

PIRLS

Chapter 1



Chapter 1

International Student Achievement in Reading

Chapter 1 summarizes reading achievement at the fourth grade for each of the countries that participated in PIRLS 2001. The average and range in performance are presented for participating countries, and gender differences also are provided.

How Do Countries Differ in Reading Achievement?

Exhibit 1.1 presents the distribution of student achievement in reading for the 35 countries that participated in PIRLS 2001. Countries are shown in decreasing order of average (mean) scale score, together with an indication of whether the country average is significantly higher or lower than the international average.¹ The international average of 500 is the mean of the average scale scores of each of the participating countries. Beginning with top-performing Sweden, it can be seen that 23 countries had average reading literacy achievement that was significantly above the international average. Two countries, Slovenia and Norway, had reading literacy achievement about at the international average, and the remaining 10 countries had average achievement below the international average.

PIRLS devoted considerable effort to maximizing comparability across the grades and ages tested, but it is difficult given that students start formal schooling at different ages.² Exhibit 1.1 shows that the grade tested in most countries represented the fourth year of formal schooling. Thus, solely for

convenience, the report usually refers to the grade tested as the fourth grade. Students in Slovenia, in particular, had one year less of formal schooling than students in the other participating countries, and also some students in the Russian Federation were in their third year of formal schooling. Although at the younger end of the age distribution, students in England, New Zealand, and Scotland were in their fifth year of schooling. On average, students in most countries were 10 years old (aged from 10.0 to 10.9 years). Students in some countries were slightly younger (from 9.7 to 9.9 years), including Italy, Scotland, Greece, Iceland, Slovenia, Cyprus, Kuwait, and Belize; in several others students were slightly older (from 11.0 to 11.2 years old), including Latvia, Romania, and Morocco.

PIRLS found substantial differences in performance across and within countries. As graphically represented in Exhibit 1.1, performance generally differed very little between one country



- 1 PIRLS used item response theory (IRT) methods to summarize the achievement results on a scale with a mean of 500 (international average) and a standard deviation of 100. Given the matrix-sampling approach, scaling averages students' responses in a way that accounts for differences in the difficulty of different subsets of items. It allows students' performance to be summarized on a common metric even though individual students responded to different items in the reading test. For more detailed information, see the "IRT Scaling and Data Analysis" section of Appendix A.
- 2 For a description of educational systems and reading literacy curricula in the PIRLS countries, see Mullis, I.V.S., Martin, M.O., Kennedy, A.M., & Flaherty, C.L. (Eds.). (2002). *PIRLS 2001 encyclopedia: A reference guide to reading education in the countries participating in IEA's Progress in International Reading Literacy Study (PIRLS)*. Chestnut Hill, MA: Boston College.

and the next higher- or lower-performing country, but the range in performance across the 35 countries was very large. Across countries, achievement in reading literacy ranged from an average of 561 for Sweden to 327 for Belize. The dark boxes at the midpoints of the distributions show the 95 percent confidence intervals around the average achievement in each country.³

Achievement for each country is shown for the 25th and 75th percentiles as well as for the 5th and 95th percentiles.⁴ Each percentile point indicates the percentages of students performing below and above that point on the scale. For example, 25 percent of the fourth-grade students in each country performed below the 25th percentile for that country, and 75 percent performed above the 25th percentile. The range between the 25th and 75th percentiles represents performance by the middle half of the students. In most countries, the range of performance for the middle group was around 100 scale-score points. In contrast, performance at the 5th and 95th percentiles represents the extremes in both lower and higher achievement. The range of performance between these two score points, which includes 90 percent of the population, was 200 to 300 points in most countries – approximately the same as the difference in average performance across countries.

Exhibit 1.2 compares overall mean achievement among individual countries. This figure shows whether or not the differences in average achievement between pairs of countries are statistically significant. Selecting a country of interest and reading 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 in performance; and a triangle pointing down indicates significantly lower performance.

The data in Exhibit 1.2 further illustrate that, when ordered by average achievement, adjacent countries often did not significantly differ from each other, although the differences in achievement between the high-performing and low-performing countries were very large. Because of this wide range in perform-

PIRLS found substantial differences in performance across and within countries.

3 See the “IRT Scaling and Data Analysis” section of Appendix A for more details about calculating standard errors and confidence intervals for the PIRLS statistics.

