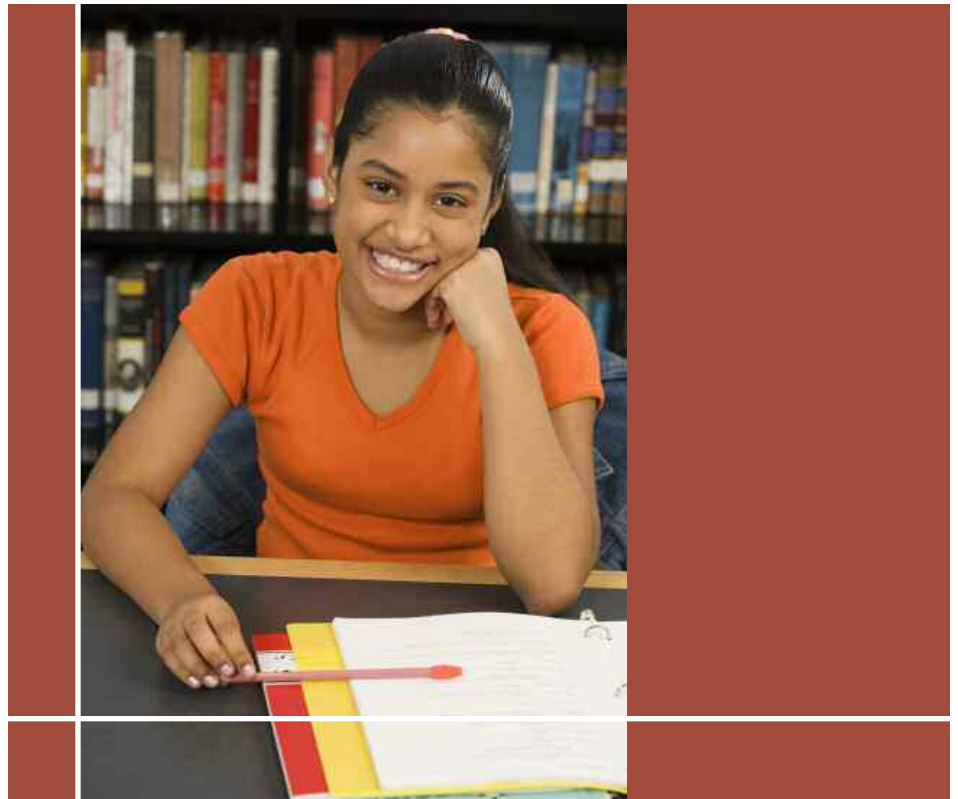


International Association for the Evaluation of Educational Achievement

Progress in International Reading Literacy Study (2006)

Ontario Report



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Introduction

The Progress in International Reading Literacy Study (PIRLS) is an assessment of Grade 4 student reading achievement. PIRLS is designed to measure trends in reading literacy with respect to two major reading purposes (literary and informational) and four major processes of reading comprehension (retrieving explicitly stated information, making straightforward inferences, interpreting and integrating ideas and information, and evaluating content). PIRLS is based on the 1991 Reading

Literacy Study developed by the International Association for the Evaluation of Educational Achievement (IEA), in which Ontario did not participate. The first PIRLS assessment was conducted in 2001, the second in 2006 and the third is planned for 2011. Ontario participated in the 2001 and 2006 assessments. PIRLS provides data that are complementary to the IEA's Trends in International Mathematics and Science Study (TIMSS), which assesses students in Grades 4 and 8.

Participants

The following 45 jurisdictions participated in PIRLS 2006.

Austria	Hong Kong SAR*	New Zealand*
Belgium (Flemish)	Hungary*	Norway*
Belgium (French)	Iceland*	Poland
Bulgaria*	Indonesia	Qatar
Canada, Alberta	Iran, Islamic Rep. of*	Romania*
Canada, British Columbia	Israel*	Russian Federation*
Canada, Nova Scotia	Italy*	Scotland*
Canada, Ontario*	Kuwait	Singapore*
Canada, Quebec*	Latvia*	Slovak Republic*
Chinese Taipei	Lithuania*	Slovenia*
Denmark	Luxembourg	South Africa
England*	Macedonia, Rep. of*	Spain
France*	Moldova, Rep. of*	Sweden*
Georgia	Morocco*	Trinidad and Tobago
Germany*	Netherlands, the*	United States*

* Also participated in the PIRLS 2001 assessment (28 jurisdictions).

