

Progress in International Reading Literacy Study (PIRLS) 2011

Results of 10-Year-Old Students in Québec

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Progress in International Reading Literacy Study (PIRLS) 2011

1. Context and Goals of the Assessment

The ability to read is essential to the cultural, political, social and economic growth of a society (UNESCO, 2006). Québec's future prosperity depends heavily on reading literacy, which is key to all areas of learning and unlocks a wide range of possibilities for personal development. Therefore, it would appear to be very important to have easily accessible information on students' achievement in reading and to measure the success of different literacy initiatives for children in the early years.

The Progress in International Reading Literacy Study (PIRLS) has been conducted every five years since 2001 by the International Association for the Evaluation of Educational Achievement (IEA), an independent, international cooperative of national research institutions and governmental research agencies. More than 60 countries now participate in the study.

PIRLS focuses on 10-year-old students (in the fourth year of elementary school, or Elementary 4, as it is known in Québec) and makes it possible to measure the students' reading literacy, to compare the performance of participating countries and school authorities, and to provide information on curricula and the instructional practices used. PIRLS 2011 also allows jurisdictions that participated in the previous assessments to identify any changes that may have taken place from one assessment to the other. The study therefore brings to light a large variety of factors that may influence reading literacy and offers an opportunity to further reflect on action that could be taken to improve reading literacy.

Forty-nine countries, including Canada, participated in PIRLS in April and May of 2011. The Canadian sample comprised nine provinces, three of which (Alberta, Ontario and Québec) were benchmarking participants. Québec selected a sufficiently large random sample¹ of 190 classes and 4244 students to ensure that its results could be considered separate from those of Canada overall, as was done in the 2006 assessment.

This document presents the results of 10-year-old students in Québec, and compares these results against those of countries participating in the international study and those of other Canadian students. The data are taken from the international report entitled *PIRLS 2011 International Results in Reading*, which is available at <http://pirls.bc.edu>.

¹ For more information on sampling, please consult the Web site of the Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS) at <http://timssandpirls.bc.edu/pirls2011/index.html>.

2. Assessment Framework: Assessing Reading Literacy in PIRLS 2011

2.1 Assessment framework

The Québec Education Program considers reading a tool for communication and the development of thinking, and it enables students to experience the culture of Québec and elsewhere in order to construct their identity and world-view. In the language of instruction programs (French and English), reading a variety of texts is one of the competencies to be developed, in conjunction with other competencies involving writing and communicating orally. In elementary and secondary school, students read and appreciate different types of everyday texts that may be in various formats: books, magazines, the media and the Internet.

The PIRLS 2011 assessment framework is based on the definition of reading literacy developed by the IEA, as follows:

“. . . the ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment.²

This definition reflects theories of reading literacy as a constructive and interactive process.

PIRLS examines three aspects of students' reading literacy:

- purposes for reading
- processes of comprehension
- reading behaviours and attitudes

These three aspects are interrelated and depend on the contexts in which students live and learn, including home, classroom, school and community contexts. Table 2.1 presents the percentages assigned to each reading aspect and process in the assessment.

² I.V.S. Mullis, M.O. Martin, A.M. Kennedy, K.L. Trong and M. Sainsbury, *PIRLS 2011 Assessment Framework* (Amsterdam, the Netherlands: International Association for the Evaluation of Educational Achievement [IEA], 2009), 11, <http://timssandpirls.bc.edu/pirls2011/framework.html>.

Table 2.1 Percentages assigned to reading purposes and comprehension processes in PIRLS 2011

Purposes for reading	
• Literary experience	50%
• Acquire and use information	50%

Processes of comprehension	
• Focus and retrieve explicitly stated information	20%
• Make straightforward inferences	30%
• Interpret and integrate ideas and information	30%
• Examine and evaluate content, language and textual elements	20%

Reading behaviours and attitudes	
• Information gathered using questionnaires completed by participating students and their parents, teachers and school principals	

Source: Mullis et al. *PIRLS 2011 Assessment Framework*, 14

2.1.1 Purposes for reading

2.1.1.1 Reading for literary experience

PIRLS uses narrative fiction to allow young readers to engage with the text and explore a wide array of situations through their imagination. These texts are fairly long but were kept intact so as to preserve their authenticity.

2.1.1.2 Reading to acquire and use information

The PIRLS assessment uses both chronological and non-chronological texts. Chronologically organized texts recount events (e.g. reports, letters, biographies, autobiographies) or describe procedures (e.g. recipes or instructions), and present their ideas as a sequence ordered in time. Non-chronological texts explain, describe or aim to convince or persuade, and may take the form of lists, tables, graphs and diagrams.

The texts selected for *Reading for literary experience* comprised approximately 800 words, while those selected for *Reading to acquire and use information* varied between 600 and 900 words.

2.1.2 Processes of comprehension

In the PIRLS context, reading is an interactive process between reader and text. In addition to calling on their background knowledge, readers construct meaning using cognitive and metacognitive strategies.

The types of tasks carried out by students vary according to the comprehension process being assessed, as shown in Table 2.2 below.

Table 2.2 Examples of tasks used to assess the different processes of comprehension

<i>Focus on and Retrieve Explicitly Stated Information</i>	<i>Make Straightforward Inferences</i>
<ul style="list-style-type: none"> • Identifying information that is relevant to the specific goal • Looking for specific ideas • Searching for definitions of words or phrases • Identifying the setting of a story (e.g. time, place) • Finding the topic sentence or main idea (when explicitly stated) 	<ul style="list-style-type: none"> • Inferring that one event caused another event • Drawing conclusions about what the main point of a series of arguments is • Determining the referent of a pronoun • Identifying generalizations made in the text • Describing the relationship between two characters
<i>Interpret and integrate ideas and Information</i>	<i>Examine and Evaluate Content, Language and Textual Elements</i>
<ul style="list-style-type: none"> • Discerning the overall message or theme of a text • Considering an alternative to the actions of the characters • Comparing and contrasting text information • Inferring a story's mood or tone • Interpreting a real-world application of text information 	<ul style="list-style-type: none"> • Evaluating the likelihood that the events described could really happen • Describing how the author devised a surprise ending • Judging the completeness or clarity of information in the text • Determining an author's perspective on the central topic

2.2 Student Questionnaire

Reading purposes and comprehension processes were evaluated using the assessment instrument itself. Each participating student was administered one of the 13 student booklets and the *Student Questionnaire*. Students were given 80 minutes to answer the test items in their booklets and 15 to 30 minutes to fill out the questionnaire.

It is important to note that in order to link the data across years and to provide a foundation for measuring trends, the majority of assessment items were retained from previous PIRLS assessments.

The four comprehension processes were assessed using multiple-choice questions (worth one point each) and constructed-response questions (worth one to three points each). In general, each of the two texts on which the student was assessed contained seven multiple-choice items, two or three short-answer items and one extended-response item. This format varied, however, depending on the nature of the texts.

A team of teachers scored the constructed-response items using scoring guides that focused on evidence of the comprehension process that the question assessed and also provided evidence that would help to distinguish partial understanding from extensive/complete understanding. Examples were also provided to illustrate the expectations corresponding to the different levels of comprehension.

2.3 Reading behaviours and attitudes

The *Student Questionnaire*, as well as the other questionnaires to be completed by students' parents, teachers and school principals, were designed to gather information about students' home and school experiences in developing reading literacy.

The *Student Questionnaire* covers students' reading behaviours and attitudes.

A *Learning to Read Survey (Home Questionnaire)* was given to the parents or primary caregivers of each participating student, a *Teacher Questionnaire* was administered to their language of instruction teachers, and a *School Questionnaire* was completed by their school principals in order to better understand the students' overall context for learning to read.

To provide information on the provincial context, professionals at the MELS Direction des programmes completed a questionnaire on Québec's reading goals and curricula.

3. Summary of Results

The PIRLS 2011 average scores in reading are reported on the PIRLS scale which has a range of 0 to 1000. The international mean is set at 500 with a standard deviation of 100. The mean of 500 has been established since 2001 to remain the same from one assessment to another. A difference in average scores is statistically different when there is no overlap of confidence intervals between different measurements being compared. Appendix 1 provides definitions of the terminology used (standard error and confidence interval).

Reading achievement is also expressed as the percentage of students reaching the four international benchmarks, defined in Appendix 2.