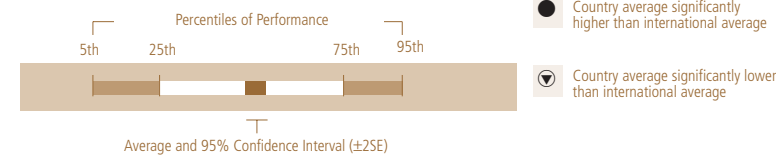
4 Tables of the percentile values and standard deviations for all countries are presented in Appendix B.

Exhibit 1.1: Distribution of Reading Achievement

ISC 4th Grade
PIRLS 2001

Countries	Reading Achievement Scale Score	Average Scale Score	Years of Formal Schooling	Average Age
Sweden		● 561 (2.2)	4	10.8
† Netherlands		● 554 (2.5)	4	10.3
^{12a} England		● 553 (3.4)	5	10.2
Bulgaria		● 550 (3.8)	4	10.9
Latvia		● 545 (2.3)	4	11.0
* † Canada (O,Q)		● 544 (2.4)	4	10.0
† Lithuania		● 543 (2.6)	4	10.9
Hungary		● 543 (2.2)	4	10.7
† United States		● 542 (3.8)	4	10.2
Italy		● 541 (2.4)	4	9.8
Germany		● 539 (1.9)	4	10.5
Czech Republic		● 537 (2.3)	4	10.5
New Zealand		● 529 (3.6)	5	10.1
† Scotland		● 528 (3.6)	5	9.8
Singapore		● 528 (5.2)	4	10.1
^{2a} Russian Federation		● 528 (4.4)	3 or 4	10.3
Hong Kong, SAR		● 528 (3.1)	4	10.2
France		● 525 (2.4)	4	10.1
^{2a} Greece		● 524 (3.5)	4	9.9
Slovak Republic		● 518 (2.8)	4	10.3
Iceland		● 512 (1.2)	4	9.7
Romania		● 512 (4.6)	4	11.1
^{2b} Israel		● 509 (2.8)	4	10.0
Slovenia		● 502 (2.0)	3	9.8
International Avg.		500 (0.6)	4	10.3
Norway		● 499 (2.9)	4	10.0
Cyprus		▼ 494 (3.0)	4	9.7
Moldova, Rep. of		▼ 492 (4.0)	4	10.8
Turkey		▼ 449 (3.5)	4	10.2
Macedonia, Rep. of		▼ 442 (4.6)	4	10.7
Colombia		▼ 422 (4.4)	4	10.5
Argentina		▼ 420 (5.9)	4	10.2
Iran, Islamic Rep. of		▼ 414 (4.2)	4	10.4
Kuwait		▼ 396 (4.3)	4	9.9
† Morocco		▼ 350 (9.6)	4	11.2
Belize		▼ 327 (4.7)	4	9.8
* Ontario (Canada)		● 548 (3.3)	4	9.9
* Quebec (Canada)		● 537 (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 1.2: Multiple Comparisons of Average Reading Achievement

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

ance, the pattern for a number of countries was one of having lower mean achievement than some countries, about the same mean achievement as other countries, and higher mean achievement than a third group of countries.

Sweden had the highest reading literacy achievement of all the countries participating in PIRLS 2001.

Sweden had the highest reading literacy achievement of all the countries participating in PIRLS 2001. The Netherlands and England had higher achievement than the rest of the other countries except Bulgaria. Bulgaria was outperformed only by Sweden and had higher average achievement than many participating countries. Latvia, Canada (O,Q), Lithuania, Hungary, and the United States also performed well. They had significantly lower average performance than Sweden, The

Netherlands, and England, but performance as high or higher than the remaining participants. Italy and Germany also had high average achievement having been outperformed only by four countries – Bulgaria in addition to the three top performers. The Czech Republic was outperformed by seven countries, but had significantly higher achievement than 20 countries. As a next group, New Zealand, Scotland, Singapore, the Russian Federation, Hong Kong, France, and Greece all performed very similarly, generally having average achievement lower than about 10 countries, the same as about 10 countries, and higher than about 15 countries. For the remaining countries, there was a pattern of each, in turn, having significantly lower achievement than one or two more countries.

What Are the Gender Differences in Reading Literacy Achievement?

