

PIRLS

Chapter 2



Chapter 2

Achievement in Reading for Literary Experience and Reading To Acquire and Use Information

For PIRLS, reading literacy is defined 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, and for enjoyment.

Based on this definition, purposes for reading and processes of comprehension formed the foundation for the PIRLS written assessment and students' attitudes and reading habits were addressed through questionnaires.

Chapter 2 presents results by the two overarching purposes for reading assessed by PIRLS:

- reading for literary experience, and
- reading to acquire and use information.¹

Essentially, the PIRLS assessment was designed so that half the passages, time, and questions tested reading for literary purposes and half tested for informational purposes. The comprehension processes were assessed within each purpose (see Chapter 3). In literary reading, the reader becomes involved in imagined events, settings, actions, consequences, characters, atmospheres, feelings, and ideas; bringing his or her own experiences, feelings, appreciation of language, and knowledge of literary forms to the text. In reading for information, the reader engages not with imagined worlds, but with aspects of the real universe. Through informational texts, one can understand how the world is and has been, and why things work as they do. These texts take many forms, but one major distinction is between chronological and non-chronological organization.

Each of these purposes for reading is often associated with certain types of texts. For example, reading for literary experience is often accomplished through reading fiction, while reading to acquire and use information

is generally associated with informative articles and instructional texts. The early reading of most young children centers on literary and narrative text types. In addition, many young readers also enjoy acquiring information from books and other types of reading material. This kind of reading becomes more important as students develop their literacy abilities, and is increasingly required in order to learn across the curriculum.

The texts were selected from sources typical of those available to students in and out of school.

¹ For a full description see Campbell, J.R., Kelly, D.L., Mullis, I.V.S., Martin, M.O., & Sainsbury, M. (2001). *Framework and specifications for PIRLS assessment 2001* (2nd ed.). Chestnut Hill, MA: Boston College.

In PIRLS, the assessment contained an equal proportion of material assessing each purpose. The literary texts were narrative fiction in the form of short stories. The informational texts represented a variety of chronological and non-chronological texts. The texts, submitted by and exhaustively reviewed by the participating countries, were selected from sources typical of those available to students in and out of school. Three of the texts accompany this report in the back pocket, a fourth text is available in Appendix C, and example items are presented in Chapter 3.

How Does Achievement Differ Across Reading Literacy Purposes?

Performance in reading for literary purposes is presented for each of the participating countries in Exhibits 2.1 and 2.2. These exhibits, respectively, present the distributions of student achievement in reading for literary purposes and the comparisons in mean achievement among pairs of individual countries. Exhibits 2.3 and 2.4 contain the corresponding data for student achievement in reading for informational purposes.

Exhibits 2.1 and 2.3 for literary and informational purposes are graphically consistent with the display of distributions in overall reading achievement (Exhibit 1.1). For each of the two major reading purposes, countries are shown in decreasing order of average achievement, together with an indication of whether the country average is significantly higher or lower than the international average. To allow comparison of the relative performance of each country for each purpose, the international average for each purpose was scaled to be 500, the same as the overall international average.

The range in performance across the participating countries was nearly identical for the two purposes (229 scale-score points for literary compared to 227 for informational), and approximately the same number of countries performed significantly above and below the international average. In reading for literary purposes, 24 countries performed above the international average, 2 similar to it, and 9 below it. In reading for informational purposes, 23 countries