In Canada, the participating provinces in 2006 were Alberta, British Columbia, Nova Scotia, Ontario and Quebec. In spring 2006, each province conducted the study with a random sample of students. In Ontario this involved 180 schools (English- and French-language) and approximately 4000 Grade 4 students, which provided sufficient data to report on the reading achievement of students from both linguistic groups.

Summary of Results

- Ontario Grade 4 students performed near the top in overall reading achievement compared to 45 countries and Canadian provinces. Only Hong Kong and the Russian Federation performed significantly better than Ontario in overall reading achievement.
 - Sixteen percent of Ontario students reached the advanced international benchmark, and 54 percent reached the high benchmark.
 - Between 2001 and 2006, there was a general trend toward improved student performance in Ontario. There was a notable improvement during this period in the following categories:
 - average score for overall reading achievement among English-language students, French-language students* and all Ontario students
 - average score for overall reading achievement among boys*
 - average score for achievement in reading for informational purposes*
 - percentage of students at or above the high, intermediate* and low* international benchmarks
- * Differences were statistically significant
- Ontario English-language students scored significantly higher than Ontario French-language students in overall reading achievement, but French-language students showed greater improvement in reading achievement between 2001 and 2006.
 - Ontario English-language students demonstrated higher achievement on reading for literary purposes than they did on reading for informational purposes. Ontario French-language students performed better on reading for informational purposes than they did on reading for literary purposes.
 - Ontario students demonstrated higher achievement on reading questions assessing the interpretation, integration and evaluation of ideas and information than on questions assessing the retrieval of explicitly stated information and the making of straightforward inferences.
 - In all countries and provinces except Luxembourg and Spain, girls performed significantly better than boys in reading achievement. In Ontario, there was a 13-percentage-point difference favouring girls, which is seven points smaller than it was in 2001. This trend was found in Ontario in reading for both literary and informational purposes and in all reading comprehension processes.
 - In all countries, students from high-Home Educational Resources (HER) homes had higher reading achievement than those from medium- and low-HER homes. The HER index was based on the number of books and children's books in the home; the availability of educational aids, such as computers, desks and daily newspapers; and parents' education. This was also true in Ontario, where students from high-HER homes (18% of Ontario students) had an average scale score of 591 and students from medium-HER homes (81% of Ontario students) had an average scale score of 550.
 - PIRLS defined an Early Home Literacy Activities (EHLA) index based on parents' responses to statements about their children's participation in the following activities: "read books," "tell stories," "sing songs," "play with alphabet toys," "play word games" and "read aloud signs and labels" prior to their child's entry into primary school; 71% of Ontario students were in the high-EHLA category. The average achievement of these students was significantly higher than that among students who were in the medium- or low-EHLA categories. This positive relationship was found in every country. The percentage of students in the high-EHLA category ranged from 13% to 85% across the participating countries, with an international average of 54%.
 - In Ontario, as well as in most other countries, there was a strong relationship between speaking the language used in the PIRLS test at home and performance on the PIRLS test.
 - About half of Ontario students who participated (46%) had a positive attitude toward reading, which is similar to the international average (49%) and lower than that among Quebec students who participated (58%). This represents a statistically significant decrease from 52% in 2001. Students in all countries with the most positive attitudes and with a positive reading self-concept had the highest reading achievement.
 - In 2006, students in Ontario indicated that they were reading more for pleasure than those in 2001 did, but they were reading less for homework.
 - In 2006, teachers in Ontario reported more frequent use of the following reading comprehension strategies than those in 2001 did: students discussing reading with other students and students doing projects.

Data Sources

Data were collected by means of student assessment booklets and questionnaires. Each student completed one of 12 test booklets and a student questionnaire during a period of 80 minutes for the assessment and an additional 15–30 minutes for the questionnaire. There were a total of 10 reading passages distributed among the 12 student booklets, but each student responded to only two reading passages in his or her one booklet. A “Learning to Read Survey” was administered to parents or primary caregivers; a Teacher Questionnaire was administered to the language teacher of the students tested and a School Questionnaire was completed by the principal to provide a more comprehensive picture of the students’ learning context.

Reporting Scales

Student performance is expressed as a score on a scale from 0 to 1000, with an international average of 500. Student performance is also reported as the percentage of students achieving four international benchmarks for reading achievement (advanced, high, intermediate and low), which are defined in Appendix A.

