

FOURTH-GRADE READING LITERACY

Key Findings: Canada, England, France, Germany, Italy, Russian Federation, Scotland, United States

Only fourth-graders from England scored higher than their U.S. counterparts among all the reporting countries on the combined reading literacy scale.

The Progress in International Reading Literacy Study (PIRLS) was an assessment of the reading literacy of fourth-graders in 35 countries. This indicator, based on data from PIRLS 2001, compares U.S. fourth-graders' reading literacy scores with scores of their counterparts in the seven other reporting countries.

In 2001, the average score for U.S. fourth-graders was 542 on the combined reading literacy scale (table 5). This score was lower than the average score of their counterparts in England (553), but higher than the average scores of fourth-graders in France (525), the Russian Federation (528), and Scotland (528).

On the literary subscale of PIRLS 2001, U.S. fourth-graders had an average score of 550. This score was higher than the scores of France (518), Germany (537), the Russian Federation (523), and Scotland (529), but not detectably different from the scores of Canada (545), England (559), or Italy (543). On the informational subscale of PIRLS 2001, U.S. fourth-graders had an average score of 533. They were surpassed by fourth-graders from England,

whose average score was 546. The scores of U.S. fourth-graders, however, were not detectably different from the scores of their peers in other reporting countries.

The average scores for reading literacy describe how a country performs overall compared to other nations, but they provide no information about the way scores are distributed within each country. One way to measure the spread of scores is to measure the standard deviation, which gives an indication of how scores are distributed around the average. Canada (72), France (70), Germany (67), Italy (71), and the Russian Federation (66) each had lower standard deviations than the United States (83), which indicates less variation around the mean.

Another way to understand the distribution of scores within and between countries is to look at percentiles of performance. Scores falling between the 25th and 75th percentiles of the full range of scores represent the middle half of the score distribution. On average, there was a 108-point gap between the cut point scores of the 25th and the 75th percentiles in the United States. In the other reporting countries, the gap ranged from 85 (the Russian Federation) to 112 points (England) (figure 8).

Definitions and Methodology

PIRLS 2001 scores are reported on a scale of 0 to 1000, and are scaled to have an international average of 500 and an international standard deviation of 100 (for the 35 participating countries). The two subscales of PIRLS, the literary and informational scales, make up the combined reading literacy score. Items from

the literary subscale require students to understand language use and to comprehend the plot of a fictional story. Questions in the informational subscale measure students' ability to understand the information presented in a factual text.

Table 5. Fourth-graders' average scores for the combined reading literacy scale, literary subscale, and informational subscale, by country: 2001

Country	Average combined reading literacy scale score	Standard deviation	Average literary subscale score	Average informational subscale score
England ^{1,2}	553	87	559	546
Canada (O, Q) ^{3,4}	544	72	545	541
United States ¹	542	83	550	533
Italy	541	71	543	536
Germany	539	67	537	538
Scotland ¹	528	84	529	527
Russian Federation ²	528	66	523	531
France	525	70	518	533

Average is significantly higher than the U.S. average
 Average is not significantly different from the U.S. average
 Average is significantly lower than the U.S. average

¹Met guidelines for sample participation rates after replacement schools were included.

²National Defined Population (weighted sample size) covers less than 95 percent of National Desired Population (all 9-year-olds).