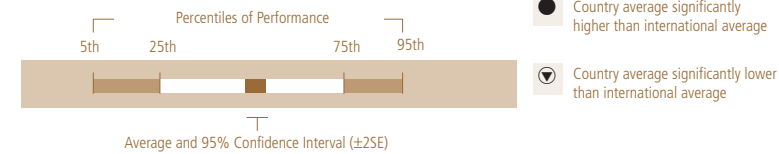


Exhibit 2.1: Distribution of Reading Achievement for Literary Purposes

ISC 4th Grade
PIRLS 2001

Countries	Reading Achievement Scale Score	Average Scale Score	Years of Formal Schooling	Average Age
Sweden		● 559 (2.4)	4	10.8
^{1,2a} England		● 559 (3.9)	5	10.2
[†] Netherlands		● 552 (2.5)	4	10.3
[†] United States		● 550 (3.8)	4	10.2
Bulgaria		● 550 (3.9)	4	10.9
Hungary		● 548 (2.0)	4	10.7
[†] Lithuania		● 546 (3.1)	4	10.9
* [†] Canada (O,Q)		● 545 (2.6)	4	10.0
Italy		● 543 (2.7)	4	9.8
Latvia		● 537 (2.2)	4	11.0
Germany		● 537 (1.9)	4	10.5
Czech Republic		● 535 (2.3)	4	10.5
New Zealand		● 531 (3.9)	5	10.1
[†] Scotland		● 529 (3.5)	5	9.8
Singapore		● 528 (5.6)	4	10.1
^{2a} Greece		● 528 (3.3)	4	9.9
^{2a} Russian Federation		● 523 (3.9)	3 or 4	10.3
Iceland		● 520 (1.3)	4	9.7
France		● 518 (2.6)	4	10.1
Hong Kong, SAR		● 518 (3.1)	4	10.2
Slovak Republic		● 512 (2.6)	4	10.3
Romania		● 512 (4.7)	4	11.1
^{2b} Israel		● 510 (2.6)	4	10.0
Norway		● 506 (2.7)	4	10.0
International Avg.		500 (0.6)	4	10.3
Slovenia		499 (1.8)	3	9.8
Cyprus		498 (2.5)	4	9.7
Moldova, Rep. of		▼ 480 (3.7)	4	10.8
Turkey		▼ 448 (3.4)	4	10.2
Macedonia, Rep. of		▼ 441 (4.5)	4	10.7
Colombia		▼ 425 (4.2)	4	10.5
Iran, Islamic Rep. of		▼ 421 (4.5)	4	10.4
Argentina		▼ 419 (5.8)	4	10.2
Kuwait		▼ 394 (3.8)	4	9.9
[‡] Morocco		▼ 347 (8.4)	4	11.2
Belize		▼ 330 (4.9)	4	9.8
* Ontario (Canada)		● 551 (3.3)	4	9.9
* Quebec (Canada)		● 534 (3.0)	4	10.2

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.



* Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

1 National Desired Population does not cover all of International Desired Population. Because coverage falls below 65%, Canada is annotated Canada (O, Q) for the provinces of Ontario and Quebec only.

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Exhibit 2.2: Multiple Comparisons of Average Reading Achievement for Literary Purposes

ISC 4th Grade
PIRLS 2001

Instructions: Read across the row for a country to compare performance with the countries listed along the top of the chart. The symbols indicate whether the average achievement of the country in the row is significantly lower than that of the comparison country, significantly higher than that of the comparison country, or if there is no statistically significant difference between the average achievement of the two countries.

	Sweden	England	Netherlands	United States	Bulgaria	Hungary	Lithuania	Canada (O,Q)	Italy	Latvia	Germany	Czech Republic	New Zealand	Scotland	Singapore	Greece	Russian Federation	Iceland	France	Hong Kong, SAR	Slovak Republic	Romania	Israel	Norway	Slovenia	Cyprus	Moldova, Rep. of	Turkey	Macedonia, Rep. of	Colombia	Iran, Islamic Rep. of	Argentina	Kuwait	Morocco	Belize			
Sweden		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
England																																						
Netherlands	▼																																					
United States	▼																																					
Bulgaria	▼																																					
Hungary	▼	▼																																				
Lithuania	▼	▼																																				
* Canada (O,Q)	▼	▼	▼																																			
Italy	▼	▼	▼																																			
Latvia	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
Germany	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
Czech Republic	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
New Zealand	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
Scotland	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
Singapore	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												
Greece	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																											
Russian Federation	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																										
Iceland	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																									
France	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																								
Hong Kong, SAR	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																							
Slovak Republic	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																						
Romania	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																					
Israel	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																				
Norway	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																			
Slovenia	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																		
Cyprus	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																	
Moldova, Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																
Turkey	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼															
Macedonia, Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼														
Colombia	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼													
Iran, Islamic Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼												
Argentina	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼											
Kuwait	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼										
Morocco	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼									
Belize	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼								
* Ontario (Canada)	▼										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
* Quebec (Canada)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																												