The following are some highlights of PIRLS 2011:

Table 3.1 Main results and trends in PIRLS for Québec since 2001

Year	Québec Result	Québec Results by gender		Canada Result	Québec Ranking among participating jurisdictions
		Girls	Boys		
2001	537	544	530	NA	11th out of 35 participating jurisdictions
2006	533	539	527	NA	18th out of 40 participating jurisdictions
2011	538	544	531	548	20th out of 45 participating jurisdictions

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

- Québec 10-year-olds performed slightly better in PIRLS 2011 than in the past assessments and ranked 20th among the 45 participating jurisdictions. Québec’s ranking remained relatively stable, given that in 2011, four new jurisdictions participating in PIRLS obtained higher results than Québec.
- In 2011, Canada could draw on the results of nine provinces. The average score for Québec (538 points) was significantly lower than the score for Canada overall (548 points).
- Québec girls had a statistically higher average score (544) than the boys (531). This gap has not narrowed since 2001.
- The percentage of Québec students reaching each of the four international benchmarks in reading remained stable over the three PIRLS assessments. The percentage of Québec students reaching the *Advanced* International Benchmark was 7% in 2011 (13% for Anglophone students and 6% for

Francophone students³). Almost half the Québec students (43%) reached the *High* International Benchmark, ranking Québec 23rd at the international level.

- Québec is the only province among the four participating provinces that assessed both linguistic populations to show no significant statistical difference between the overall reading achievement of its Francophone and Anglophone students.
- With respect to the reading purposes assessed by PIRLS 2011, Québec students improved their results in *literary experience* by 8 points over 2006. Québec students performed equally well in both reading purposes in 2011.
- In PIRLS 2011, Québec students had similar results for the two categories of comprehension processes. Compared with 2006, they improved their performance by 3 points in *Retrieving and Straightforward Inferencing*, and by 7 points in *Interpreting, Integrating and Evaluating*. In the latter case, this was a significant increase over the 2006 assessment, but was not better than the 2001 result.

³ For the sake of simplicity, this report refers to Anglophone and Francophone students, but in reality, the data refer to students who attended a school in either the French or English school system, therefore, to the language of instruction and not the students' mother tongue.

4. Presentation of Reading Achievement Results for Québec 10-Year-Olds

4.1 Reading performance of Québec students and trends observed since 2001

Nine provinces represented Canada in PIRLS 2011. Each province administered the assessment to students in both the English- and French-language school systems. In Québec, 114 classes in the French-language system and 75 classes in the English-language system took part in the assessment.

The average scores (scale averages) indicated in the tables in this section are provided along with the standard error in parentheses.

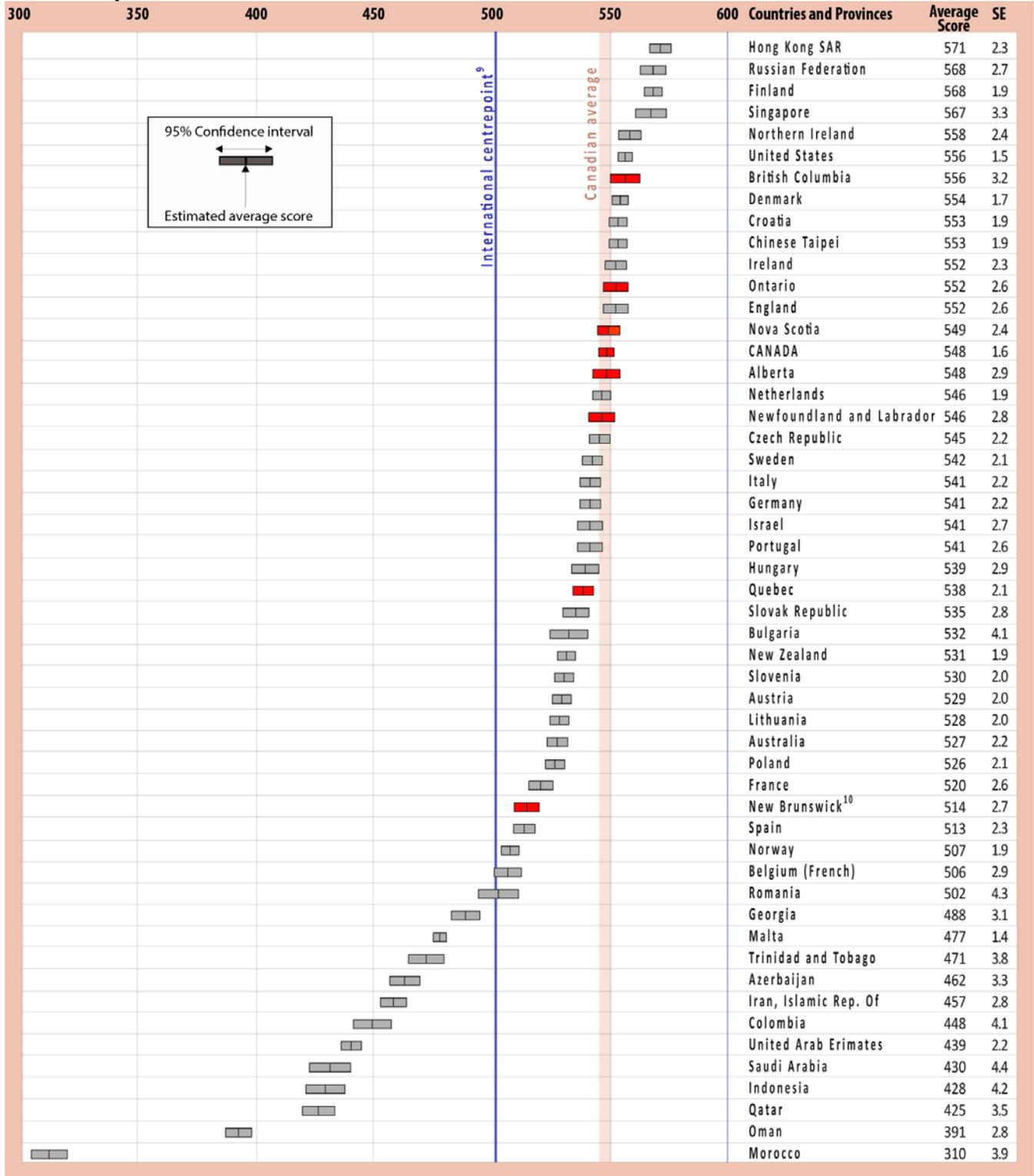
Reading performance

Québec 10-year-old students ranked 20th among the 45 participating jurisdictions. The average score of Québec students was significantly higher than that of 23 participating jurisdictions and significantly lower than that of 14. Québec's ranking remained relatively stable, given that in 2011, four new jurisdictions participating in PIRLS obtained higher results than Québec. Although 12 jurisdictions that took part in the 2006 assessment significantly improved their performance, none impacted Québec's ranking. Of the seven jurisdictions that experienced a significant drop compared to 2006, three countries came in below Québec.

If confidence intervals are considered, the average score for Québec was significantly lower than that for Canada overall. The average scores of countries and benchmarking provinces are presented in Figure 4.1.

Québec has been participating in PIRLS since 2001. The results of Québec students in PIRLS 2011, although slightly better than in the past assessments (2001 and 2006), did not indicate any significant increases. Four of the five provinces that participated in previous PIRLS assessments demonstrated similar stable results, while one province's performance dropped significantly.

Figure 4.1 Average scores and confidence intervals in reading for countries and Canadian provinces



Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Reading performance at the international benchmarks

The percentage of students reaching each international benchmark provides an overall picture of the students' reading skills in the fourth year of elementary school. Table 4.1 presents the cumulative distributions in the four levels for countries and benchmarking provinces in PIRLS 2011. In this table, it is assumed that those students classified at a given level (benchmark) can perform the tasks at that level as well as those at the lower level.

The percentage of Québec students reaching each of the four international benchmarks in reading remained stable over the three PIRLS assessments. The percentage of Québec students reaching the *Advanced* International Benchmark was 7% in 2011, compared with 13% for Canada overall. Almost half the Québec students (43%) reached the *High* International Benchmark.

In Québec, the percentage of students reaching the four international benchmarks differed statistically depending on whether the students were enrolled in the French or English school system (see Table 4.2).