Exhibit 1.3 shows gender differences in fourth-grade students' reading achievement for each of the participating countries, presenting average achievement separately for girls and boys as well as the difference between the means. Countries are shown in increasing order of this gender difference. The gender difference for each country is shown by a bar, indicating the amount of the difference, whether the direction of the difference favored girls or boys, and whether the difference is statistically significant (indicated by the bar being

darkened). In all countries, girls had significantly higher achievement than boys. Italy had an 8-point difference and all other countries had differences of 11 points or more. The international average was 20 points. Countries with a difference of 25 points or more included Moldova (25 points), New Zealand, Iran, and Belize (27 points), and Kuwait (48 points).

Exhibit 1.4 provides information on gender differences in reading achievement among students with high performance compared to those in the middle of the achievement distribution. For each country, score levels were computed for the highest-scoring 25 percent of students, called the upper quartile; for the top-scoring 50 percent of students, called the median (or top half) level; and for the top-scoring 75 percent, comprising students reaching the lower quartile and higher. The percentages of girls and boys in each country reaching each of the three levels were computed. For equitable performance, 25 percent each of girls and boys should have reached the upper quartile, 50 percent each the median level, and 75 percent each the lower quartile.

On average, across countries, significantly more girls than boys reached each quartile of their country's achievement distribution. More specifically, 29 percent of girls compared with 21 percent of boys reached the upper quartile, 55 percent compared with 45 percent reached the median level, and 79 percent compared with 71 percent reached the lower quartile. By subtraction, it can be determined that fewer boys (8 percent, on average) than girls reach the lowest quartile of achievement, and that 29 percent of boys are below the lowest quartile compared to 21 percent of girls. Statistically significant gender differences favoring girls at each quartile were consistent across countries, with only a few exceptions (Italy and the United States at the upper quartile, France at the median level, and Colombia and Morocco at the lower quartile).



