	1.9	(0.4)
Québec	0.3	(0.1)	1.9	(0.4)	6.5	(0.8)	18.9	(1.0)	32.8	(1.3)	29.2	(1.4)	9.5	(0.8)	0.8	(0.2)
British Columbia	0.4	(0.2)	1.9	(0.4)	7.1	(0.8)	17.1	(1.4)	28.5	(1.6)	28.1	(1.7)	13.9	(1.2)	3.0	(0.5)
Newfoundland and Labrador	0.5	(0.4)	2.0	(0.8)	9.1	(1.5)	21.2	(1.6)	30.4	(2.2)	24.7	(1.5)	10.6	(1.1)	1.5	0.6
Singapore	0.6	(0.1)	2.8	(0.3)	9.0	(0.6)	18.0	(0.8)	27.3	(0.8)	25.3	(0.9)	13.6	(0.7)	3.5	(0.5)
Netherlands	0.1	(0.1)	1.6	(0.3)	11.2	(1.4)	24.8	(1.5)	29.1	(1.3)	23.7	(1.7)	8.8	(0.8)	0.7	(0.2)
…																
New Brunswick	0.3	(0.1)	2.3	(0.4)	10.8	(1.1)	25.4	(1.5)	31.3	(1.5)	22.6	(1.4)	6.6	(0.8)	0.8	(0.4)
Australia	1.0	(0.2)	3.2	(0.3)	9.4	(0.5)	18.9	(0.6)	26.8	(0.6)	25.0	(0.6)	12.6	(0.6)	3.2	(0.5)
Saskatchewan	0.6	(0.3)	3.2	(0.6)	9.7	(1.2)	19.8	(1.4)	29.4	(1.8)	25.0	(1.5)	10.3	(0.9)	2.0	(0.4)
New Zealand	0.9	(0.3)	3.4	(0.4)	9.5	(0.6)	17.5	(0.6)	24.0	(0.7)	25.0	(0.7)	14.9	(0.8)	4.7	(0.5)
United States	0.5	(0.1)	3.3	(0.5)	11.1	(1.1)	22.2	(1.2)	27.4	(0.9)	23.1	(1.0)	10.2	(0.9)	2.2	0.4
Japan	1.9	(0.5)	3.9	(0.5)	9.1	(0.7)	17.8	(0.8)	25.9	(0.9)	25.0	(0.9)	12.7	(0.7)	3.6	(0.4)
Manitoba	1.2	(0.5)	4.1	(0.9)	11.0	(1.3)	22.7	(1.8)	28.6	(1.3)	21.5	(1.4)	9.5	(1.0)	1.4	0.4
Prince Edward Island	1.0	(0.3)	4.5	(0.6)	12.3	(1.0)	23.6	(1.3)	29.1	(1.6)	21.3	(1.7)	7.2	(0.9)	1.0	(0.5)

Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.

Table 2.4 Percentage of students at each proficiency level, by country, province and economy: Reading – Continuous Texts