● Average achievement significantly higher than comparison country

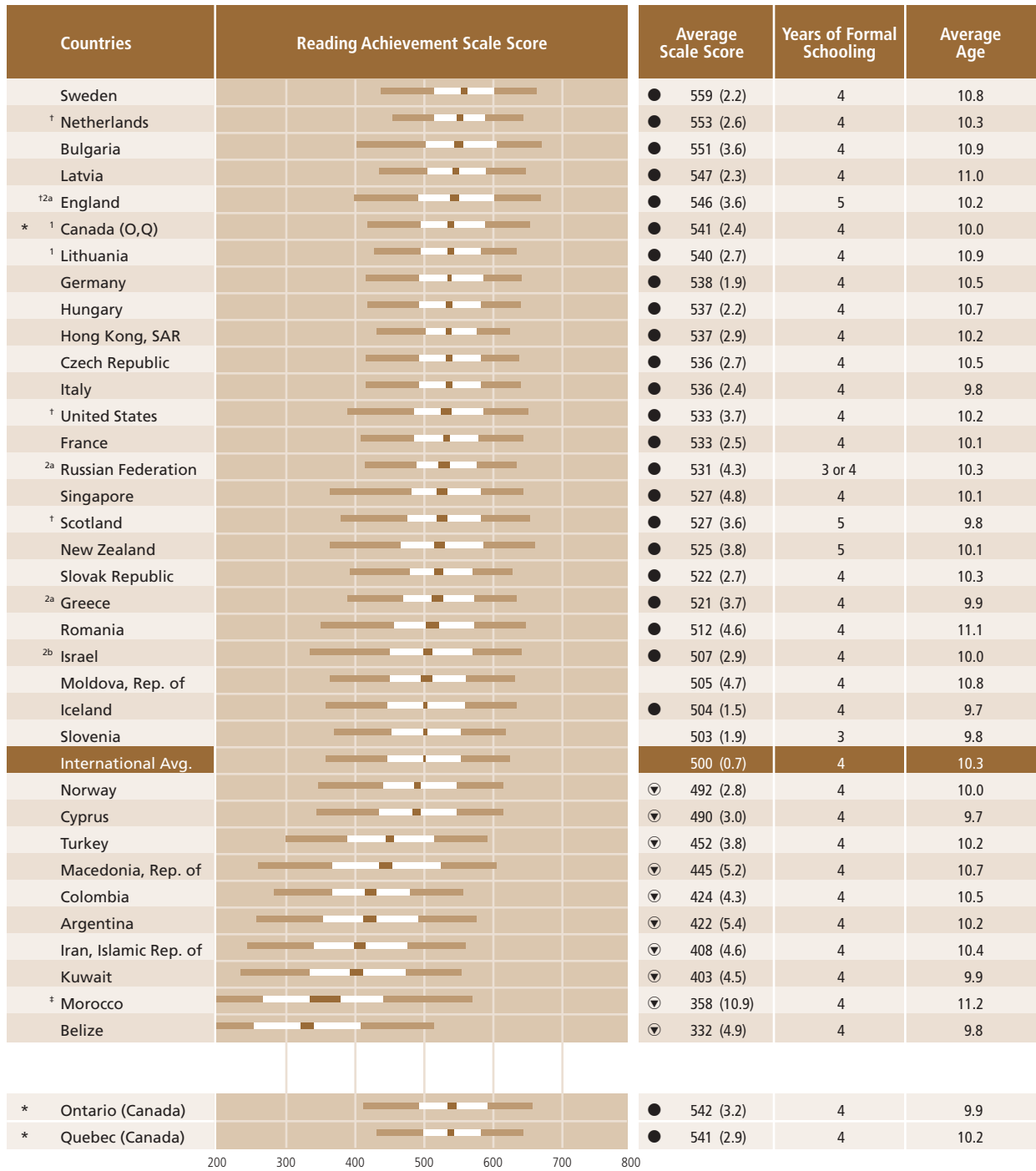
▼ Average achievement significantly lower than comparison country

* Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

Exhibit 2.3: Distribution of Reading Achievement for Informational Purposes

ISC 4th Grade
PIRLS 2001



SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

* Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.
[†] Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).
[‡] Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

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 () Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Exhibit 2.4: Multiple Comparisons of Average Reading Achievement for Informational Purposes

ISC 4th Grade
PIRLS 2001

Instructions: Read across the row for a country to compare performance with the countries listed along the top of the chart. The symbols indicate whether the average achievement of the country in the row is significantly lower than that of the comparison country, significantly higher than that of the comparison country, or if there is no statistically significant difference between the average achievement of the two countries.