Table 4.1 Percentage of students at the PIRLS 2011 international benchmarks of reading performance

Jurisdiction	Advanced International Benchmark (625)	High International Benchmark (550)	Intermediate International Benchmark (475)	Low International Benchmark (400)
Singapore	24 (1.6)	62 (1.8)	87 (1.1)	97 (0.4)
Russian Federation	19 (1.2)	63 (1.7)	92 (1.1)	99 (0.2)
Northern Ireland	19 (1.2)	58 (1.4)	87 (0.9)	97 (0.6)
Finland	18 (0.9)	63 (1.3)	92 (0.7)	99 (0.2)
England	18 (1.1)	54 (1.3)	83 (1.1)	95 (0.5)
Hong Kong SAR	18 (1.2)	67 (1.5)	93 (0.8)	99 (0.2)
United States	17 (0.7)	56 (0.8)	86 (0.6)	98 (0.3)
Ireland	16 (0.9)	53 (1.4)	85 (0.8)	97 (0.5)
Israel	15 (0.9)	49 (1.3)	80 (1.3)	93 (0.8)
<i>Canada, Ontario</i>	15 (1.3)	54 (1.7)	85 (1.1)	97 (0.4)
New Zealand	14 (0.7)	45 (1.1)	75 (0.9)	92 (0.5)
Canada	13 (0.7)	51 (1.1)	86 (0.6)	98 (0.2)
<i>Canada, Alberta</i>	13 (1.0)	51 (1.6)	85 (1.2)	97 (0.5)
Chinese Taipei	13 (0.9)	55 (1.3)	87 (0.7)	98 (0.3)
Denmark	12 (0.8)	55 (1.2)	88 (0.8)	99 (0.2)
Hungary	12 (0.9)	48 (1.5)	81 (1.2)	95 (0.7)
Bulgaria	11 (0.8)	45 (2.0)	77 (1.9)	93 (1.0)
Croatia	11 (0.7)	54 (1.3)	90 (0.7)	99 (0.2)
Australia	10 (0.7)	42 (1.1)	76 (1.0)	93 (0.7)
Italy	10 (0.7)	46 (1.4)	85 (1.1)	98 (0.4)
Germany	10 (0.8)	46 (1.4)	85 (1.0)	98 (0.3)
Portugal	9 (1.1)	47 (1.8)	84 (1.2)	98 (0.5)
Sweden	9 (0.8)	47 (1.6)	85 (1.0)	98 (0.3)
Czech Republic	8 (0.9)	50 (1.4)	87 (0.9)	98 (0.5)
Slovak Republic	8 (0.6)	44 (1.5)	82 (1.3)	96 (0.8)
Slovenia	8 (0.7)	42 (1.2)	79 (0.9)	95 (0.6)
<i>Canada, Québec</i>	7 (0.7)	43 (1.9)	85 (1.0)	98 (0.3)
Poland	7 (0.6)	39 (1.2)	77 (0.9)	95 (0.5)
Romania	7 (0.7)	32 (1.6)	65 (2.1)	86 (1.5)
Netherlands	7 (0.5)	48 (1.5)	90 (0.8)	100 (0.2)
Lithuania	6 (0.5)	39 (1.4)	80 (1.2)	97 (0.4)
France	5 (0.5)	35 (1.6)	75 (1.5)	95 (0.8)
Austria	5 (0.5)	39 (1.5)	80 (0.9)	97 (0.3)
Malta	4 (0.4)	24 (0.7)	55 (0.8)	78 (0.6)
Spain	4 (0.5)	31 (1.3)	72 (1.2)	94 (0.7)
Trinidad and Tobago	3 (0.5)	19 (1.4)	50 (1.9)	78 (1.5)
United Arab Emirates	3 (0.3)	14 (0.6)	38 (1.0)	64 (0.9)
Georgia	2 (0.3)	21 (1.2)	60 (1.6)	86 (1.4)
Belgium (French)	2 (0.5)	25 (1.4)	70 (1.7)	94 (1.1)
Qatar	2 (0.5)	12 (1.2)	34 (1.4)	60 (1.5)
Norway	2 (0.4)	25 (1.5)	71 (1.3)	95 (0.7)
Iran, Islamic Rep. of	1 (0.2)	13 (0.9)	45 (1.6)	76 (1.1)
Colombia	1 (0.3)	10 (1.3)	38 (2.1)	72 (1.9)
Saudi Arabia	1 (0.2)	8 (1.0)	34 (2.0)	65 (1.9)
Azerbaijan	0 (0.3)	9 (0.9)	45 (2.1)	82 (1.6)
Oman	0 (0.1)	5 (0.4)	21 (0.9)	47 (1.2)
Indonesia	0 (0.1)	4 (0.6)	28 (1.9)	66 (2.2)
Morocco	0 (0.0)	1 (0.2)	7 (0.7)	21 (1.3)
International average	8	44	80	95

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Table 4.2 Percentage of Elementary 4 students in Québec at the international benchmarks of reading performance, by linguistic school system

Language of instruction	Advanced International Benchmark		High International Benchmark		Intermediate International Benchmark		Low International Benchmark	
	%	S.E. ¹	%	S.E.	%	S.E.	%	S.E.
English	13	1.5	49	2.0	84	1.5	97	0.8
French	6	0.8	43	2.1	85	1.1	98	0.4

¹ S.E.: standard error

4.2 Reading performance by language

Québec is the only province among the four participating provinces that assessed both linguistic populations to show no significant statistical difference between the overall reading achievement of its Francophone and Anglophone students, although the Anglophone students performed better than the Francophone students.

4.3 Reading performance by gender

Table 4.3 presents the average scores in reading by gender and by country and benchmarking province.

The three PIRLS assessments show that girls outperformed boys in reading. PIRLS 2011 reveals that unfortunately, the gap did not narrow in Québec, with a difference of 14 points in favour of the girls. Figure 4.2 illustrates the gap between the performance of girls and boys in Québec. The gender gap varied depending on the country, ranging from 1 to 54 points, with the international average being 17 points and the Canadian average, 12 points.

Table 4.3 Average scores of girls and boys in reading (PIRLS 2011)