Country, province or economy	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Shanghai-China	0.1	(0.1)	0.5	(0.1)	3.1	(0.4)	11.9	(0.7)	26.5	(1.1)	34.2	(1.0)	20.1	(1.0)	3.6	(0.4)
Korea	0.3	(0.1)	1.0	(0.3)	5.1	(0.7)	15.5	(1.0)	32.5	(1.2)	32.7	(1.2)	11.9	(1.0)	1.0	(0.2)
Hong Kong-China	0.3	(0.1)	1.8	(0.3)	6.0	(0.5)	16.0	(0.8)	29.4	(1.3)	31.2	(1.0)	13.4	(0.7)	2.0	(0.3)
Finland	0.2	(0.1)	1.5	(0.2)	6.4	(0.5)	17.0	(0.9)	30.2	(0.8)	30.2	(0.8)	13.1	(0.7)	1.4	0.2
Ontario	0.3	(0.1)	2.0	(0.3)	7.0	(0.8)	19.2	(1.2)	28.7	(1.1)	26.9	(1.2)	13.1	(1.1)	2.8	(0.4)
Alberta	0.2	(0.1)	2.1	(0.4)	8.7	(1.1)	19.2	(1.3)	26.2	(1.1)	25.8	(1.3)	13.6	(1.4)	4.2	(0.7)
Canada	0.4	(0.1)	2.4	(0.2)	8.3	(0.4)	20.2	(0.7)	28.9	(0.7)	25.9	(0.7)	11.5	(0.5)	2.4	(0.2)
Québec	0.4	(0.1)	2.3	(0.4)	8.5	(0.9)	20.8	(1.1)	30.6	(1.1)	27.0	(1.3)	9.3	(0.8)	1.2	(0.3)
Nova Scotia	0.6	(0.3)	2.2	(0.6)	8.4	(0.9)	21.7	(1.4)	31.4	(1.8)	24.6	(1.8)	9.6	(1.3)	1.4	0.5
British Columbia	0.7	(0.3)	2.9	(0.6)	8.2	(0.9)	19.3	(1.4)	29.2	(1.3)	25.1	(1.4)	12.1	(1.0)	2.6	(0.6)
Japan	1.7	(0.4)	3.5	(0.6)	8.6	(0.7)	17.9	(0.8)	27.1	(0.9)	26.7	(0.9)	12.2	(0.8)	2.4	(0.3)
Singapore	0.6	(0.1)	3.3	(0.3)	9.9	(0.5)	18.8	(0.7)	27.2	(0.7)	25.0	(1.0)	12.4	(0.6)	2.8	(0.3)
Estonia	0.3	(0.2)	2.3	(0.4)	11.5	(0.9)	26.0	(1.3)	34.8	(1.1)	20.0	(0.9)	4.7	(0.5)	0.4	(0.2)
Newfoundland and Lab.	0.4	(0.3)	3.5	(0.9)	10.3	(1.5)	23.2	(1.6)	30.5	(1.8)	21.6	(1.5)	9.1	(1.1)	1.5	(0.6)
Netherlands	0.1	(0.1)	2.0	(0.4)	12.3	(1.3)	25.5	(1.5)	27.7	(1.1)	22.8	(1.7)	8.6	(0.9)	0.8	(0.2)
Australia	1.1	(0.1)	3.8	(0.3)	10.4	(0.5)	20.6	(0.6)	27.3	(0.6)	23.4	(0.5)	11.0	(0.5)	2.4	(0.4)
New Zealand	1.2	(0.3)	3.7	(0.4)	10.7	(0.6)	19.4	(0.8)	25.4	(0.8)	23.8	(0.8)	12.8	(0.7)	3.0	(0.4)
Saskatchewan	0.8	(0.3)	3.4	(0.7)	11.4	(1.2)	22.4	(1.8)	29.0	(1.6)	23.2	(1.4)	8.1	(0.8)	1.7	(0.4)
New Brunswick	0.4	(0.2)	3.7	(0.6)	12.3	(1.0)	24.7	(1.5)	29.6	(1.7)	20.6	(1.6)	7.3	(0.8)	1.4	(0.5)
Manitoba	1.1	(0.3)	4.6	(0.7)	12.9	(1.4)	24.7	(1.4)	26.4	(1.4)	20.7	(1.2)	8.1	(1.0)	1.5	0.4
Prince Edward Island	1.4	(0.5)	6.1	(0.8)	14.4	(1.0)	25.3	(1.4)	26.1	(1.7)	19.2	(1.2)	6.6	(0.8)	0.9	(0.4)

Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.

Table 2.5 Percentage of students at each proficiency level, by country, province and economy: Reading – Non-Continuous Texts

