

## SECTION 1

# Countries' Reading Achievement

The PIRLS 2021 data about students' reading achievement provide an extremely valuable resource for continuing research about the impact of the COVID-19 pandemic on students' learning. PIRLS 2021 is the only large scale international assessment that successfully collected data during education's COVID-19 disruption. Further, the achievement data is accompanied by contextual information collected from several sources: principals' reports about school conditions, students' attitudes toward their reading instruction, and parents' perceptions regarding the impact of the pandemic on their children's learning (see later sections of the report on [Home Environment Support](#); [School Composition, Resources, and Climate](#); and [Students' Reading Attitudes and Behaviors](#)).

### The About PIRLS 2021 Section

The first section, [About PIRLS 2021](#), provides a considerable amount of information about the PIRLS 2021 international assessment of reading comprehension at fourth grade (e.g., the content of the assessment, the 57 countries and 8 benchmarking entities participating in PIRLS 2021, the transition to digital assessment, and the numbers of students assessed).

Despite coinciding with school disruptions due to the COVID-19 pandemic, the PIRLS 2021 data collection successfully included nearly 400,000 students in 57 countries worldwide. Although the pandemic necessitated changes in school operations, frequently leading to school closures (see Exhibit 3 in [About PIRLS 2021](#)), the countries were able to make various adjustments in their data collection schedules, ranging from minor changes to essentially heroic efforts.

Exhibit 5 in [About PIRLS 2021](#) shows the chronology of the PIRLS 2021 data collection from October 2020 through July 2022. Fortunately, modifying the schedules had minimal impact on the quality of the PIRLS 2021 data. The thorough and well documented adjudications of the PIRLS 2021 sampling procedures and data collection outcomes found that the PIRLS guidelines to ensure high quality were met for the most part, while the few exceptions were annotated appropriately (see [Appendix A](#)). The International Quality Assurance Program also monitored and documented the data collection activities (see Chapter 6 in [Methods and Procedures: PIRLS 2021 Technical Report](#)).

## Impacts of Modifying the Assessment Schedule on Students' Achievement

Consistently across assessment cycles, the PIRLS data collection procedures have included conducting the assessments at the end of the fourth grade school year so that as much of the curriculum has been covered as possible. In light of the data collection challenges in PIRLS 2021, 43 of the 57 countries managed to assess students at the end of the target school year, including conducting the assessment a year later than originally scheduled in a few countries (this is annotated in the exhibits with a bowtie after the countries' names). So far, no discernible achievement differences have been identified that are associated with assessing fourth grade students one year later than initially scheduled.

However, in the other 14 countries (all in the Northern Hemisphere), the necessary modifications to the data collection schedule delayed assessing students in the fourth grade cohort until the beginning of the fifth grade. In reviewing the PIRLS 2021 achievement results, it appeared that some of these countries had an achievement advantage in PIRLS 2021 that also was manifested in the relatively larger trend increases between 2016 and 2021 (see report section on [Trends in Reading Achievement](#)).

Of course, the reasons for any achievement differences are unknown. However, although there was variation, the average age of students in the 14 countries that delayed assessment until the beginning of the fifth grade was half a year older on average than the average age of students assessed at the end of fourth grade.

### Average Ages of Students Assessed in PIRLS 2021 and PIRLS 2016 by Data Collection Period

PIRLS 2021 Data Collection Period	PIRLS 2021	PIRLS 2016	Difference
Assessed Fourth Grade Students at the End of the School Year	10.2	10.2	0.0
Delayed Assessment of Fourth Grade Cohort at the Beginning of Fifth Grade	10.8	10.2	0.5

Because of rounding, some results may appear inconsistent.

Beyond finding that these students were comparatively older, unfortunately, without any information about the reading achievement of the students in the 14 countries at the end of the fourth grade or their activities over the summer months, the PIRLS 2021 data in and of itself cannot be used to disentangle the extent of the impact of the delayed assessment on students' reading achievement. Researchers may be able to use within country data and local insights to study this issue in the future.

For now, however, throughout the report pink highlighting has been used to identify the results of the 14 countries where delayed assessment until the beginning of the fifth grade resulted in collecting data from a sample of comparatively older students.