Jurisdiction	Girls		Boys		Difference
	Percentage of girls	Average scale score	Percentage of boys	Average scale score	
Colombia	49 (1.3)	447 (4.6)	51 (1.3)	448 (4.6)	1 (3.9)
Italy	50 (0.7)	543 (2.4)	50 (0.7)	540 (2.7)	3 (2.4)
France	49 (0.8)	522 (3.4)	51 (0.8)	518 (2.4)	5 (2.7)
Spain	49 (0.8)	516 (2.5)	51 (0.8)	511 (2.8)	5 (2.5)
Belgium (French)	49 (0.9)	509 (3.1)	51 (0.9)	504 (3.1)	5 (2.3)
Israel	51 (1.6)	544 (3.1)	49 (1.6)	538 (3.4)	6 (3.4)
Czech Republic	49 (1.2)	549 (2.5)	51 (1.2)	542 (2.5)	6 (2.6)
Netherlands	51 (0.7)	549 (2.1)	49 (0.7)	543 (2.2)	7 (2.0)
Austria	49 (1.2)	533 (2.2)	51 (1.2)	525 (2.3)	8 (2.3)
Germany	49 (0.8)	545 (2.3)	51 (0.8)	537 (2.7)	8 (2.5)
Slovak Republic	49 (0.8)	540 (3.1)	51 (0.8)	530 (2.8)	10 (2.1)
United States	51 (0.5)	562 (1.9)	49 (0.5)	551 (1.7)	10 (1.8)
Canada, Alberta	48 (0.9)	553 (3.1)	52 (0.9)	543 (3.1)	10 (2.2)
Denmark	50 (0.7)	560 (1.9)	50 (0.7)	548 (2.1)	12 (2.2)
Canada	49 (0.6)	555 (1.7)	51 (0.6)	542 (2.1)	12 (2.0)
Canada, Ontario	49 (1.1)	558 (3.3)	51 (1.1)	546 (2.8)	13 (3.4)
Canada, Québec	50 (1.0)	544 (2.6)	50 (1.0)	531 (2.4)	14 (2.5)
Poland	48 (0.9)	533 (2.5)	52 (0.9)	519 (2.7)	14 (3.1)
Azerbaijan	47 (0.9)	470 (3.6)	53 (0.9)	456 (3.5)	14 (2.3)
Croatia	50 (0.8)	560 (2.1)	50 (0.8)	546 (2.2)	14 (2.2)
Sweden	49 (1.0)	549 (2.4)	51 (1.0)	535 (2.5)	14 (2.7)
Portugal	49 (1.2)	548 (3.0)	51 (1.2)	534 (2.8)	14 (2.4)
Norway	52 (1.0)	514 (2.2)	48 (1.0)	500 (2.7)	14 (3.1)
Chinese Taipei	47 (0.6)	561 (2.1)	53 (0.6)	546 (2.1)	15 (2.1)
Bulgaria	49 (0.9)	539 (4.5)	51 (0.9)	524 (4.3)	15 (3.5)
Romania	48 (0.9)	510 (4.8)	52 (0.9)	495 (4.3)	15 (3.3)
Ireland	49 (2.2)	559 (2.9)	51 (2.2)	544 (3.0)	15 (3.9)
Hungary	49 (0.9)	547 (3.2)	51 (0.9)	532 (3.2)	16 (2.6)
Slovenia	48 (0.8)	539 (2.2)	52 (0.8)	523 (2.7)	16 (3.1)
Northern Ireland	50 (1.2)	567 (2.5)	50 (1.2)	550 (3.2)	16 (3.4)
Hong Kong SAR	46 (1.2)	579 (2.3)	54 (1.2)	563 (2.5)	16 (2.2)
Australia	49 (1.1)	536 (2.7)	51 (1.1)	519 (2.7)	17 (3.1)
Singapore	49 (0.6)	576 (3.5)	51 (0.6)	559 (3.6)	17 (2.6)
Malta	49 (0.5)	486 (1.9)	51 (0.5)	468 (2.0)	18 (2.8)
Indonesia	51 (0.9)	437 (4.5)	49 (0.9)	419 (4.3)	18 (2.3)
Lithuania	48 (0.8)	537 (2.4)	52 (0.8)	520 (2.4)	18 (2.8)
Russian Federation	49 (1.0)	578 (2.8)	51 (1.0)	559 (3.1)	18 (2.3)
Iran, Islamic Rep. of	49 (2.9)	467 (4.3)	51 (2.9)	448 (4.3)	20 (6.4)
New Zealand	49 (1.0)	541 (2.2)	51 (1.0)	521 (2.7)	20 (3.1)
Finland	49 (0.8)	578 (2.3)	51 (0.8)	558 (2.2)	21 (2.3)
Georgia	48 (0.9)	499 (2.7)	52 (0.9)	477 (4.0)	22 (3.0)
England	49 (1.0)	563 (3.0)	51 (1.0)	540 (3.1)	23 (3.0)
United Arab Emirates	50 (1.6)	452 (3.0)	50 (1.6)	425 (3.5)	27 (4.8)
Morocco	48 (0.8)	326 (4.0)	52 (0.8)	296 (4.6)	29 (3.9)
Qatar	47 (3.4)	441 (4.7)	53 (3.4)	411 (4.2)	30 (6.0)
Trinidad and Tobago	49 (2.0)	487 (4.5)	51 (2.0)	456 (4.3)	31 (4.6)
Oman	49 (0.7)	411 (3.0)	51 (0.7)	371 (3.4)	40 (2.9)
Saudi Arabia	52 (1.5)	456 (3.1)	48 (1.5)	402 (8.2)	54 (8.8)
International average	49 (0.2)	520 (0.5)	51 (0.2)	504 (0.5)	16 (0.5)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Figure 4.2 Trends in average scores in reading for Québec, by gender (PIRLS 2011)

Legend:

Girls: 

Boys: 

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

4.4 Reading performance by reading purpose

Five literary passages and five informational passages were used in PIRLS 2011 to assess the two reading purposes, *Literary experience* and *Acquire and use information*.

In the 2011 assessment, Québec students improved their results in *Literary experience* by 8 points over the 2006 assessment. They had similar results in the two reading purposes in 2011.

Reading performance by reading purpose is presented by country and benchmarking province in Table 4.4.

Table 4.4 Average scores in literary and informational reading

Jurisdiction	Overall average score	Average score by reading purpose			
		Literary		Informational	
Hong Kong SAR	571 (2.3)	565	(2.5)	578	(2.2)
Russian Federation	568 (2.7)	567	(2.7)	570	(2.7)
Finland	568 (1.9)	568	(2.0)	568	(2.0)
Singapore	567 (3.3)	567	(3.5)	569	(3.3)
Northern Ireland	558 (2.4)	564	(2.7)	555	(2.6)
United States	556 (1.5)	563	(1.8)	553	(1.6)
Denmark	554 (1.7)	555	(1.7)	553	(1.8)
Croatia	553 (1.9)	555	(1.9)	552	(1.6)
Chinese Taipei	553 (1.9)	542	(1.9)	565	(1.8)
<i>Canada, Ontario</i>	552 (2.6)	558	(2.6)	549	(2.7)
Ireland	552 (2.3)	557	(2.7)	549	(2.3)
England	552 (2.6)	553	(2.8)	549	(2.6)
Canada	548 (1.6)	553	(1.7)	545	(1.7)
<i>Canada, Alberta</i>	548 (2.9)	552	(3.1)	545	(2.8)
Netherlands	546 (1.9)	545	(2.4)	547	(1.9)
Czech Republic	545 (2.2)	545	(2.1)	545	(2.0)
Sweden	542 (2.1)	547	(2.4)	537	(2.4)
Italy	541 (2.2)	539	(2.0)	545	(2.0)
Germany	541 (2.2)	545	(2.2)	538	(2.5)
Israel	541 (2.7)	542	(2.7)	541	(2.6)
Portugal	541 (2.6)	538	(2.8)	544	(2.6)
Hungary	539 (2.9)	542	(2.8)	536	(3.0)
<i>Canada, Québec</i>	538 (2.1)	539	(2.0)	539	(2.4)
Slovak Republic	535 (2.8)	540	(2.9)	530	(3.0)
Bulgaria	532 (4.1)	532	(4.4)	533	(4.0)
New Zealand	531 (1.9)	533	(2.3)	530	(2.0)
Slovenia	530 (2.0)	532	(2.4)	528	(2.0)
Austria	529 (2.0)	533	(2.2)	526	(2.0)
Lithuania	528 (2.0)	529	(1.8)	527	(2.0)
Australia	527 (2.2)	527	(2.2)	528	(2.2)
Poland	526 (2.1)	531	(2.1)	519	(2.4)
France	520 (2.6)	521	(2.6)	519	(2.6)
Spain	513 (2.3)	516	(2.1)	512	(2.0)
Norway	507 (1.9)	508	(2.0)	505	(2.3)
Belgium (French)	506 (2.9)	508	(2.9)	504	(3.2)
Romania	502 (4.3)	504	(4.2)	500	(4.6)
Georgia	488 (3.1)	491	(2.9)	482	(3.1)
Malta	477 (1.4)	470	(1.7)	485	(1.5)
Trinidad and Tobago	471 (3.8)	467	(4.1)	474	(3.8)
Azerbaijan	462 (3.3)	461	(3.0)	460	(3.9)
Iran, Islamic Rep. of	457 (2.8)	459	(2.9)	455	(2.9)
Colombia	448 (4.1)	453	(4.1)	440	(4.4)
United Arab Emirates	439 (2.2)	427	(2.4)	452	(2.2)
Saudi Arabia	430 (4.4)	422	(4.6)	440	(4.5)
Indonesia	428 (4.2)	418	(4.0)	439	(4.5)
Qatar	425 (3.5)	415	(3.9)	436	(3.4)
Oman	391 (2.8)	379	(2.8)	404	(3.0)
Morocco	310 (3.9)	299	(3.6)	321	(3.6)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

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4.5 Reading performance by comprehension process

PIRLS 2011 measured student achievement in the four comprehension processes described in the preceding section. Due to the small number of items in each process, results were grouped into two scales: 1) *Retrieving and straightforward inferencing* and 2) *Interpreting, integrating, and evaluating*. The first scale comprises the processes *Focus on and retrieve explicitly stated information* and *Make straightforward inferences* and the second, *Interpret and integrate ideas and information* and *Examine and evaluate content, language and textual elements*.

At the international level, most countries with the highest reading achievement are performing significantly better in *Interpreting, integrating, and evaluating* than in *Retrieving and straightforward inferencing*. This is true for Canada as well.

In PIRLS 2011, Québec students had similar results in both processes. Compared with the 2006 assessment, they improved their performance by 3 points in *Retrieving and straightforward inferencing*, and by 7 points in *Interpreting, integrating, and evaluating*. In the latter instance, the increase was significant compared with the 2006 assessment, but was not better than the 2001 results.

Students from other PIRLS 2011 benchmarking provinces performed better than Québec students in the two comprehension scales.

Québec girls outperformed boys in both reading purposes and comprehension processes. If average scores are considered by gender, the difference between the girls and the boys is less pronounced for informational reading.