Achievement Results

The following tables and graphs provide information about student achievement in reading on the 2006 assessment and some comparison data about Ontario students from 2001 and 2006. The full results are in the international report, which can be viewed on the EQAO Web site, www.eqao.com.

Table 1 shows the PIRLS results for participating countries and provinces compared with the results for Ontario (jurisdictions that scored the same as, higher than or lower than Ontario, including Ontario, English and Ontario, French). The distribution among these categories is based on statistical analyses to determine which differences between jurisdiction averages were statistically significant. Within the three categories,

jurisdictions are listed in alphabetical order:

Only two countries had results that were significantly higher than the results for Ontario (Hong Kong and the Russian Federation). Eight jurisdictions had results that were the same as those for Ontario, including the provinces of Alberta and British Columbia. Thirty-five jurisdictions had results that were lower than those for Ontario, including Quebec and Nova Scotia. The average scale score for Ontario, English was higher than that for Ontario, French.

Table 1: Average Scale Scores¹

Higher Than Ontario		Same As Ontario		Lower Than Ontario	
Hong Kong SAR	564 (2.4)	Bulgaria	547 (4.4)	Austria	538 (2.2)
Russian Federation	565 (3.4)	Canada, Alberta	560 (2.4)	Belgium (Flemish)	547 (2.0)
		Canada, BC	558 (2.6)	Belgium (French)	500 (2.6)
		Canada, ON	555 (2.7)	Canada, Nova Scotia	542 (2.2)
		Canada, ON, English	557 (2.9)	Canada, ON, French	509 (3.6)
		Hungary	551 (3.0)	Canada, Quebec	533 (2.8)
		Italy	551 (2.9)	Chinese Taipei	535 (2.0)
		Luxembourg	557 (1.1)	Denmark	546 (2.3)
		Singapore	558 (2.9)	England	539 (2.6)
		Sweden	549 (2.3)	France	522 (2.1)
				Georgia	471 (3.1)
				Germany	548 (2.2)
				Iceland	511 (1.3)
				Indonesia	405 (4.1)
				International Avg.	500 (0.0)
				Iran, Islamic Rep. of	421 (3.1)
				Israel	512 (3.3)
				Kuwait	330 (4.2)
				Latvia	541 (2.3)
				Lithuania	537 (1.6)
				Macedonia, Rep. of	442 (4.1)
				Moldova, Rep. of	500 (3.0)
				Morocco	323 (5.9)
				Netherlands, the	547 (1.5)
				New Zealand	532 (2.0)
				Norway	498 (2.6)
				Poland	519 (2.4)
				Qatar	353 (1.1)
				Romania	489 (5.0)
				Scotland	527 (2.8)
				Slovak Republic	531 (2.8)
				Slovenia	522 (2.1)
				South Africa	302 (5.6)
				Spain	513 (2.5)
				Trinidad and Tobago	436 (4.9)
				United States	540 (3.5)

1. An overall average reading achievement scale score is provided for each jurisdiction; standard error statistics are provided in parentheses. Please refer to Appendix B for an explanation of the terms “standard error statistics,” “confidence interval” and “significant difference.”

Table 2 provides the percentage of students at or above the four international benchmarks, which are defined in Appendix A. Standard error statistics are provided in parentheses. Results for the benchmarks are not available for the English and French populations separately.

Table 2: Percentages of Students at or Above the PIRLS 2006 International Benchmarks in Overall Reading Achievement