## Average Reading Achievement and Scale Score Distributions

The overall achievement results for the 57 PIRLS 2021 participating countries and 8 benchmarking participants are presented in three exhibits.

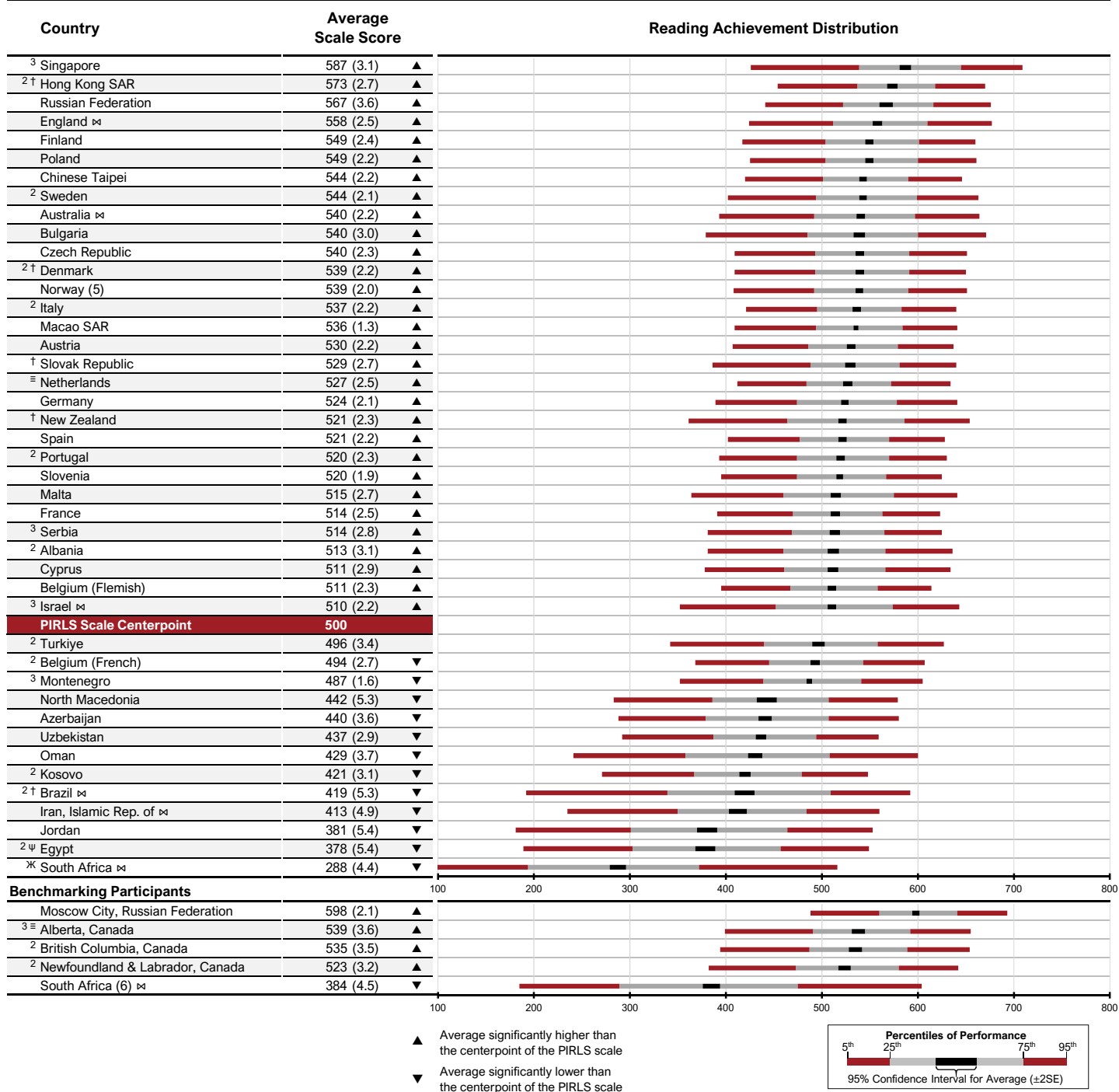
- Exhibit 1.1 shows the average reading achievement and scale score distributions for the 43 countries and 5 benchmarking participants that collected their data at the end of the fourth grade.
- For the countries in Exhibit 1.1, Exhibit 1.2 provides significance tests for differences between country averages. Results flagged as significant have a 1 in 20 error level. There is a 5 percent chance of declaring the sample differences significant, even though the true difference is zero.
- Exhibit 1.3 includes the average reading achievement and scale score distribution for all 57 countries and 8 benchmarking entities, including the results for the students in the 14 countries and 3 benchmarking entities (half a year older) that delayed data collection until the beginning of the fifth grade (highlighted in pink).