	Sweden	Netherlands	Bulgaria	Latvia	England	Canada (O,Q)	Lithuania	Germany	Hungary	Hong Kong, SAR	Czech Republic	Italy	United States	France	Russian Federation	Singapore	Scotland	New Zealand	Slovak Republic	Greece	Romania	Israel	Moldova, Rep. of	Iceland	Slovenia	Norway	Cyprus	Turkey	Macedonia, Rep. of	Colombia	Argentina	Iran, Islamic Rep. of	Kuwait	Morocco	Belize				
Sweden				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Netherlands						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Bulgaria						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Latvia	▼						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
England	▼							●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
* Canada (O,Q)	▼	▼	▼										●	●																									
Lithuania	▼	▼	▼	▼																																			
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Hungary	▼	▼	▼	▼	▼																																		
Hong Kong, SAR	▼	▼	▼	▼	▼																																		
Czech Republic	▼	▼	▼	▼	▼																																		
Italy	▼	▼	▼	▼	▼																																		
United States	▼	▼	▼	▼	▼																																		
France	▼	▼	▼	▼	▼	▼																																	
Russian Federation	▼	▼	▼	▼	▼	▼																																	
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Scotland	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																											
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Slovak Republic	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼																									
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Romania	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Israel	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Moldova, Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Iceland	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Slovenia	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Norway	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Cyprus	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Turkey	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Macedonia, Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Colombia	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Argentina	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Iran, Islamic Rep. of	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Kuwait	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Morocco	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Belize	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
* Ontario (Canada)	▼	▼	▼											●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
* Quebec (Canada)	▼	▼	▼											●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

● Average achievement significantly higher than comparison country

▼ Average achievement significantly lower than comparison country

* Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

performed above the international average, 2 similar to it, and 10 below it. However, while the ordering is similar for the two purposes and overall achievement, there are some interesting differences between literary and informational reading in the relative performance of the PIRLS countries.²

The exhibits comparing average achievement among pairs of individual countries for literary (Exhibit 2.2) and informational (Exhibit 2.4) purposes use the same format as for overall reading achievement (Exhibit 1.2) and are read the same way, by selecting a country and looking across the table. A triangle pointing up indicates significantly higher performance than the comparison country listed across the top; absence of a symbol indicates no significant difference; and a triangle pointing down indicates significantly lower performance.

Sweden and England had the highest average achievement in reading for literary purposes, with Sweden having significantly higher mean achievement than the rest of the other participating countries and England performing significantly better than all the other countries except The Netherlands, the United States, and Bulgaria.

Seven additional countries – The Netherlands, the United States, Bulgaria, Hungary, Lithuania, Canada, and Italy – also performed very well in reading for literary purposes, having significantly higher achievement than many other participating countries (20 or more). Only Sweden outperformed The Netherlands, the United States, and Bulgaria. Hungary and Lithuania were outperformed only by Sweden and England, and Canada (O,Q) and Italy were outperformed only by The Netherlands in addition to Sweden and England.

In reading for informational purposes, Sweden, The Netherlands, and Bulgaria had the highest average achievement, with Sweden having significantly higher mean achievement than the rest of the countries, and The Netherlands and Bulgaria performing significantly better than all the other countries except Latvia and England. Latvia and England also did very well being outperformed only by Sweden, and having higher average achievement than most of the other participating countries. Canada (O,Q) was outperformed by only the three top-performing countries, while having higher achievement than 22 participants.

2 See the Appendix A for the correlations in achievement for the two purposes in each country.

In Which Reading Purposes Are Countries Relatively Strong or Weak?

Exhibit 2.5 displays the difference between average achievement in the literary and informational purposes for each country.³ The results reveal that many countries performed relatively better or worse in one purpose compared to the other (darkened bar indicates difference is statistically significant). Differences in relative performance may be related to one or more of a number of factors, such as emphases in intended curricula or widely used textbooks, strengths or weaknesses in curriculum implementation, and the grade level at which certain reading comprehension strategies are introduced.