Countries and Provinces	Advanced (625)	High (550)	Intermediate (475)	Low (400)
Singapore	19 (1.4)	58 (1.7)	86 (1.0)	97 (0.4)
Russian Federation	19 (1.5)	61 (2.0)	90 (1.1)	98 (0.5)
Canada, Alberta	17 (1.1)	57 (1.6)	89 (0.8)	99 (0.2)
Bulgaria	16 (1.4)	52 (2.3)	82 (1.8)	95 (1.0)
Canada, British Columbia	16 (1.3)	56 (1.6)	88 (1.0)	98 (0.3)
Canada, Ontario	16 (1.1)	54 (1.9)	87 (1.1)	98 (0.5)
England	15 (0.9)	48 (1.3)	78 (1.1)	93 (0.7)
Luxembourg	15 (0.6)	56 (0.8)	89 (0.5)	99 (0.2)
Hong Kong SAR	15 (1.0)	62 (1.6)	92 (0.8)	99 (0.2)
Hungary	14 (0.9)	53 (1.8)	86 (1.4)	97 (0.5)
Italy	14 (1.4)	52 (1.8)	87 (1.3)	98 (0.4)
New Zealand	13 (0.7)	45 (1.0)	76 (1.0)	92 (0.6)
Canada, Nova Scotia	13 (1.0)	48 (1.2)	82 (1.0)	96 (0.4)
United States	12 (1.2)	47 (2.0)	82 (1.4)	96 (0.6)
Denmark	11 (0.8)	52 (1.4)	85 (1.0)	97 (0.4)
Germany	11 (0.9)	52 (1.6)	87 (0.8)	97 (0.3)
Sweden	11 (0.9)	53 (1.5)	88 (1.0)	98 (0.4)
Israel	10 (1.0)	40 (1.3)	70 (1.3)	85 (1.2)
Scotland	10 (0.8)	40 (1.4)	77 (1.4)	93 (0.8)
Latvia	8 (0.8)	46 (1.5)	86 (1.2)	98 (0.4)
Slovak Republic	8 (0.6)	43 (1.5)	80 (1.3)	94 (0.9)
Austria	8 (0.9)	45 (1.5)	84 (1.1)	98 (0.4)
Belgium (Flemish)	7 (0.6)	49 (1.5)	90 (0.9)	99 (0.2)
Chinese Taipei	7 (0.7)	43 (1.3)	84 (1.0)	97 (0.4)
Poland	7 (0.5)	36 (1.2)	73 (1.1)	93 (0.7)
Netherlands, the	6 (0.5)	49 (1.2)	91 (0.8)	99 (0.2)
Canada, Quebec	6 (0.8)	41 (1.9)	83 (1.3)	97 (0.4)
Slovenia	6 (0.6)	37 (1.2)	76 (1.1)	94 (0.5)
Lithuania	5 (0.8)	43 (1.3)	86 (0.9)	99 (0.3)
France	5 (0.6)	35 (1.2)	76 (1.2)	96 (0.4)
Spain	5 (0.5)	31 (1.3)	72 (1.3)	94 (0.8)
Romania	4 (0.5)	27 (1.6)	61 (2.2)	84 (1.8)
Iceland	3 (0.4)	29 (1.1)	72 (0.8)	93 (0.8)
Belgium (French)	3 (0.4)	23 (1.3)	66 (1.6)	92 (0.7)
Moldova, Rep. of	3 (0.4)	23 (1.5)	67 (1.9)	91 (0.9)
Macedonia, Rep. of	2 (0.4)	15 (1.1)	40 (1.7)	66 (1.6)
Trinidad and Tobago	2 (0.5)	13 (1.2)	38 (1.7)	64 (2.0)
Norway	2 (0.3)	22 (1.1)	67 (1.6)	92 (0.8)
South Africa	2 (0.4)	6 (0.9)	13 (1.4)	22 (1.6)
Georgia	1 (0.4)	15 (1.3)	50 (1.8)	82 (1.3)
Iran, Islamic Rep. of	1 (0.2)	8 (0.7)	30 (1.3)	60 (1.6)
Indonesia	0 (0.1)	2 (0.3)	19 (1.6)	54 (2.1)
Morocco	0 (0.0)	1 (0.4)	9 (1.2)	26 (2.0)
Kuwait	0 (0.1)	2 (0.3)	10 (0.8)	28 (1.2)
Qatar	0 (0.0)	1 (0.2)	11 (0.4)	33 (0.7)
International Median	7 (0.0)	41 (0.0)	76 (0.0)	94 (0.0)

Ontario is among the top countries and provinces with respect to the percentage of students at the advanced and high benchmarks.

Table 3 presents the PIRLS 2006 results for girls and boys. Average reading achievement scale scores are provided along with the standard error statistics in parentheses.