For the 43 countries and 5 benchmarking entities that assessed fourth grade students at the end of the school year, Exhibit 1.1 includes each country's average scale score with its 95 percent confidence interval as well as the range in performance for the middle half of the students (25<sup>th</sup> to 75<sup>th</sup> percentile—interquartile range) and the extremes (5<sup>th</sup> and 95<sup>th</sup> percentiles). The 43 countries are presented according to their average achievement in descending order. Please note that the countries annotated with a bowtie (⌘) assessed their fourth grade students at the end of the fourth grade school year, but one calendar year later than initially planned. The benchmarking participants are in a separate section at the bottom of the exhibit for ease of comparison.

## Exhibit 1.1: Average Reading Achievement and Scale Score Distributions

Assessed Fourth Grade Students at the End of the School Year

⌘ Assessed one year later than originally scheduled



The PIRLS achievement scale was established in 2001 based on the combined achievement distribution of all countries that participated in PIRLS 2001. To provide a point of reference for country comparisons, the scale centerpoint of 500 was located at the mean of the combined achievement distribution. The units of the scale were chosen so that 100 scale score points corresponded to the standard deviation of the distribution.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

See Appendix A.2 for population coverage notes 1, 2, and 3. See Appendix A.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

⋈ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 25%.

Issues identified in Albania's data quality led to reduced comparability and framework coverage.

South Africa continued investigating its PIRLS 2021 results at the time of publication and will deal with the findings through its national report.

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021

Downloaded from <https://pirls2021.org/results>

The results indicate that these 43 countries had relatively high achievement in reading at the fourth grade as a group. The fourth grade students in almost three-fourths (30 out of the 43 countries) had higher achievement than the scale centerpoint of 500 (a point that is stable across assessment cycles, see “History of the PIRLS Reading Achievement Scale”). As in previous cycles, the results also reveal that although the differences from country to country in average achievement were often small (considerable overlapping of confidence intervals), there was a substantial range in performance of nearly 300 scale score points from the top-performing to the lower-performing countries.

### History of the PIRLS Reading Achievement Scale

The PIRLS reading achievement scale was established in PIRLS 2001, based on the achievement across all participating countries, treating each country equally. Students’ achievement is placed on the scale with the successive PIRLS cycles, most recently for PIRLS 2021. Reporting the achievement data from each successive PIRLS assessment on the PIRLS scale enables monitoring increases or decreases in achievement across assessment cycles. The scale has a typical range of achievement between 300 and 700. A centerpoint of 500 was set to correspond to the mean of overall achievement in 2001, with 100 points set to correspond to the standard deviation. PIRLS uses the scale centerpoint as a point of reference that remains constant from assessment to assessment.

The achievement distributions in Exhibit 1.1 show a large within-country range in many of PIRLS 2021 countries—about 200 points or even larger between lower- and higher-performing students. When considering average achievement, it is important to keep in mind the sizable variations within countries, and that every country has some very good readers as well as some struggling readers.

For the countries shown in Exhibit 1.1, Exhibit 1.2 provides significance tests for differences in average estimated reading achievement between one country and another country. Exhibit 1.2 is based on a traditional approach of testing for significance of differences and does not provide information about practical significance. Significance in the statistical sense means that the size of the difference is surprising compared to the standard error of the difference. In the exhibit, a 5 percent error rate was used to calculate whether a difference was flagged as significant or not. Differences should be triangulated with other data in order to come to meaningful interpretations of what the differences imply in terms of improving reading education in the countries (see Chapter 13 in [Methods and Procedures: PIRLS 2021 Technical Report](#)).