Table 4.5 presents the average scores of girls and boys in the two reading purposes and the two categories of comprehension processes.

Table 4.5 Average scores in two reading purposes and two categories of comprehension processes, by gender

Jurisdiction	Reading Purpose				Comprehension Process			
	Literary		Informational		Retrieving and Straightforward Inferencing		Interpreting, Integrating and Evaluating	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Germany	550 (2.9)	539 (2.5)	540 (2.8)	536 (2.8)	554 (2.9)	543 (2.8)	540 (2.4)	532 (2.8)
England	567 (2.9)	539 (3.4)	560 (3.0)	539 (3.2)	557 (3.0)	535 (3.2)	568 (3.1)	544 (3.2)
Saudi Arabia	449 (3.1)	393 (8.5)	464 (3.9)	414 (8.2)	457 (3.3)	408 (8.8)	453 (3.7)	393 (8.3)
Australia	539 (3.0)	516 (3.2)	534 (2.9)	522 (2.7)	536 (3.1)	517 (3.1)	538 (2.8)	521 (2.7)
Austria	539 (2.3)	526 (2.7)	527 (2.2)	525 (2.5)	542 (2.5)	537 (2.8)	526 (2.1)	516 (2.4)
Azerbaijan	470 (3.7)	454 (3.3)	466 (4.5)	455 (4.0)	475 (3.2)	463 (3.6)	458 (4.0)	441 (3.9)
Belgium (French)	513 (3.2)	503 (3.4)	504 (3.6)	503 (3.4)	514 (3.3)	509 (3.0)	502 (3.3)	497 (3.6)
Bulgaria	541 (4.8)	523 (4.7)	538 (4.5)	527 (4.3)	540 (4.5)	525 (4.3)	540 (4.4)	525 (4.3)
Canada	562 (2.0)	544 (2.2)	549 (1.9)	542 (2.0)	549 (1.8)	538 (1.9)	560 (1.8)	548 (2.0)
<i>Canada, Alberta</i>	561 (3.4)	544 (3.2)	547 (3.0)	542 (3.1)	547 (3.1)	537 (3.1)	560 (3.4)	549 (3.4)
<i>Canada, Ontario</i>	567 (3.5)	549 (2.9)	553 (3.7)	545 (2.7)	551 (3.2)	539 (2.8)	566 (3.4)	553 (2.7)
Canada, Québec	549 (2.7)	529 (2.2)	540 (2.8)	533 (2.7)	544 (2.6)	532 (2.3)	545 (2.9)	531 (2.4)
Colombia	453 (4.6)	452 (4.6)	438 (5.1)	442 (4.9)	449 (4.6)	452 (4.7)	443 (5.0)	442 (5.2)
Croatia	566 (2.3)	545 (2.5)	555 (1.8)	548 (2.1)	561 (2.2)	547 (2.4)	560 (1.9)	545 (2.2)
Denmark	565 (2.0)	545 (2.2)	557 (2.3)	550 (2.1)	563 (2.3)	549 (2.5)	558 (1.9)	548 (1.9)
United Arab Emirates	442 (3.0)	413 (3.6)	465 (2.7)	439 (3.6)	452 (3.1)	426 (3.3)	453 (2.9)	423 (3.5)
Spain	520 (2.5)	511 (2.5)	512 (2.2)	512 (2.7)	518 (2.3)	514 (2.6)	513 (2.5)	507 (2.6)
United States	570 (2.3)	555 (1.9)	556 (1.9)	549 (1.9)	554 (1.8)	544 (1.7)	568 (2.0)	557 (1.9)
Russian Federation	578 (2.8)	557 (3.1)	577 (2.9)	563 (2.9)	574 (3.2)	557 (3.0)	581 (2.7)	561 (3.0)
Finland	582 (2.4)	556 (2.4)	575 (2.6)	561 (2.6)	579 (2.7)	560 (2.3)	578 (2.4)	557 (2.0)
France	526 (3.3)	517 (2.6)	519 (3.2)	519 (2.9)	531 (3.0)	525 (2.5)	513 (3.5)	510 (2.7)
Georgia	504 (2.5)	480 (4.2)	494 (3.1)	472 (4.1)	497 (2.6)	473 (4.0)	502 (3.0)	481 (4.4)
Hong Kong SAR	577 (2.8)	555 (2.7)	582 (2.5)	574 (2.3)	569 (2.4)	556 (2.5)	588 (2.6)	570 (2.7)
Hungary	553 (3.2)	531 (3.3)	540 (3.4)	531 (3.4)	545 (3.1)	530 (3.0)	550 (3.2)	534 (3.1)
Indonesia	428 (4.4)	408 (4.1)	447 (4.7)	430 (4.7)	441 (4.7)	421 (4.1)	430 (4.9)	415 (4.9)
Ireland	569 (3.1)	546 (3.4)	553 (3.1)	545 (3.0)	558 (3.7)	546 (3.1)	562 (2.9)	545 (2.9)
Northern Ireland	575 (3.2)	552 (3.5)	561 (3.1)	549 (3.4)	563 (2.8)	548 (3.4)	571 (2.8)	553 (3.3)
Israel	546 (3.2)	538 (3.7)	542 (3.1)	540 (3.3)	540 (3.3)	536 (3.3)	546 (3.5)	541 (3.8)
Italy	542 (2.4)	535 (2.4)	545 (2.4)	545 (2.4)	541 (2.4)	538 (2.2)	546 (2.4)	542 (2.7)
Lithuania	541 (2.2)	517 (2.2)	534 (2.4)	521 (2.3)	540 (2.4)	521 (2.3)	537 (2.7)	518 (2.3)
Malta	482 (2.1)	459 (2.7)	491 (1.9)	478 (2.1)	489 (2.3)	470 (2.4)	483 (2.6)	466 (2.2)
Morocco	314 (4.3)	285 (4.1)	335 (4.3)	308 (4.0)	336 (3.7)	314 (3.4)	307 (4.6)	271 (4.8)
New Zealand	546 (2.7)	521 (3.3)	537 (2.4)	522 (2.8)	536 (2.4)	519 (2.8)	545 (2.5)	526 (2.5)
Norway	516 (2.5)	498 (2.6)	511 (2.5)	499 (3.2)	518 (2.3)	503 (2.5)	508 (2.5)	495 (3.7)
Oman	400 (3.1)	360 (3.3)	425 (3.1)	383 (3.7)	414 (2.8)	376 (2.8)	404 (3.5)	361 (3.4)
Netherlands	549 (2.4)	540 (2.6)	549 (2.4)	545 (2.2)	551 (2.4)	547 (2.5)	549 (2.2)	538 (2.2)
Poland	542 (2.8)	520 (2.4)	523 (3.3)	516 (3.2)	534 (2.7)	519 (2.7)	531 (2.7)	519 (2.5)
Portugal	548 (3.1)	528 (2.9)	549 (3.2)	539 (2.7)	547 (3.1)	532 (2.9)	549 (3.2)	535 (2.9)
Qatar	431 (4.7)	400 (4.0)	449 (4.9)	424 (4.2)	439 (4.7)	410 (3.8)	440 (4.7)	412 (4.1)
Romania	512 (4.8)	497 (4.3)	508 (5.1)	493 (4.8)	506 (4.9)	494 (4.7)	512 (4.9)	494 (4.9)
Singapore	578 (3.9)	556 (3.8)	576 (3.5)	563 (3.6)	573 (3.5)	557 (3.7)	579 (3.6)	562 (3.7)
Iran, Islamic Rep. of	469 (4.6)	449 (4.5)	465 (4.2)	445 (4.5)	469 (4.3)	447 (4.5)	466 (4.5)	448 (4.5)
Slovak Republic	547 (3.6)	533 (2.9)	533 (3.3)	528 (3.1)	538 (3.4)	531 (3.1)	542 (3.2)	530 (2.8)
Czech Republic	550 (2.8)	539 (2.4)	547 (2.7)	543 (2.3)	552 (3.0)	544 (2.6)	547 (2.5)	541 (2.3)
Slovenia	543 (2.7)	523 (3.2)	534 (2.0)	522 (2.8)	541 (2.1)	524 (3.0)	538 (2.1)	522 (3.1)
Sweden	557 (3.1)	538 (2.6)	543 (2.7)	531 (3.1)	549 (2.6)	537 (2.6)	549 (2.5)	532 (2.6)
Chinese Taipei	550 (2.2)	535 (2.3)	572 (2.1)	560 (2.0)	560 (2.2)	544 (2.3)	561 (2.2)	549 (2.3)
Trinidad and Tobago	486 (4.8)	450 (4.5)	488 (4.3)	460 (4.2)	490 (4.3)	459 (4.4)	480 (4.5)	448 (4.8)
International average	522 (0.5)	502 (0.5)	519 (0.5)	507 (0.5)	521 (0.5)	505 (0.5)	519 (0.5)	502 (0.5)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

5. Behaviours and Attitudes: Responses to Contextual Questionnaires

The *Student Questionnaire*, as well as the other questionnaires distributed to students' parents, teachers and school principals, are used to collect information on the students' home and school experiences in developing reading literacy.