Country, province or economy	Proficiency levels													
	Below Level 1b (less than 262.04 score points)		Level 1b (from 262.04 to less than 334.75 score points)		Level 1a (from 334.75 to less than 407.47 score points)		Level 2 (from 407.47 to less than 480.18 score points)		Level 3 (from 480.18 to less than 552.89 score points)		Level 4 (from 552.89 to less than 625.61 score points)		Level 5 (from 625.61 to 698.32 score points)		Level 6 (above 698.32 score points)	
	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error	%	Standard error
Korea	0.4	(0.2)	0.9	(0.3)	4.8	(0.7)	15.2	(1.0)	30.8	(1.1)	33.1	(1.3)	13.3	(1.1)	1.6	(0.3)
Shanghai-China	0.2	(0.1)	1.2	(0.3)	5.2	(0.5)	16.2	(0.7)	31.2	(0.9)	31.4	(1.2)	12.8	(0.7)	1.9	(0.3)
Ontario	0.4	(0.1)	1.6	(0.3)	6.4	(0.6)	18.0	(1.0)	30.4	(1.2)	28.3	(1.1)	12.5	(1.0)	2.4	0.4
Finland	0.3	(0.1)	1.7	(0.2)	6.5	(0.5)	17.3	(0.6)	29.6	(0.8)	29.6	(0.9)	12.9	(0.8)	2.1	(0.3)
Alberta	0.2	(0.1)	1.7	(0.4)	6.7	(0.9)	17.7	(1.3)	28.0	(1.2)	28.1	(1.4)	13.5	(1.1)	4.0	(0.9)
British Columbia	0.3	(0.2)	2.0	(0.4)	6.9	(0.7)	19.1	(1.3)	29.4	(1.6)	27.5	(1.3)	12.5	(1.1)	2.3	0.5
Singapore	0.3	(0.1)	2.0	(0.2)	7.3	(0.5)	16.5	(0.6)	27.8	(0.8)	28.0	(0.9)	14.8	(0.7)	3.5	(0.5)
Hong Kong-China	0.4	(0.1)	1.8	(0.3)	7.5	(0.6)	18.9	(0.9)	33.1	(0.9)	28.3	(0.9)	9.2	(0.7)	0.8	(0.2)
Canada	0.5	(0.1)	2.1	(0.2)	7.5	(0.4)	19.0	(0.5)	30.2	(0.6)	26.9	(0.6)	11.6	(0.5)	2.3	0.2
Nova Scotia	0.7	(0.3)	2.3	(0.6)	7.5	(0.8)	21.0	(1.3)	32.7	(1.5)	25.3	(1.6)	9.2	(1.1)	1.4	(0.5)
Québec	0.6	(0.2)	2.6	(0.5)	8.4	(0.9)	18.6	(1.2)	30.9	(1.4)	26.2	(1.2)	10.9	(0.9)	1.9	(0.4)
Australia	0.9	(0.1)	2.8	(0.3)	8.6	(0.5)	18.9	(0.6)	28.3	(0.7)	25.6	(0.6)	12.2	(0.6)	2.8	(0.4)
New Zealand	0.9	(0.2)	2.6	(0.3)	8.9	(0.5)	17.7	(0.7)	25.2	(1.0)	25.7	(0.8)	15.0	(0.7)	4.1	0.4
Estonia	0.6	(0.2)	2.5	(0.4)	9.6	(0.7)	22.0	(1.2)	31.8	(1.2)	23.9	(1.0)	8.2	(0.6)	1.4	0.3
Netherlands	0.2	(0.1)	2.1	(0.4)	10.8	(1.1)	23.2	(1.5)	27.6	(1.3)	24.6	(1.5)	10.2	(1.1)	1.4	(0.4)
Newfoundland and Labrador	0.4	(0.2)	3.6	(1.0)	9.2	(1.2)	22.7	(1.5)	31.5	(1.8)	23.0	(1.7)	8.6	(1.2)	1.1	(0.4)
Liechtenstein			2.8	(1.2)	10.6	(1.7)	22.7	(2.5)	29.1	(2.6)	28.8	(2.9)	5.4	(1.6)		
Saskatchewan	0.8	(0.4)	3.1	(0.7)	10.4	(1.0)	22.6	(1.5)	30.6	(1.7)	23.7	(1.6)	7.7	(1.0)	1.1	(0.4)
Manitoba	1.0	(0.4)	4.0	(0.9)	11.6	(1.3)	24.7	(1.5)	30.0	(1.4)	20.9	(1.4)	6.7	(0.8)	1.1	(0.3)
New Brunswick	0.8	(0.3)	4.0	(0.7)	13.6	(1.3)	26.2	(1.9)	28.9	(1.7)	18.9	(1.2)	6.8	(1.0)	0.8	(0.3)
Prince Edward Island	1.4	(0.4)	4.8	(0.7)	13.1	(1.0)	25.0	(1.8)	29.4	(1.6)	19.5	(1.6)	6.0	(0.9)	0.9	0.3

Note: Countries, economies and provinces have been sorted by the total percentage of students who attained Level 2 or higher. Shaded areas show countries, economies or provinces whose percentages for Levels 5 and 6 are higher than Québec's.