### Exhibit 1.2: Significance of Differences Between Countries' Average Reading Achievement

Assessed Fourth Grade Students at the End of the School Year

⌘ Assessed one year later than originally scheduled

Read across the row for a country to compare performance with the countries listed along the top of the chart. If no statistically significant difference was found, no symbol is present. If the difference is significant ( $p < 0.05$ ), a symbol indicates whether the estimated achievement of the country in the row is higher (▲) than that of the comparison country, or lower (▼).

Country	Average Scale Score	Singapore	Hong Kong SAR	Russian Federation	England ⌘	Finland	Poland	Chinese Taipei	Sweden	Australia ⌘	Bulgaria	Czech Republic	Denmark	Norway (5)	Italy	Macao SAR	Austria	Slovak Republic	Netherlands	Germany	New Zealand	Spain	Portugal	Slovenia	Malta	France	Serbia	Albania	Cyprus	Belgium (Flemish)	Israel ⌘	Turkiye	Belgium (French)	Montenegro	North Macedonia		
Singapore	587 (3.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
Hong Kong SAR	573 (2.7)	▼		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
Russian Federation	567 (3.6)	▼			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		
England ⌘	558 (2.5)	▼	▼			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Finland	549 (2.4)	▼	▼	▼						▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Poland	549 (2.2)	▼	▼	▼						▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Chinese Taipei	544 (2.2)	▼	▼	▼							▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Sweden	544 (2.1)	▼	▼	▼												▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Australia ⌘	540 (2.2)	▼	▼	▼	▼	▼	▼	▼									▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Bulgaria	540 (3.0)	▼	▼	▼	▼	▼	▼	▼									▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Czech Republic	540 (2.3)	▼	▼	▼	▼	▼	▼	▼									▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Denmark	539 (2.2)	▼	▼	▼	▼	▼	▼	▼									▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Norway (5)	539 (2.0)	▼	▼	▼	▼	▼	▼	▼									▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Italy	537 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	
Macao SAR	536 (1.3)	▼	▼	▼	▼	▼	▼	▼	▼								▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Austria	530 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Slovak Republic	529 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Netherlands	527 (2.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Germany	524 (2.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
New Zealand	521 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Spain	521 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Portugal	520 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Slovenia	520 (1.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Malta	515 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
France	514 (2.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Serbia	514 (2.8)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Albania	513 (3.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Cyprus	511 (2.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Belgium (Flemish)	511 (2.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Israel ⌘	510 (2.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Turkiye	496 (3.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Belgium (French)	494 (2.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Montenegro	487 (1.6)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
North Macedonia	442 (5.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Azerbaijan	440 (3.6)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Uzbekistan	437 (2.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Oman	429 (3.7)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Kosovo	421 (3.1)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Brazil ⌘	419 (5.3)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Iran, Islamic Rep. of ⌘	413 (4.9)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Jordan	381 (5.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Egypt	378 (5.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
South Africa ⌘	288 (4.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
<b>Benchmarking Participants</b>																																					
Moscow City, Russian Federation	598 (2.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Alberta, Canada	539 (3.6)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
British Columbia, Canada	535 (3.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Newfoundland & Labrador, Canada	523 (3.2)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
South Africa (6) ⌘	384 (4.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼

▲ Average achievement significantly higher than comparison country  
▼ Average achievement significantly lower than comparison country

Significance tests were not adjusted for multiple comparisons. Five percent of the comparisons would be statistically significant by chance alone.  
( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.  
Issues identified in Albania's data quality led to reduced comparability and framework coverage.

## Exhibit 1.2: Significance of Differences Between Countries' Average Reading Achievement

Assessed Fourth Grade Students at the End of the School Year

∞ Assessed one year later than originally scheduled

(Continued)