Table 3: Countries' and Provinces' Average Reading Achievement by Gender

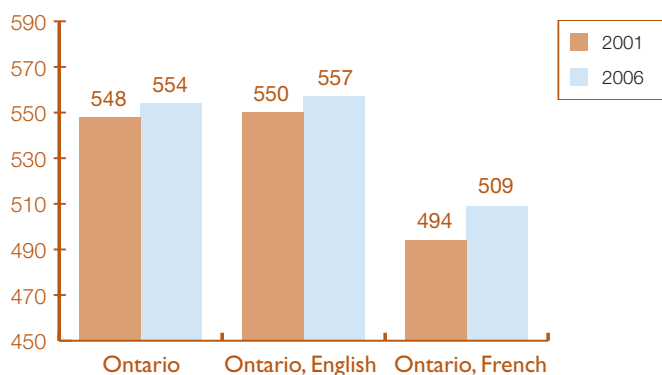
Country	Average Scale Score and Standard Error of Measurement		Achievement Difference
	Girls	Boys	
Luxembourg	559 (1.3)	556 (1.6)	3 (2.0)
Spain	515 (2.6)	511 (3.1)	4 (2.8)
Belgium (French)	502 (2.8)	497 (2.9)	5 (2.3)
Hungary	554 (3.6)	548 (2.9)	5 (2.6)
Belgium (Flemish)	550 (2.3)	544 (2.4)	6 (2.5)
Italy	555 (3.3)	548 (3.3)	7 (2.9)
Netherlands, the	551 (2.0)	543 (1.6)	7 (2.2)
Germany	551 (2.5)	544 (2.5)	7 (2.6)
Canada, Alberta	564 (2.4)	556 (2.7)	8 (1.9)
Canada, British Columbia	562 (2.9)	554 (3.1)	9 (3.0)
Austria	543 (2.3)	533 (2.6)	10 (2.3)
United States	545 (3.3)	535 (4.4)	10 (3.2)
Hong Kong SAR	569 (2.5)	559 (2.8)	10 (2.5)
France	527 (2.4)	516 (2.4)	11 (2.5)
Slovak Republic	537 (2.7)	525 (3.3)	11 (2.5)
Canada, Ontario	562 (3.3)	549 (3.3)	13 (3.8)
Canada, Ontario, English	564 (3.4)	551 (3.5)	13 (3.8)
Canada, Quebec	539 (2.7)	527 (3.5)	13 (3.0)
Chinese Taipei	542 (2.2)	529 (2.3)	13 (1.9)
Denmark	553 (2.8)	539 (2.7)	14 (3.2)
Moldova, Rep. of	507 (3.1)	493 (3.5)	14 (2.5)
Iran, Islamic Rep. of	429 (5.3)	414 (3.8)	14 (6.7)
Romania	497 (5.0)	483 (5.7)	14 (4.2)
Israel	520 (4.1)	506 (3.7)	15 (4.0)
Russian Federation	572 (3.9)	557 (3.4)	15 (2.9)
Canada, Ontario, French	517 (3.9)	501 (4.5)	16 (3.8)
Singapore	567 (3.1)	550 (3.3)	17 (2.9)
Poland	528 (2.6)	511 (2.7)	17 (2.6)
Georgia	480 (3.3)	463 (3.8)	17 (3.2)
Morocco	332 (6.6)	314 (6.6)	18 (5.8)
Sweden	559 (2.6)	541 (2.6)	18 (2.5)
Lithuania	546 (2.0)	528 (2.0)	18 (2.2)
Iceland	520 (1.7)	501 (1.9)	19 (2.5)
Norway	508 (2.8)	489 (3.1)	19 (3.2)
England	549 (3.0)	530 (2.8)	19 (2.7)
Slovenia	532 (2.1)	512 (2.7)	19 (2.5)
Indonesia	415 (4.2)	395 (4.6)	20 (3.3)
Bulgaria	558 (4.4)	537 (5.0)	21 (3.8)
Canada, Nova Scotia	553 (2.5)	531 (2.8)	21 (3.2)
Macedonia, Rep. of	453 (4.4)	432 (4.4)	21 (3.5)
Scotland	538 (3.6)	516 (3.1)	22 (3.8)
Latvia	553 (2.7)	530 (2.6)	23 (2.7)
New Zealand	544 (2.2)	520 (2.9)	24 (3.1)
Trinidad and Tobago	451 (4.9)	420 (6.0)	31 (5.6)
South Africa	319 (6.3)	283 (5.5)	36 (4.6)
Qatar	372 (1.7)	335 (1.7)	37 (2.6)
Kuwait	364 (4.7)	297 (6.2)	67 (7.5)
International Average	509 (0.6)	492 (0.6)	17 (0.5)

The average scale score is significantly higher among girls than among boys in all jurisdictions other than Luxembourg and Spain. The difference in achievement among boys and girls in Ontario is similar to the international average.