5.1 School composition by student socioeconomic background

In the *School Questionnaire*, principals of participating schools had to indicate the percentage of students in their schools coming from economically disadvantaged homes and the percentage of students coming from economically affluent homes. The table below provides this information.

Table 5.1 School composition by student economic background (as reported by school principals)

Participants	Schools with more affluent than disadvantaged students		Schools with neither more affluent nor more disadvantaged students		Schools with more disadvantaged than affluent students	
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score
Québec	60 (4.1)	544 (2.6)	25 (4.0)	526 (5.2)	15 (2.7)	528 (4.9)
Canada	39 (2.4)	557 (3.0)	34 (2.9)	549 (2.7)	28 (2.6)	533 (2.6)
International	35 (0.5)	530 (0.9)	35 (0.6)	515 (0.8)	30 (0.5)	490 (1.0)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Québec students attending schools with more affluent than disadvantaged students performed better than students attending schools with more disadvantaged students than affluent students, with an advantage of 16 points. Compared with the international average, schools with more affluent students had an advantage of 40 points. The difference in reading scores between students attending schools with more affluent students and those with more disadvantaged students was smaller in Québec than in Canada and in most of the other countries.

5.2 Home support for literacy

The home environment can create a climate that encourages children to explore and experiment with learning. Moreover, the way that children experience learning is often shaped by parenting beliefs and behaviours (Mullis et al., 2009). The main results from the *Learning to Read Survey* as they relate to reading achievement are presented below.

Languages spoken at home

According to parents who responded to the PIRLS 2011 *Learning to Read Survey*, 94% of Québec students spoke the test language (French or English) before they started school. This proportion is similar to the international average of 92%. However, 13% of Québec students also spoke a language other than English or French before they began school. There was no statistical difference in the overall reading achievement between those students who spoke the test language at home before they started school and those who did not.

Students' resources at home

The *Home Resources* scale is based on data gathered on the parental level of education and professional occupation, the number of books in the home, the number of children's books and the number of home-study supports (e.g. students having their own room and an Internet connection). According to this scale, Québec students are among those with the most home resources available for learning. Although Elementary 4 students in Québec with *many resources* (see Table 5.2) had average scores that were 37 points higher than students with *some resources*, this achievement difference is one of the smallest among the PIRLS 2011 participants.

Table 5.2 Home resources

Participants	Many resources		Some resources		Few resources		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	29 (1.6)	567 (3.0)	71 (1.6)	530 (2.1)	0 (0.1)	~ ~	11.1 (0.05)
Canada	35 (1.2)	580 (2.4)	65 (1.1)	540 (1.5)	0 (0.1)	~ ~	11.3 (0.04)
International	18 (0.2)	571 (0.7)	73 (0.2)	510 (0.4)	9 (0.1)	448 (1.4)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Engagement of parents with their children and parents' reading habits and attitudes

PIRLS 2011 asked parents how often they were engaged in a number of literacy-related activities⁴ with their children before starting school and created an *Early Literacy Activity* scale.

In Québec, Elementary 4 students whose parents *often* performed literacy-related activities (40% of respondents) had an advantage of 23 points over those students whose parents only *sometimes* performed these activities (59% of respondents). The table below presents these results.

Table 5.3 Participation of parents in literacy-related activities

Participants	Often participated in literacy-related activities		Sometimes participated in literacy-related activities		Almost never participated in literacy-related activities		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	40 (1.0)	554 (3.0)	59 (1.0)	531 (2.4)	2 (0.3)	~ ~ ⁵	10.2 (0.04)
Canada	51 (0.9)	566 (1.9)	48 (0.9)	541 (1.8)	1 (0.1)	~ ~	10.7 (0.04)
International	37 (0.2)	529 (0.5)	60 (0.2)	506 (0.5)	3 (0.1)	430 (2.6)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Among the various activities, the frequency with which parents read books to their children is associated with important differences in the scores obtained. In Québec, students whose parents often read books at home with them had an advantage of 32 points over those who did that only sometimes, never, or almost never (554/522). A total of 58% of Québec parents reported reading often with their child, compared with 71% for Canada overall.

In Québec, 29% of parents reported that they *like to read* and 58% of parents confirmed that they *somewhat like to read* (see Table 5.4). Students whose parents liked to read achieved higher scores than those whose parents did not (557 points compared with 526 points).

⁴ Parents were surveyed on the following nine activities: reading books, telling stories, singing songs, playing with alphabet toys, talking about things they have done, talking about things they have read, playing word games, writing letters or words, and reading aloud signs and labels.

⁵ There are insufficient data to report an average score.

Table 5.4 Parents' interest in reading

Participants	Parents like to read		Parents somewhat like to read		Parents do not like to read		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	29 (1.0)	557 (2.9)	58 (0.8)	535 (2.3)	13 (0.8)	526 (4.3)	9.9 (0.05)
Canada	41 (0.7)	569 (2.1)	50 (0.6)	545 (1.7)	9 (0.4)	533 (2.7)	10.4 (0.03)
International	32 (0.2)	535 (0.5)	57 (0.2)	507 (0.5)	11 (0.1)	487 (0.9)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Homework

A total of 47% of parents estimated that their child spent 16 to 30 minutes on homework every day. Only 1% of parents reported that their child did not do any homework.

5.3 Reading behaviours and attitudes

Motivation to read

In Québec, 61% of Elementary 4 students reported being *motivated*⁶ to read, compared with 70% in most of the Canadian provinces. Québec students who were *motivated* or *somewhat motivated* to read performed significantly better than those who were *not motivated to read* (see Table 5.5).

⁶ Students were asked to indicate their degree of agreement with the following six statements: I like to read things that make me think; It is important to be a good reader; My parents like it when I read; I learn a lot from reading; I need to read well for my future; and I like it when a book helps me imagine other worlds.

Table 5.5 Students' motivation to read

Participants	Motivated		Somewhat motivated		Not motivated		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	61 (1.1)	537 (2.3)	34 (1.0)	542 (3.2)	5 (0.5)	526 (5.5)	9.2 (0.05)
Canada	72 (1.0)	551 (1.7)	24 (0.6)	549 (2.2)	4 (0.2)	530 (5.2)	9.8 (0.03)
International	74 (0.1)	518 (0.4)	21 (0.1)	503 (0.7)	5 (0.1)	474 (1.3)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Students' confidence in reading

A total of 35% of Québec students reported being confident in their reading skills.⁷ This percentage is similar to the international average (36%), but lower than the Canadian average (41%). The level of confidence of Elementary 4 students in their reading ability has an impact on their PIRLS reading scores. In Québec, the difference in student performance between students who felt *confident* and *somewhat confident* was 36 points (42 points for Canada overall), and the difference between students who felt *somewhat confident* and *not confident* was 35 points (39 points for Canada overall).

Table 5.6 Students' confidence in reading

Participants	Confident		Somewhat confident		Not confident		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	35 (1.2)	565 (2.5)	55 (1.1)	529 (2.7)	10 (0.6)	494 (4.9)	10.0 (0.04)
Canada	41 (0.7)	578 (1.7)	51 (0.6)	536 (1.7)	9 (0.4)	497 (3.1)	10.2 (0.04)
International	36 (0.2)	547 (0.4)	53 (0.1)	502 (0.4)	11 (0.1)	456 (0.8)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

⁷ Students were asked to indicate their degree of agreement with the following six statements: I usually do well in reading; Reading is easy for me; Reading is harder for me than for many of my classmates; If a book is interesting, I don't care how hard it is to read; I have trouble reading stories with difficult words; My teacher tells me I am a good reader; and Reading is harder for me than any other subject.

Student engagement in reading lessons

In most countries, there is a positive linear relationship between students' engagement in reading lessons and reading achievement.⁸ In Québec, 30% of students reported being *engaged* in their reading lessons, compared with 42% at the international level and 39% for Canada overall. A total of 61% of Québec students responded that they were *somewhat engaged* in their reading lessons, and 9% that they were *not engaged* (see Table 5.7).