Countries with significantly higher relative performance in reading for literary purposes included the United States, Iceland, Norway, England, Iran, Hungary, Cyprus, Italy, Greece, New Zealand, Lithuania, Israel, and Canada (O,Q). Countries with higher relative performance in reading for informational purposes included Moldova, Hong Kong, France, Morocco, the Slovak Republic, Latvia, Kuwait, the Russian Federation, Macedonia, Slovenia, and Turkey.

What Are the Gender Differences in Achievement for the Content Areas?

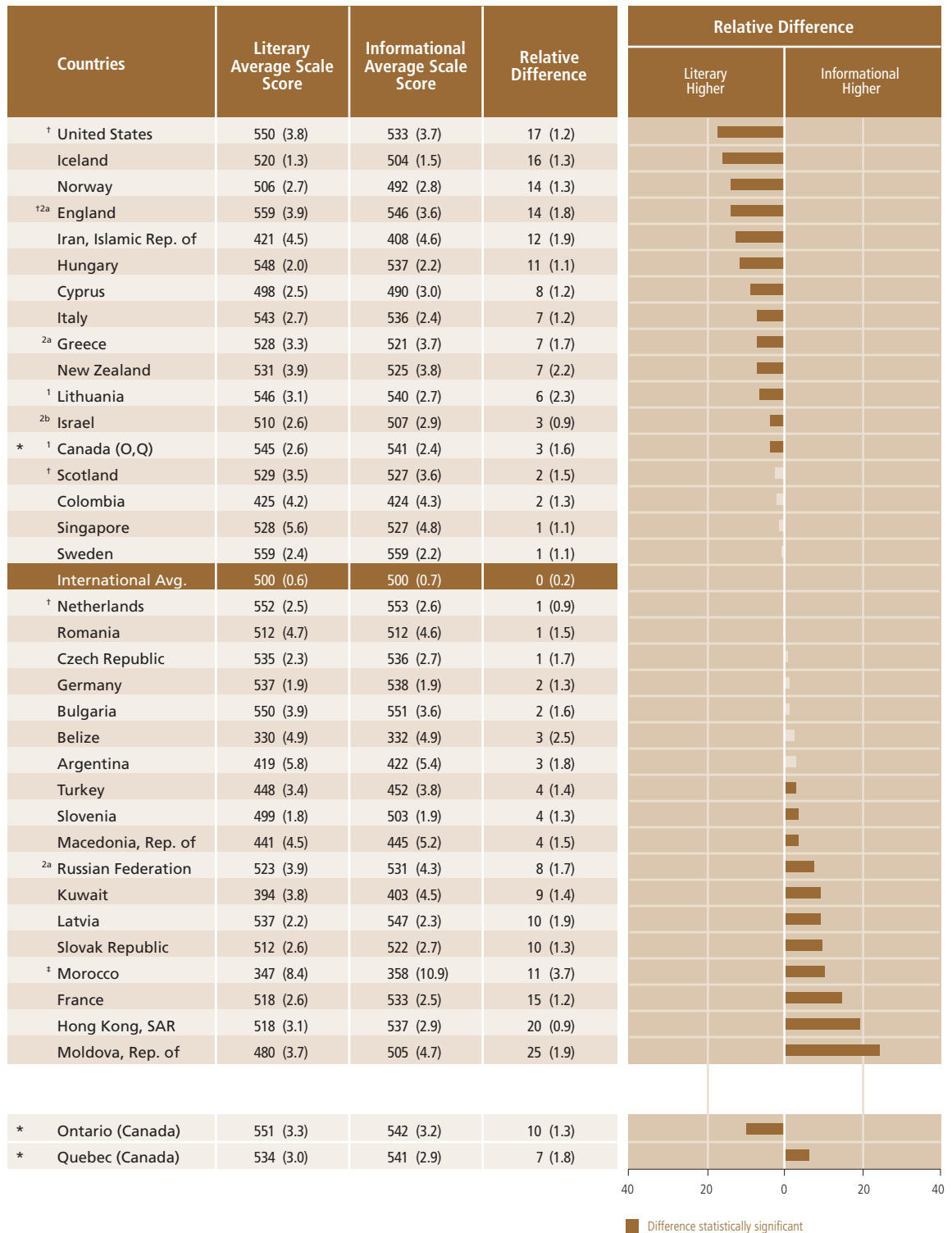
Listed alphabetically by country, Exhibit 2.6 shows average achievement by gender in reading for literary and informational purposes. Mirroring the overall results, girls had significantly higher achievement than boys for both overarching reading purposes in each country. In some countries, however, the gender differences appeared to be somewhat more pronounced for the literary than the informational purposes. This is consistent with the previous IEA reading literacy study⁴ and research in other countries⁵ showing that the largest differences between girls and boys were found in the narrative domain, in almost every case.