Comparison of 2001 and 2006 PIRLS Achievement Results for Ontario

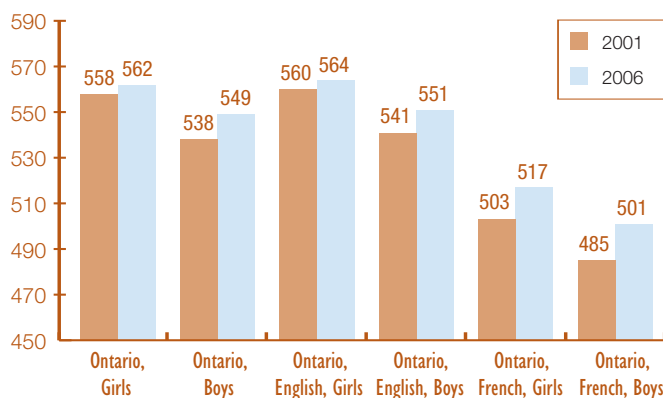
The following graphs show changes in average scale score among students in Ontario between the 2001 and 2006 PIRLS administrations. When calculating differences between 2001 and 2006, the international agency made some adjustments to the samples to ensure that they would be comparable across the two assessments. Therefore the numbers in the following graph may be slightly different from those reported separately for 2006 and 2001.

Average Scale Scores for 2001 and 2006



Between 2001 and 2006, Ontario French-language students showed statistically significant improvement in reading achievement. Although the average scale score among Ontario English-language students was higher in 2006 than in 2001, the difference was not statistically significant. There was a statistically significant improvement in reading achievement between 2001 and 2006 in eight countries, a statistically significant decrease in six countries, and a statistically insignificant difference in 14 countries.

Average Scale Scores by Gender for 2001 and 2006



Between 2001 and 2006, the improvement in achievement was statistically significant among boys but not among girls.

Reading Literacy in PIRLS

PIRLS defines reading literacy as “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.”

PIRLS focuses on three aspects of students' reading literacy:

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

PIRLS Test Structure

Processes of comprehension and purposes for reading are the foundation of the PIRLS written assessment of reading comprehension. Below are the percentages of the reading assessment devoted to these two aspects.

Purposes for reading are divided into two categories:

Reading

- 1) for literary experience (50%) and
- 2) to acquire and use information (50%).

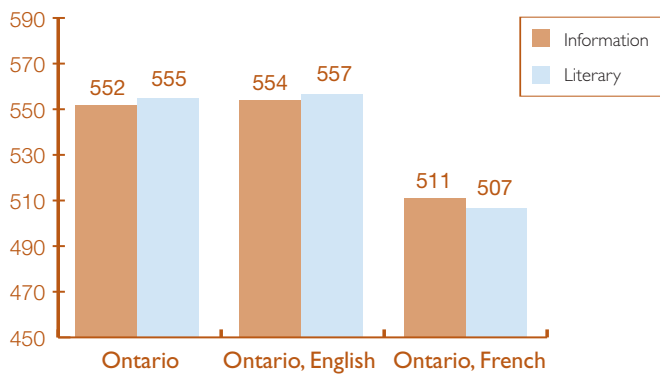
The following processes of comprehension are assessed by PIRLS:

- 1) focus on and retrieve stated information (20%);
- 2) make straightforward inferences (30%);
- 3) interpret and integrate ideas and information (30%) and
- 4) examine and evaluate content, language and textual elements (20%).

A student questionnaire addresses students' attitudes toward reading and their reading habits. In addition, questionnaires are given to parents, teachers and school principals to gather information about students' home and school experiences in developing reading literacy. To provide information about national contexts, countries complete questionnaires about reading goals and curricula. A profile of reading education in each country is compiled.

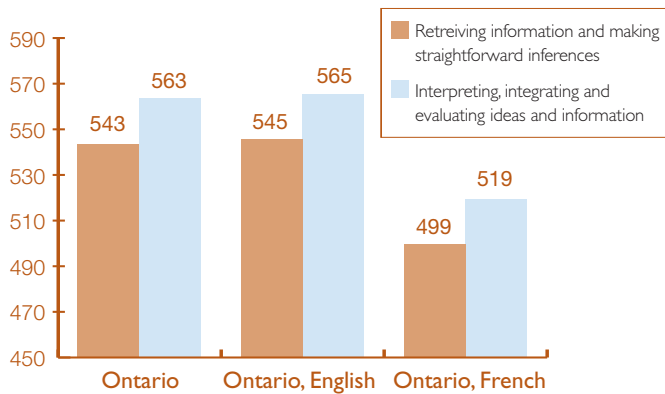
The graphs below show the average scale scores for the two purposes for reading and for the processes of reading comprehension. The four processes identified above have been collapsed into two categories for reporting.