Table 5.7 Student engagement in reading lessons

Participants	Engaged		Somewhat engaged		Not engaged		Scale average
	Percentage of students	Average score	Percentage of students	Average score	Percentage of students	Average score	
Québec	30 (1.4)	546 (3.2)	61 (1.3)	537 (2.3)	9 (0.8)	522 (5.3)	9.5 (0.06)
Canada	39 (0.9)	558 (1.9)	54 (0.7)	545 (1.9)	7 (0.4)	531 (4.4)	9.9 (0.03)
International	42 (0.2)	519 (0.5)	50 (0.2)	510 (0.5)	8 (0.1)	494 (1.0)	

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Students' reading habits

Students' reading habits outside of school are another aspect of the reading experience that was assessed. Table 5.8 presents the amount of time students reported spending on reading outside of school. A total of 41% of Québec students responded that they read stories or novels every day or almost every day.

⁸ Students were asked to indicate their degree of agreement with the following statements: I like what I read about in school; My teacher gives me interesting things to read; I know what my teacher expects me to do; I think of things not related to the lesson; My teacher is easy to understand; I am interested in what my teacher says; and My teacher gives me interesting things to do.

Table 5.8 Time spent reading outside of school

Participants	Less than 30 minutes	30 minutes up to 1 hour	From 1 hour up to 2 hours	2 hours or more
Québec	44%	38%	9%	9%
Canada	41%	39%	10%	10%
International	40%	35%	13%	11%

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

5.4 Teachers and reading instruction

Table 5.9 paints a portrait of Elementary 4 teachers. There was no significant difference in the reading achievement of Québec students as it relates to the number of years of teaching experience of their teachers.

Table 5.9 Distribution of Elementary 4 teachers by gender and age group and average number of years of teaching experience

Participants	Gender		Age group						Years of experience
	Male	Female	Under 25	25 to 29	30 to 39	40 to 49	50 to 59	60 or more	
Québec	12	88	0	11	35	29	22	2	15.6
Canada	17	83	1	12	35	27	22	2	14.3
International	16	84	3	11	30	32	21	4	17.4

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Professional development

Professional development is one of the variables measured in the *Teacher Questionnaire*. Table 5.10 presents the Québec data as they compare to the Canadian and international data. As outlined in the international report (Mullis et al., 2012), past studies are not conclusive as to the impact of teacher professional development on student literacy achievement. Also related to Table 5.10 below, PIRLS 2011 reported that 92% of Québec teachers specialized in teaching at the elementary level, compared with 81% of Canadian teachers overall and 78% internationally.

Table 5.10 Proportion of Elementary 4 teachers who spent time on professional development activities related to reading in the past two years

Participants	16 hours or more	Some time, but less than 16 hours	No time
Québec	14 (2.9)	70 (4.0)	15 (3.2)
Canada	30 (2.2)	62 (1.1)	7 (1.1)
International	24 (0.1)	50 (0.1)	25 (0.1)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

A total of 79% of Québec students had teachers who adopted collaborative practices to improve their teaching (discussion of a specific subject, planning and preparation of common materials, etc.), which is a very high percentage.

Perceptions of working conditions and career satisfaction

The PIRLS 2011 *Teacher Questionnaire* asked Elementary 4 teachers about their perceptions of working conditions.⁹ Average scale scores varied between 7.8 (Morocco) and 11.9 (Florida). As a correlate of teachers' working conditions, PIRLS investigated teachers' career satisfaction.¹⁰ Average scale scores varied between 8.6 (France) and 11.6 (Colombia). Table 5.11 presents the results concerning these two aspects.

⁹ A *Teacher Working Conditions* scale was created that covered the following five areas: the state of repair of the school building, classroom overcrowding, teaching load, adequacy of the workspace, and adequacy of instructional materials and supplies.

¹⁰ This scale was constructed from the following six items: I am content with my profession as a teacher; I am satisfied with being a teacher at this school; I had more enthusiasm when I began teaching than I have now; I do important work as a teacher; I plan to continue as a teacher for as long as I can; and, I am frustrated as a teacher.

Table 5.11 Teacher Working Conditions and Career Satisfaction scales

Participants	Working Conditions scale	Career Satisfaction scale
	Average scale score	Average scale score
Québec	10.4 (0.16)	9.4 (0.15)
Canada	10.6 (0.09)	9.9 (0.09)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

In Canada, there was a positive statistical relationship between career satisfaction and perception of working conditions. In Québec, 40% of the students had teachers who were satisfied at work; this was one of the lowest proportions among the PIRLS 2011 jurisdictions. However, 34% of Québec students had teachers who perceived hardly any problems with their working conditions—a higher proportion than for the majority of the jurisdictions. A total of 46% of Québec students came from schools where the principal considered the general resources and reading resources to be sufficient, and this was one of the highest rates among jurisdictions.

Student characteristics and reading instruction

Student characteristics and classroom management impact both the climate of the classroom and student learning (see Table 5.12). A majority of Québec teachers felt that students' lack of sleep limited how they teach. In addition, more teachers in Québec than in most of the other Canadian provinces felt that the presence of disruptive students and uninterested students interfered with teaching.

Table 5.12. Student characteristics that limit reading instruction (as reported by teachers)

Participants	Lack of prerequisite knowledge and skills			Lack of basic nutrition		Lack of sleep		Disruptive students		Uninterested students	
	Not applicable or not at all	To some extent	A lot	Not applicable or not at all	To some extent or a lot	Not applicable or not at all	To some extent or a lot	Not at all or to some extent	A lot	Not at all or to some extent	A lot
Québec	27 (3.9)	58 (4.9)	15 (2.9)	72 (3.5)	28 (3.5)	34 (3.6)	66 (3.6)	77 (3.8)	23 (3.8)	90 (2.8)	10 (2.8)
Canada	21 (2.0)	65 (2.3)	14 (1.6)	67 (2.2)	33 (2.2)	33 (2.6)	66 (2.6)	82 (1.9)	18 (1.9)	94 (0.9)	6 (0.9)
International	28 (0.5)	61 (0.5)	11 (0.3)	73 (0.4)	27 (0.4)	51 (0.5)	49 (0.5)	88 (0.3)	12 (0.3)	90 (0.3)	10 (0.3)

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Resources as a basis for reading instruction

Teachers use a variety of instructional resources and those favoured in Québec differed from those used in most of the other Canadian provinces (see Table 5.13).

Table 5.13. Proportion of Elementary 4 teachers using certain resources as a basis for reading instruction

Participants	Percentage of teachers using . . .			
	textbooks	workbooks	children's books	reference materials
Québec	62 (4.7)	60 (3.5)	36 (4.7)	17 (3.7)
Canada	33 (2.3)	27 (2.3)	61 (2.3)	25 (2.5)
International	72	40	27	27

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

Less than one third of Elementary 4 teachers in Québec reported that computers were available for reading instruction, while the proportion was higher in several of the other provinces.

Evaluation of students' ongoing work

Québec teachers placed a major emphasis on tests administered in the classroom, setting it apart from most of the other Canadian provinces (see Table 5.14).

Table 5.14 Proportion of teachers placing a major emphasis on sources of information to monitor students' progress in reading

Participants	Percentage of teachers placing a major emphasis on . . .		
	evaluation of students' ongoing work	classroom tests	provincial achievement tests
Québec	82 (3.4)	66 (4.2)	8 (2.7)
Canada	89 (1.6)	37 (2.4)	7 (1.4)
International	84	58	32

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

5.5 School climate

School emphasis on academic success

School emphasis on academic success was assessed through a series of five questions. For each of them, the principal of participating students had to characterize five statements of academic optimism.¹¹ The responses were aggregated to create the *School Emphasis on Academic Success* scale (see Table 5.15).

Table 5.15 Distribution of results for the *School Emphasis on Academic Success* scale (as reported by school principals)

Participants	Very high emphasis (%)	High emphasis (%)	Medium emphasis (%)
Québec	5	75	21
Canada	12	67	21
International	9	59	32

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

In Québec, the impact of school emphasis on academic success was especially pronounced, with a difference of 51 points between students attending schools with *very high emphasis* on students' academic success and students attending schools with *medium emphasis*. This difference was 35 points for Canada overall and 30 points at the international level.

Teachers were also asked to answer the same set of questions on this topic and the results are presented in Table 5.16. A difference of 33 points separated students in *very high emphasis* and *medium emphasis* schools. This difference was 34 points for Canada overall and 32 points at the international level.