Exhibit 1.3: Average Reading Achievement by Gender

ISC
4th Grade
PIRLS 2001

Countries	Girls			Boys		Achievement Difference
	Percent	Average Scale Score		Percent	Average Scale Score	
Italy	48 (0.9)	545 (2.6)	●	52 (0.9)	537 (2.7)	8 (2.5)
France	48 (0.9)	531 (2.7)	●	52 (0.9)	520 (3.0)	11 (3.3)
Colombia	50 (1.2)	428 (5.1)	●	50 (1.2)	416 (4.7)	12 (4.3)
^{2a} Russian Federation	49 (0.9)	534 (4.3)	●	51 (0.9)	522 (4.8)	12 (2.3)
Czech Republic	49 (1.0)	543 (2.8)	●	51 (1.0)	531 (2.6)	12 (2.8)
Germany	50 (0.8)	545 (2.2)	●	50 (0.8)	533 (2.5)	13 (2.7)
Romania	51 (1.0)	519 (4.2)	●	49 (1.0)	504 (5.7)	14 (3.8)
Hungary	51 (1.0)	550 (2.4)	●	49 (1.0)	536 (2.5)	14 (2.1)
¹ Netherlands	50 (0.8)	562 (2.7)	●	50 (0.8)	547 (2.8)	15 (2.2)
Slovak Republic	50 (0.9)	526 (3.0)	●	50 (0.9)	510 (3.3)	16 (3.0)
¹ Lithuania	51 (1.0)	552 (3.0)	●	49 (1.0)	535 (2.7)	17 (2.7)
¹ Scotland	52 (1.0)	537 (3.9)	●	48 (1.0)	519 (4.2)	17 (4.0)
* ¹ Canada (O,Q)	50 (0.7)	553 (2.6)	●	50 (0.7)	536 (2.6)	17 (2.1)
¹ United States	51 (0.8)	551 (3.8)	●	49 (0.8)	533 (4.9)	18 (4.1)
Argentina	51 (1.1)	428 (6.2)	●	49 (1.1)	410 (6.5)	18 (4.7)
Hong Kong, SAR	50 (1.0)	538 (3.0)	●	50 (1.0)	519 (3.5)	19 (2.9)
Iceland	50 (0.8)	522 (1.9)	●	50 (0.8)	503 (1.5)	19 (2.4)
Turkey	48 (0.9)	459 (4.0)	●	52 (0.9)	440 (3.7)	19 (3.1)
International Avg.	50 (0.2)	510 (0.7)	●	50 (0.2)	490 (0.7)	20 (0.7)
¹ Morocco	45 (1.3)	361 (9.6)	●	55 (1.3)	341 (10.9)	20 (6.8)
^{2a} Greece	50 (1.0)	535 (3.8)	●	50 (1.0)	514 (4.0)	21 (3.9)
Macedonia, Rep. of	49 (0.9)	452 (5.1)	●	51 (0.9)	431 (4.8)	21 (3.6)
Norway	48 (1.0)	510 (3.5)	●	52 (1.0)	489 (3.4)	21 (3.9)
Slovenia	50 (0.8)	512 (2.5)	●	50 (0.8)	491 (2.4)	22 (2.8)
Latvia	48 (1.1)	556 (3.1)	●	52 (1.1)	534 (2.6)	22 (3.4)
^{2b} Israel	50 (1.3)	520 (3.4)	●	50 (1.3)	498 (3.7)	22 (4.3)
Sweden	49 (0.7)	572 (2.6)	●	51 (0.7)	550 (2.5)	22 (2.6)
^{12a} England	52 (1.1)	564 (3.9)	●	48 (1.1)	541 (3.7)	22 (3.3)
Cyprus	49 (0.9)	506 (3.3)	●	51 (0.9)	482 (3.6)	24 (3.5)
Bulgaria	51 (0.9)	562 (3.7)	●	49 (0.9)	538 (4.7)	24 (3.6)
Singapore	48 (1.5)	540 (5.3)	●	52 (1.5)	516 (5.7)	24 (4.1)
Moldova, Rep. of	50 (1.0)	504 (4.7)	●	50 (1.0)	479 (4.0)	25 (4.0)
New Zealand	49 (1.3)	542 (4.7)	●	51 (1.3)	516 (4.2)	27 (5.4)
Iran, Islamic Rep. of	55 (3.6)	426 (5.7)	●	45 (3.6)	399 (5.6)	27 (8.1)
Belize	50 (0.9)	341 (5.3)	●	50 (0.9)	314 (5.2)	27 (4.8)
Kuwait	48 (0.3)	422 (5.6)	●	52 (0.3)	373 (6.3)	48 (8.4)
* Quebec (Canada)	51 (0.9)	544 (3.4)	●	49 (0.9)	530 (3.1)	14 (2.7)
* Ontario (Canada)	49 (0.9)	558 (3.8)	●	51 (0.9)	538 (3.4)	20 (2.7)