Average 2006 Scale Scores by Type of Reading Passage



The average scale score for literary passages was higher than the average score for information passages among Ontario English-language students and it was higher for information passages among Ontario French-language students. Between 2001 and 2006, there was a significant improvement in reading achievement with respect to information passages, but the change was not statistically significant with respect to literary passages, although there was a trend toward improvement in 2006.

Average 2006 Scale Scores by Type of Reading Comprehension Process



Students in Ontario demonstrated higher reading achievement on questions requiring interpretation, integration and evaluation. Although there was a general trend toward improvement from 2001 to 2006, the differences were not statistically significant.

PIRLS Curriculum Match

The content of the PIRLS assessment matches overall reading expectations up to and including Grade 4 in *The Ontario Curriculum, Grades 1–8: Language* (1997) and *Le curriculum de l'Ontario, de la 1^{re} à la 8^e année – Français*, 1997, which were in

effect when Ontario students wrote the 2006 PIRLS assessment. Similarly, the processes of reading comprehension used for PIRLS match specific expectations in the 1997 Ontario language curricula.

Table 4: Curriculum Match

PIRLS Frameworks (2001, 2006)	<i>The Ontario Curriculum, Grades 1–8: Language</i> (1997) Grade 4 Reading Expectations	<i>Le curriculum de l'Ontario, de la 1^{re} à la 8^e année – Français</i> , 1997 Lecture – 4 ^e année
Reading for literary experience and to acquire and use information	<p>Students will</p> <ul style="list-style-type: none"> ■ read a variety of fiction and non-fiction materials (e.g., short novels, myths, biographies, short articles) 	<ul style="list-style-type: none"> ■ Read and recognize the types of texts required: <ul style="list-style-type: none"> • non-narrative selections: journals, messages such as on postcards, instructions, slogans, autobiographies, memory aids • literary selections: charades, different types of poems, fairytales, stories depicting adventures.
Focus on and retrieve stated information	<ul style="list-style-type: none"> ■ begin to develop research skills (e.g., formulate questions, locate information, clarify their understanding of information through discussions) 	<ul style="list-style-type: none"> ■ Separate the subject from the selection and choose useful information to accomplish the task required (e.g., identify physical characteristics, temperament and actions of the main characters).
Make straightforward inferences	<ul style="list-style-type: none"> ■ make inferences while reading 	<ul style="list-style-type: none"> ■ Make inferences (i.e., read between the lines, get information) from the information supplied in the reading selection and one's own knowledge in order to bring the desired implicit information to the surface.
Interpret and integrate ideas and information	<ul style="list-style-type: none"> ■ develop their opinions by reading a variety of materials 	<ul style="list-style-type: none"> ■ Express and explain the reaction and the feelings brought on by the text, supplying details.
Examine and evaluate content, language and textual elements	<ul style="list-style-type: none"> ■ make judgements about what they read on the basis of evidence ■ use conventions of written materials to help them understand and use the materials ■ use their knowledge of the organization and characteristics of different forms of writing to understand and use content 	<ul style="list-style-type: none"> ■ Show an understanding of the reading material, take the information needed and express reactions (for instance, during discussions about a reading selection). ■ Anticipate the general content of the selection by glancing at it, by finding clues in the organizational elements (titles, subtitles, table of contents) and by drawing on personal knowledge on the subject.

In September 2006, the Ontario Ministry of Education implemented a revised language curriculum: *The Ontario Curriculum, Grades 1–8: Language* (revised 2006) and *Le curriculum de l'Ontario, de la 1^{re} à la 8^e année – Français* (édition révisée, 2006).

Sample reading passages, questions and scoring guides can be found in Appendix D of the PIRLS 2006 *International Report*.

Improvement over Time: PIRLS and the Primary and Junior EQAO Assessments

In order to position PIRLS in the context of the EQAO assessment program, an analysis of the *Frameworks*, assessment materials, scoring guides and performance levels was conducted to determine the degree of congruence between the Grade 4 PIRLS assessment and the reading components of the primary and junior EQAO assessments administered in Grades 3 and 6, respectively. The analysis showed that the reading constructs and their theoretical underpinnings, as well as the benchmarks (PIRLS) and performance levels (*The Ontario Curriculum*) of the PIRLS and EQAO reading assessments are very similar. The reading passages for PIRLS are somewhat more complex.