¹¹ The statements were as follows: Teachers' understanding of the school's curricular goals; Teachers' degree of success in implementing the school's curriculum; Teachers' expectations for student achievement; Parental support for student achievement; and Students' desire to do well in school.

Table 5.16 Distribution of results for the *School Emphasis on Academic Success* scale (as reported by teachers)

Participants	Very high emphasis (%)	High emphasis (%)	Medium emphasis (%)
Québec	6	66	28
Canada	10	68	22
International	9	60	31

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

School safety and discipline

School climate was also assessed by means of a series of five questions that teachers answered regarding school safety and order.¹² The results are presented in Table 5.17.

Table 5.17 Distribution of results for the *Safe and Orderly School* scale (as reported by teachers)

Participants	Safe and orderly (%)	Somewhat safe and orderly (%)	Not safe and orderly (%)
Québec	45	51	5
Canada	62	34	4
International	55	41	4

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

The proportion of Québec schools considered to be safe and orderly by teachers was among the lowest of the participating jurisdictions. The achievement difference between schools perceived to be *safe and orderly* and those considered *not safe and orderly* was 21 points. Internationally, this difference was 32 points.

Disciplinary problems within classrooms and the school can affect students' learning. Principals of each participating school had to answer a series of questions, asking about the extent of ten different discipline and school safety problems in their school¹³ (see Table 5.18).

¹² The five statements were as follows: The school is located in a safe neighbourhood; I feel safe at this school; This school's security policies and practices are sufficient; The students behave in an orderly manner; and The students are respectful of the teachers.

¹³ The statements related to students' behaviours were as follows: Arriving late at school; Absenteeism (i.e. unjustified absences); Classroom disturbance; Cheating; Profanity; Vandalism; Theft; Intimidation or verbal abuse among students (including texting, e-mailing, etc.); Physical fights among students; and Intimidation or verbal abuse of teachers or staff (including texting, e-mailing, etc.).

**Table 5.18 Distribution of results for the *School Discipline and Safety* scale
(as reported by school principals)**

Participants	Hardly any problems (%)	Minor problems (%)	Moderate problems (%)
Québec	56	40	4
Canada	60	37	3
International average	58	31	11

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

In Québec, the achievement difference between schools with *hardly any problems* and those with *moderate problems* was 16 points. Internationally, this difference reached 57 points.

The impact of school discipline on reading achievement was smaller in Québec than internationally.

Students bullied at school

Students were asked how often they experienced bullying behaviours in school (rumours being spread about them, their personal effects being stolen, being shoved or hit, etc.). A total of 19% of Québec students reported being bullied *often*. Students who were bullied often had an average score 33 points lower than that of students who did not experience bullying (517/550).

Table 5.19 Distribution of results for *Bullied at School* scale (as reported by students)

Participants	Almost never (%)	Sometimes (%)	Often (%)
Québec	44	37	19
Canada	44	36	20
International	47	33	20

Source: IEA, Progress in International Reading Literacy Study – PIRLS 2011

6. Conclusion

It is important to point out that Québec students performed above the international average on the PIRLS 2011 reading assessment.

Québec students obtained slightly higher results in 2011 (538) that were not, however, statistically different from the PIRLS 2006 (533) and 2001 (537) assessments. Québec's ranking has been directly impacted by certain jurisdictions performing better: Croatia, Finland, Ireland and Northern Ireland. Twelve jurisdictions participating in the 2006 assessment improved their results significantly, but none impacted Québec's ranking. Of the seven jurisdictions that experienced a significant drop compared to 2006, Austria, Bulgaria and Lithuania came in below Québec.

Like almost everywhere else in the world, girls in Québec outperformed boys. The 2006 report noted that *technology and the use of computers could narrow the gap in the future*, but this did not materialize in 2011. Anglophones' and Francophones' scores were equivalent, although, as in 2006, the results of Québec Francophones were very different from those of Québec Anglophones and of students from the other four provinces that participated in PIRLS 2011.

The socioeconomic composition of the school had a smaller effect on students' reading achievement in Québec than in Canada or internationally. This observation also applies with respect to the home resources available for learning. The language spoken at home before starting school did not have a significant impact on students' reading performance in PIRLS 2011.

The engagement of parents in literacy-related activities, in particular reading books to their child, was positively associated with higher scores in reading achievement. A total of 40% of Québec parents participated often in literacy-related activities and 29% of them liked to read.

Motivation to read and the strategies used by teachers to develop students' reading skills were the two factors that most influenced students' reading performance. A total of 61% of Elementary 4 students in Québec reported being motivated to read, 35% responded that they were very confident in their reading skills and 30% felt engaged in their reading lessons. Motivation, confidence and engagement were associated with higher average scores on PIRLS 2011.

Elementary 4 teachers in Québec had an average of 15.6 years of experience and 92% of them specialized in teaching at the elementary school level. A large majority of teachers collaborated with their colleagues and participated in professional development activities related to reading in order to improve their practices. More than half of the teachers felt that students' lack of sleep interfered with their teaching of reading. Québec teachers stood apart in their use of workbooks as a basis for instruction and classroom tests to monitor their students' progress in reading.

Safe and orderly schools were associated with higher reading scores; however, the difference was smaller in Québec than internationally. Even though a majority of schools were considered to be somewhat safe and orderly and very few schools had moderate disciplinary problems, 37% of Elementary 4 students in Québec reported having been bullied sometimes and 19% having been bullied often.

APPENDIX 1

Standard error statistic, confidence interval and statistically significant difference

In PIRLS, the average achievement scale scores are based on representative samples of students. These scores provide estimates of the actual average achievement scale scores students would have demonstrated had they all taken the assessment. Because an estimate is rarely exact, it is common practice to provide a range of scores within which the “true” achievement level might fall. This range of scores is called a **confidence interval** and represents the high- and low-end points between which the actual achievement results should fall 95% of the time. The high- and low-end points are calculated by multiplying the standard error statistic by 2. In the PIRLS report, confidence intervals appear in parentheses next to the achievement scores.

The statistics presented here show that the actual achievement level of all students would fall somewhere in the established range 19 times out of 20, if the assessment were repeated with different samples randomly drawn from the same student population. If the confidence intervals of jurisdictions overlap, it is possible to conclude that the differences are defined as not statistically significant.

In this report, the term **statistically significant difference** means that any differences are probably “real” differences and not due to chance.

APPENDIX 2

The four international benchmarks in reading are defined below.¹⁴

Low International Benchmark (between 400 and 474 points)

When reading *Literary texts*, students can:

- Locate and retrieve an explicitly stated detail

When reading *Information texts*, students can:

- Locate and reproduce two or three pieces of information from within the text
- Use subheadings, text boxes, and illustrations to locate parts of the text

Intermediate International Benchmark (between 475 and 549 points)

When reading *Literary texts*, students can:

- Retrieve and reproduce explicitly stated actions, events and feelings
- Make straightforward inferences about the attributes, feelings and motivations of main characters
- Interpret obvious reasons and causes and give simple explanations
- Begin to recognize language features and style

When reading *Information texts*, students can:

- Locate and reproduce two or three pieces of information from within the text
- Use subheadings, text boxes, and illustrations to locate parts of the text

High International Benchmark (between 550 and 624 points)

When reading *Literary texts*, students can:

- Locate and distinguish significant actions and details embedded across the text
- Make inferences to explain relationships between intentions, actions, events, and feelings, and give text-based support
- Interpret and integrate story events and character actions and traits from different parts of the text
- Evaluate the significance of events and actions across the entire story
- Recognize the use of some language features (e.g., metaphor, tone, imagery)

When reading *Information texts*, students can:

- Locate and distinguish relevant information within a dense text or a complex table
- Make inferences about logical connections to provide explanations and reasons
- Integrate textual and visual information to interpret the relationship between ideas
- Evaluate content and textual elements to make a generalization

¹⁴ Taken from Chapter 2 of the *PIRLS 2011 Canadian Report*.

Advanced International Benchmark (625 points or above)

When reading *Literary texts*, students can:

- Integrate ideas and evidence across a text to appreciate overall themes
- Interpret story events and characters' actions to provide reasons, motivations, feelings, and character traits with full text-based support

When reading *Information texts*, students can:

- Distinguish and interpret complex information from different parts of text, and provide full text-based support
- Integrate information across a text to provide explanations, interpret significance, and sequence activities
- Evaluate visual and textual features to explain their function

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