3 Since the PIRLS scales were developed using Item Response Theory (IRT) technology (see Procedural Appendix), like all such scales the Literary and Informational scales cannot be described in absolute terms. While the scales are expressed in the same numerical units, they are not directly comparable in terms of being able to say how much achievement or learning in one equals how much achievement or learning in the other.

4 Wagemaker, H. (Ed.). (1996). *Are girls better readers?* Amsterdam: International Association for the Evaluation of Educational Achievement.

5 For example, grade 4 assessments in the United States have found larger gender differences favoring girls in reading for literary experience than reading to gain information (see NAEP 1994 *Reading Report Card for the Nation and the States*).

Exhibit 2.5: Relative Difference in Performance Between Literary and Informational Purposes



* Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.

† Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).

‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).

1 National Desired Population does not cover all of International Desired Population. Because coverage falls below 65%, Canada is annotated Canada (O, Q) for the provinces of Ontario and Quebec only.

2a National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

2b National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Exhibit 2.6: Reading for Literary and Informational Purposes by Gender

Countries	Literary			Informational		
	Girls Average Scale Score	Boys Average Scale Score	Difference	Girls Average Scale Score	Boys Average Scale Score	Difference
Argentina	429 (6.2) ●	408 (6.2)	21 (4.6)	429 (6.0) ●	415 (5.9)	15 (4.9)
Belize	340 (5.3) ●	320 (5.6)	20 (5.1)	349 (5.1) ●	316 (5.9)	32 (5.0)
Bulgaria	563 (4.2) ●	535 (5.1)	28 (5.4)	561 (3.4) ●	541 (4.2)	20 (3.1)
* ¹ Canada (O,Q)	554 (3.0) ●	535 (2.7)	19 (2.2)	549 (3.0) ●	534 (2.6)	16 (2.7)
Colombia	431 (4.9) ●	419 (4.8)	12 (4.6)	430 (5.2) ●	417 (4.9)	12 (5.4)
Cyprus	512 (2.9) ●	485 (3.3)	26 (3.7)	500 (3.1) ●	480 (3.5)	20 (2.8)
Czech Republic	543 (2.7) ●	528 (2.7)	14 (2.8)	541 (3.3) ●	532 (3.1)	9 (3.5)
^{2a} England	574 (4.9) ●	544 (4.0)	30 (4.3)	554 (4.0) ●	537 (4.0)	17 (3.5)
France	524 (2.9) ●	513 (3.2)	11 (3.2)	540 (2.9) ●	527 (3.1)	12 (3.3)
Germany	544 (2.1) ●	529 (2.4)	14 (2.5)	543 (2.5) ●	533 (2.1)	10 (2.6)
^{2a} Greece	539 (3.8) ●	516 (3.7)	23 (3.5)	529 (3.9) ●	513 (4.4)	15 (3.8)
Hong Kong, SAR	528 (3.4) ●	507 (3.4)	21 (3.4)	546 (2.8) ●	529 (3.6)	17 (3.1)
Hungary	558 (2.1) ●	538 (2.6)	20 (2.5)	542 (2.5) ●	532 (2.8)	10 (3.0)
Iceland	531 (1.9) ●	509 (1.7)	21 (2.4)	512 (1.9) ●	496 (2.0)	16 (2.6)