Although the Ontario performance levels and the international benchmarks define similar skills at the four levels, the percentages cannot be compared directly. In 2001, the cut points for PIRLS were set to a predetermined percentage of students at each level. It is useful to examine changes over time for the PIRLS and EQAO assessments. Table 5 shows the difference in the percentage of students at each performance level for PIRLS and EQAO between 2001 and 2006. The results for PIRLS are combined for English- and French-language students because the benchmark results are not available separately.

Table 5: Changes from 2001 to 2006 in Percentage of Students at PIRLS and Ontario Performance Levels

PIRLS Benchmark/Ontario Level of Achievement	Assessment	Percentage-Point Change from 2001 to 2006
Advanced International Benchmark/ Ontario Achievement Level 4	PIRLS (En & Fr)	0
	EQAO English Primary	+1
	EQAO English Junior	0
	EQAO French Primary	+2
	EQAO French Junior	0
High International Benchmark/Ontario Achievement Level 3 (provincial standard)	PIRLS (En & Fr)	+4
	EQAO English Primary	+13
	EQAO English Junior	+9
	EQAO French Primary	+15
	EQAO French Junior	+14
Intermediate International Benchmark/ Ontario Achievement Level 2	PIRLS (En & Fr)	+3
	EQAO English Primary	+8
	EQAO English Junior	+3
	EQAO French Primary	+12
	EQAO French Junior	+6
Low International Benchmark/Ontario Achievement Level 1	PIRLS (En & Fr)	+2
	EQAO English Primary	+5
	EQAO English Junior	+1
	EQAO French Primary	+4
	EQAO French Junior	+3

The changes in achievement for the PIRLS and EQAO assessments are in the same direction, with most of the percentages being larger in 2006. The percentage-point changes for the EQAO assessments tend to be larger than those for PIRLS. A possible reason for this is that the EQAO assessments measure *Ontario Curriculum* expectations, which are the basis for reading instruction in Ontario. For the EQAO assessments, the differences tend to be larger among French-language students than among English-language students. This is consistent with the PIRLS finding in which the change in average scale score was larger among French-language students than among English-language students in Ontario.

Appendix A

The four international benchmarks for student achievement in reading are defined below:

Low Benchmark

When reading literary texts, students can

- recognize explicitly stated detail and
- locate a specific part of the story and make an inference clearly suggested by the text.

When reading information texts, students can

- locate and reproduce explicitly stated information that is readily accessible, for example, at the beginning of the text or in a clearly defined section and
- begin to make a straightforward inference clearly suggested by the text.

Intermediate Benchmark

When reading literary texts, students can

- identify central events, plot sequence and relevant story details;
- make straightforward inferences about the attributes, feelings and motivations of main characters and
- begin to make connections across parts of the text.

When reading information texts, students can

- locate and reproduce one or two pieces of information in the text;
- make straightforward inferences to provide information from a single part of the text and
- use subheadings, textboxes and illustrations to locate parts of the text.

High Benchmark

When reading literary texts, students can

- locate relevant episodes and distinguish significant details embedded across the text;
- make inferences to explain relationships between intentions, actions, events and feelings, and give text-based support;
- recognize the use of some textual features (e.g., figurative language, abstract message) and
- begin to interpret and integrate story events and character actions across the text.

When reading information texts, students can

- recognize and use a variety of organizational features to locate and distinguish relevant information;
- make inferences based on abstract or embedded information;
- integrate information across the text to recognize main ideas and provide explanations;
- compare and evaluate parts of a text to give a preference and a reason for it and
- begin to understand textual elements, such as simple metaphors and author's point of view.

Advanced Benchmark

When reading literary texts, students can

- integrate ideas across a text to provide interpretations of a character's traits, intentions and feelings, and provide full-text support;
- interpret figurative language and
- begin to examine and evaluate story structure.

When reading information texts, students can

- distinguish and interpret complex information from different parts of text, and provide full text-based support;
- understand the function of organizational features and
- integrate information across a text to sequence activities and fully justify preferences.

Appendix B

Standard Error Statistic, Confidence Interval and Significant Difference

In PIRLS, the average achievement scale scores were based on samples of students; therefore, they are only estimates of the actual average achievement scale scores the entire population of 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 actual achievement results 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 1.96. In PIRLS reports, the standard error is presented in parentheses alongside the achievement score.

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

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