● Significantly higher than other gender

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).

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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.

Exhibit 1.4: Percentages of Girls and Boys Reaching Quartiles of Reading Achievement in Each CountryISC
4th Grade
PIRLS 2001

Countries	Upper Quartile (Top 25%)		Median (Top 50%)		Lower Quartile (Top 75%)	
	Percent of Girls	Percent of Boys	Percent of Girls	Percent of Boys	Percent of Girls	Percent of Boys
Argentina	28 (2.3) ●	22 (2.0)	54 (2.7) ●	46 (2.8)	78 (2.5) ●	72 (2.9)
Belize	29 (2.1) ●	21 (1.9)	55 (2.0) ●	45 (2.1)	80 (1.8) ●	71 (2.2)
Bulgaria	30 (1.7) ●	20 (1.7)	55 (2.1) ●	44 (2.4)	79 (1.7) ●	70 (2.3)
* 1 Canada (O,Q)	29 (1.5) ●	21 (1.5)	54 (1.7) ●	46 (1.5)	79 (1.1) ●	71 (1.2)
Colombia	28 (2.3) ●	22 (1.9)	52 (2.5) ●	48 (2.5)	77 (2.1)	74 (2.5)
Cyprus	30 (1.7) ●	20 (1.5)	55 (1.9) ●	45 (2.1)	80 (1.4) ●	71 (1.7)
Czech Republic	27 (1.8) ●	23 (1.5)	54 (1.9) ●	46 (2.2)	79 (1.7) ●	72 (1.8)
12a England	29 (1.8) ●	21 (1.5)	55 (2.2) ●	45 (2.0)	79 (1.6) ●	71 (1.7)
France	27 (1.4) ●	23 (1.5)	52 (1.9)	48 (1.8)	77 (1.4) ●	73 (1.7)
Germany	28 (1.5) ●	22 (1.2)	54 (1.5) ●	46 (1.6)	78 (1.2) ●	72 (1.5)
2a Greece	29 (2.1) ●	21 (2.1)	55 (2.5) ●	45 (2.5)	80 (2.1) ●	70 (2.1)
Hong Kong, SAR	29 (1.8) ●	21 (1.7)	56 (2.4) ●	44 (2.4)	80 (1.7) ●	70 (2.1)
Hungary	28 (1.6) ●	22 (1.4)	54 (1.7) ●	46 (2.0)	78 (1.4) ●	71 (1.4)
Iceland	28 (1.5) ●	22 (1.3)	55 (1.5) ●	45 (1.3)	80 (0.9) ●	70 (0.8)
Iran, Islamic Rep. of	29 (2.6) ●	20 (2.1)	56 (2.8) ●	43 (2.7)	80 (1.9) ●	70 (2.3)
2b Israel	29 (1.6) ●	21 (1.5)	55 (1.7) ●	45 (1.6)	79 (1.4) ●	71 (1.5)
Italy	27 (1.3)	24 (1.6)	53 (1.6) ●	47 (1.7)	77 (1.7) ●	73 (1.6)
Kuwait r	33 (3.0) ●	18 (2.0)	61 (2.7) ●	40 (2.6)	85 (1.5) ●	66 (2.8)
Latvia	32 (2.1) ●	18 (1.6)	58 (2.2) ●	43 (1.8)	80 (1.6) ●	70 (1.7)
1 Lithuania	30 (1.8) ●	20 (1.6)	55 (2.1) ●	45 (1.9)	79 (1.6) ●	71 (1.8)
Macedonia, Rep. of	29 (1.8) ●	21 (1.5)	54 (2.5) ●	46 (2.1)	78 (2.0) ●	72 (2.0)
Moldova, Rep. of	30 (2.4) ●	21 (1.9)	56 (2.8) ●	44 (2.3)	81 (2.1) ●	69 (2.0)
† Morocco	28 (3.2) ●	23 (3.6)	54 (3.0) ●	47 (3.8)	78 (2.6)	73 (3.1)
† Netherlands	29 (1.9) ●	21 (1.5)	55 (2.2) ●	45 (2.0)	80 (1.6) ●	71 (2.0)
New Zealand	29 (2.1) ●	21 (1.6)	55 (2.3) ●	45 (1.9)	80 (1.8) ●	70 (1.6)
Norway	28 (1.9) ●	22 (1.6)	55 (1.9) ●	45 (1.8)	81 (1.7) ●	70 (1.6)
Romania	27 (2.0) ●	23 (2.1)	53 (2.2) ●	47 (2.4)	77 (1.7) ●	73 (2.3)
2a Russian Federation	28 (2.4) ●	22 (2.2)	54 (2.4) ●	46 (2.3)	78 (2.1) ●	72 (2.3)
† Scotland	29 (2.0) ●	21 (2.0)	54 (2.0) ●	46 (2.4)	78 (1.7) ●	72 (1.9)
Singapore	29 (2.5) ●	21 (1.8)	55 (2.5) ●	45 (2.5)	79 (2.0) ●	71 (2.3)
Slovak Republic	28 (1.8) ●	22 (1.6)	55 (1.8) ●	45 (1.9)	80 (1.5) ●	71 (1.8)
Slovenia	29 (1.5) ●	21 (1.3)	57 (1.4) ●	43 (1.5)	80 (1.3) ●	70 (1.5)
Sweden	30 (1.7) ●	20 (1.2)	56 (1.8) ●	44 (1.7)	81 (1.4) ●	69 (1.6)
Turkey	28 (1.9) ●	22 (1.6)	54 (2.1) ●	46 (1.8)	79 (1.6) ●	71 (1.5)
† United States	27 (2.2)	23 (2.0)	53 (2.1) ●	47 (2.5)	79 (1.8) ●	71 (2.1)
International Avg.	29 (0.3) ●	21 (0.3)	55 (0.4) ●	45 (0.4)	79 (0.3) ●	71 (0.3)
* Ontario (Canada)	29 (1.9) ●	21 (1.7)	55 (2.3) ●	45 (1.8)	79 (1.5) ●	71 (1.6)
* Quebec (Canada)	29 (1.9) ●	21 (1.8)	54 (2.0) ●	46 (2.0)	78 (1.9) ●	71 (1.7)

● Significantly greater percentage than other gender

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.

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