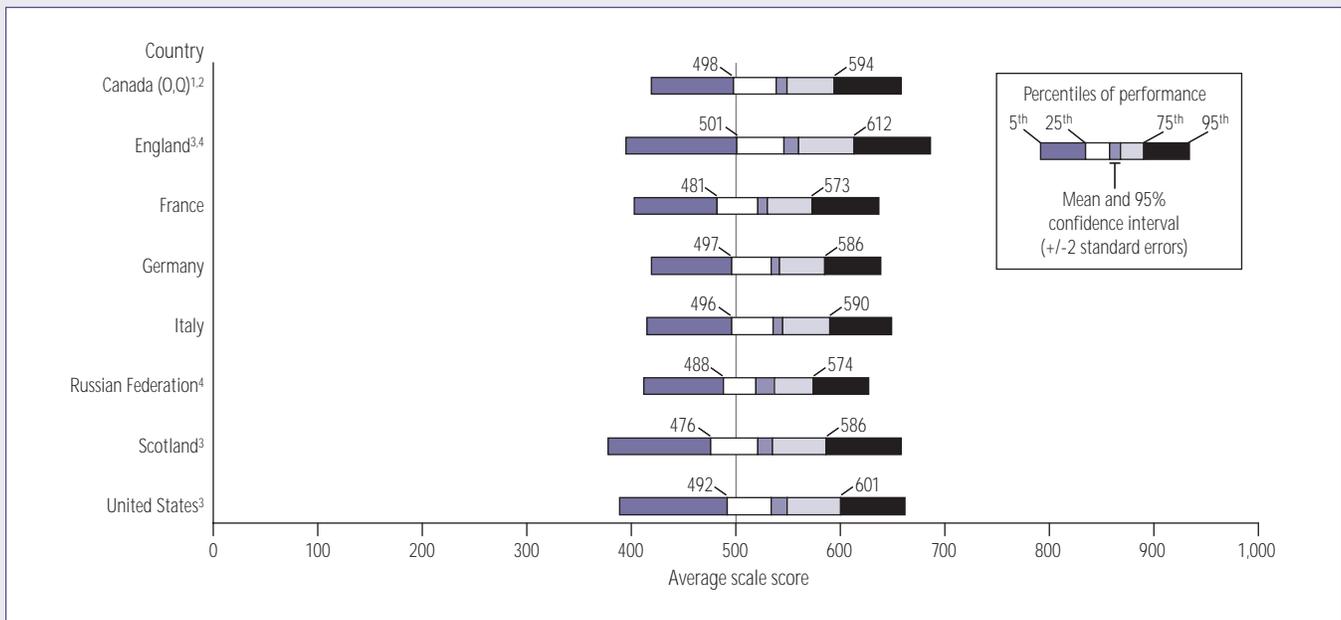
³National Desired Population (all 9-year-olds with some national exclusions) does not cover all of International Desired Population (all 9-year-olds) because coverage falls below 65 percent.

⁴Canada is represented by the provinces of Ontario and Quebec (O, Q) only.

NOTE: PIRLS 2001 assessed students in the upper of the two grades with the most 9-year-olds. In the United States and most other countries, this age group corresponds with the fourth grade. However, in England and Scotland, this age group refers to students who have received 5 years of formal schooling. PIRLS 2001 scores are reported on a scale of 0 to 1,000, and are scaled to have an international average of 500 and an international standard deviation of 100 (for the 35 participating countries). PIRLS 2001 consisted of 3 scales: a literary subscale, an informational subscale, and a combined reading literacy scale. The combined literacy scale is based on the distribution of scores on all the test items, while the subscales are based on only the items that belong to each subscale. Hence, the combined reading literacy score is not the statistical average of the scores of the two subscales.

SOURCE: International Association for the Evaluation of Educational Achievement, Progress in International Reading Literacy Study (PIRLS) 2001.

Figure 8. Distribution of average combined reading literacy scale scores of fourth-graders, by percentiles and country: 2001



¹National Desired Population (all 9-year-olds with some national exclusions) does not cover all of International Desired Population (all 9-year-olds) because coverage falls below 65 percent.

²Canada is represented by the provinces of Ontario and Quebec (O,Q) only.

³Met guidelines for sample participation rates after replacement schools were included.

⁴National Defined Population (actual sample) covers less than 95 percent of National Desired Population (all 9-year-olds).

NOTE: PIRLS 2001 assessed students in the upper of the two grades with the most 9-year-olds. In the United States and most other countries, this corresponds with the fourth grade. However, in England and Scotland, this refers to students who have received 5 years of formal schooling. PIRLS 2001 scores are reported on a scale of 0 to 1,000, and are scaled to have an international average of 500 and an international standard deviation of 100 (for the 35 participating countries). PIRLS 2001 consisted of 3 scales: a literary subscale, an informational subscale, and a combined reading literacy scale. The combined literacy scale is based on the distribution of scores on all the test items, while the subscales are based on only the items that belong to each subscale. Hence, the combined reading literacy score is not the statistical average of the scores of the two subscales.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools*, Exhibit 3.1. Chestnut Hill, MA: Boston College.