Iran, Islamic Rep. of	433 (5.7) ●	406 (6.4)	28 (8.7)	419 (6.4) ●	395 (6.1)	24 (8.8)
^{2b} Israel	521 (3.3) ●	498 (3.2)	23 (3.9)	518 (3.5) ●	495 (3.6)	23 (4.2)
Italy	549 (2.7) ●	538 (3.3)	11 (2.8)	539 (2.7) ●	533 (2.6)	6 (2.6)
Kuwait	416 (5.2) ●	373 (5.4)	43 (7.4)	430 (6.1) ●	378 (6.7)	52 (9.1)
Latvia	548 (2.8) ●	527 (2.2)	21 (2.4)	558 (2.8) ●	537 (2.6)	22 (2.8)
¹ Lithuania	554 (3.4) ●	536 (3.7)	18 (3.8)	548 (2.9) ●	532 (2.9)	16 (2.8)
Macedonia, Rep. of	453 (4.6) ●	430 (4.9)	22 (3.3)	454 (5.6) ●	437 (5.8)	17 (4.8)
Moldova, Rep. of	492 (4.3) ●	468 (3.6)	23 (3.4)	516 (5.5) ●	494 (4.7)	23 (4.5)
[‡] Morocco	358 (8.5) ●	340 (9.1)	19 (5.1)	370 (10.8) ●	349 (11.9)	20 (6.3)
[†] Netherlands	561 (2.8) ●	544 (3.2)	17 (3.3)	559 (2.9) ●	547 (2.9)	11 (2.4)
New Zealand	546 (4.7) ●	517 (4.6)	30 (5.1)	536 (4.5) ●	514 (4.4)	21 (4.6)
Norway	519 (3.4) ●	494 (3.1)	24 (3.6)	499 (3.7) ●	486 (3.1)	14 (3.9)
Romania	518 (4.2) ●	505 (6.1)	13 (4.4)	519 (4.6) ●	506 (5.6)	13 (4.3)
^{2a} Russian Federation	531 (3.9) ●	517 (4.3)	14 (2.9)	536 (4.5) ●	527 (4.6)	9 (2.8)
[†] Scotland	538 (4.0) ●	519 (4.1)	19 (3.9)	534 (4.3) ●	520 (4.1)	14 (4.4)
Singapore	541 (5.7) ●	516 (6.0)	25 (4.2)	538 (4.9) ●	517 (5.3)	21 (3.8)
Slovak Republic	519 (2.9) ●	505 (2.9)	14 (2.8)	530 (2.8) ●	514 (3.4)	16 (3.3)
Slovenia	509 (2.4) ●	490 (2.4)	19 (3.1)	514 (2.6) ●	492 (2.5)	21 (3.4)
Sweden	572 (2.9) ●	547 (2.6)	25 (2.8)	568 (2.8) ●	550 (2.6)	18 (3.2)
Turkey	460 (3.8) ●	437 (3.6)	22 (2.9)	460 (4.6) ●	444 (4.2)	16 (4.5)
[†] United States	558 (4.2) ●	542 (4.6)	16 (4.3)	541 (4.1) ●	525 (4.3)	16 (4.0)
International Avg.	511 (0.7) ●	490 (0.7)	21 (0.7)	509 (0.7) ●	491 (0.8)	18 (0.8)
* Ontario (Canada)	563 (4.0) ●	540 (3.3)	24 (3.2)	550 (3.9) ●	533 (3.4)	17 (3.5)
* Quebec (Canada)	541 (3.5) ●	526 (3.4)	15 (3.5)	546 (3.3) ●	535 (3.1)	10 (2.9)

● Significantly higher than other gender

- * Canada is represented by the provinces of Ontario and Quebec only. The international average does not include the results from these provinces separately.
- † Met guidelines for sample participation rates only after replacement schools were included (see Exhibit A.7).
- ‡ Nearly satisfying guidelines for sample participation rates after replacement schools were included (see Exhibit A.7).
- ¹ National Desired Population does not cover all of International Desired Population. Because coverage falls below 65%, Canada is annotated Canada (O, Q) for the provinces of Ontario and Quebec only.

^{2a} National Defined Population covers less than 95% of National Desired Population (see Exhibit A.4).

^{2b} National Defined Population covers less than 80% of National Desired Population (see Exhibit A.4).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70-84% of the students.