Country	Average Scale Score	Azerbaijan	Uzbekistan	Oman	Kosovo	Brazil ∞	Iran, Islamic Rep. of ∞	Jordan	Egypt	South Africa ∞	Benchmarking Participants	Moscow City, Russian Federation	Alberta, Canada	British Columbia, Canada	Newfoundland & Labrador, Canada	South Africa (6) ∞
Singapore	587 (3.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Hong Kong SAR	573 (2.7)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Russian Federation	567 (3.6)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
England ∞	558 (2.5)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Finland	549 (2.4)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Poland	549 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Chinese Taipei	544 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Sweden	544 (2.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Australia ∞	540 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Bulgaria	540 (3.0)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Czech Republic	540 (2.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Denmark	539 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Norway (5)	539 (2.0)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Italy	537 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Macao SAR	536 (1.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Austria	530 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▲	▲	▲	▲
Slovak Republic	529 (2.7)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▲	▲	▲	▲
Netherlands	527 (2.5)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▲	▲	▲	▲
Germany	524 (2.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
New Zealand	521 (2.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Spain	521 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Portugal	520 (2.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Slovenia	520 (1.9)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Malta	515 (2.7)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
France	514 (2.5)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Serbia	514 (2.8)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
Albania	513 (3.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Cyprus	511 (2.9)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Belgium (Flemish)	511 (2.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Israel ∞	510 (2.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Turkiye	496 (3.4)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Belgium (French)	494 (2.7)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Montenegro	487 (1.6)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
North Macedonia	442 (5.3)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Azerbaijan	440 (3.6)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Uzbekistan	437 (2.9)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Oman	429 (3.7)	▼	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Kosovo	421 (3.1)	▼	▼	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Brazil ∞	419 (5.3)	▼	▼	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Iran, Islamic Rep. of ∞	413 (4.9)	▼	▼	▼	▲	▲	▲	▲	▲	▲	▼	▼	▼	▼	▲	▲
Jordan	381 (5.4)	▼	▼	▼	▼	▼	▼	▼	▲	▲	▼	▼	▼	▼	▲	▲
Egypt	378 (5.4)	▼	▼	▼	▼	▼	▼	▼	▲	▲	▼	▼	▼	▼	▲	▲
South Africa ∞	288 (4.4)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
<b>Benchmarking Participants</b>																
Moscow City, Russian Federation	598 (2.1)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Alberta, Canada	539 (3.6)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
British Columbia, Canada	535 (3.5)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▲	▲	▲	▲	▲
Newfoundland & Labrador, Canada	523 (3.2)	▲	▲	▲	▲	▲	▲	▲	▲	▲	▼	▼	▼	▲	▲	▲
South Africa (6) ∞	384 (4.5)	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼

▲ Average achievement significantly higher than comparison country

▼ Average achievement significantly lower than comparison country

Significance tests were not adjusted for multiple comparisons. Five percent of the comparisons would be statistically significant by chance alone.  
 ( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.  
 Issues identified in Albania's data quality led to reduced comparability and framework coverage.

In Exhibit 1.2, reading across a country row provides a way to compare that country's average achievement to the average achievement of each of the other PIRLS 2021 countries shown across the top of the exhibit. Looking across the row for Singapore—the first country listed—shows an entire row of up arrows (▲), indicating that Singapore had higher average achievement (significant at  $p < \alpha = 0.05$ ) than each one of the other countries.

Hong Kong SAR and the Russian Federation had the next highest average reading achievement. Although these two countries had lower average achievement (▼) than Singapore, each had higher estimated average achievement than the rest of the other countries in the exhibit. Going down the exhibit, looking across each row in turn, England (with its assessment conducted in 2022 as noted by the bowtie, ∞) had lower average achievement than Singapore, Hong Kong SAR, and the Russian Federation but higher achievement than the rest of the other countries. Next, Finland, Poland, Chinese Taipei, and Sweden had lower average reading achievement than the top four countries, but these four countries did not have different average achievement from each other and both Finland and Poland had higher estimated average reading achievement than each of the other countries.

Exhibit 1.3 presents average reading achievement and scale score distributions for all 57 countries and 8 benchmarking entities that participated in PIRLS 2021. Once again, the countries are presented in order of average achievement from highest to lowest. The countries with delayed testing and older students are highlighted in pink. Comparing back to Exhibits 1.1 and 1.2 that indicated Singapore through Sweden as the eight countries with relatively higher achievement than most of each of the other participating countries, it can be seen that these eight countries have been joined by five of the 14 countries with older students.

Despite not being able to identify the impact of the delayed assessment, it is clear that the students in these five countries are very capable readers. Could this perhaps be a sign of recovery from the impact of COVID-19 in these countries? Unfortunately, PIRLS has no way of isolating the effects that delaying the assessment of the fourth grade cohort over the summer until the beginning of fifth grade may have had on the reading achievement of these students, so ***direct comparisons with countries that assessed students at the end of fourth grade need to be made with great care.***

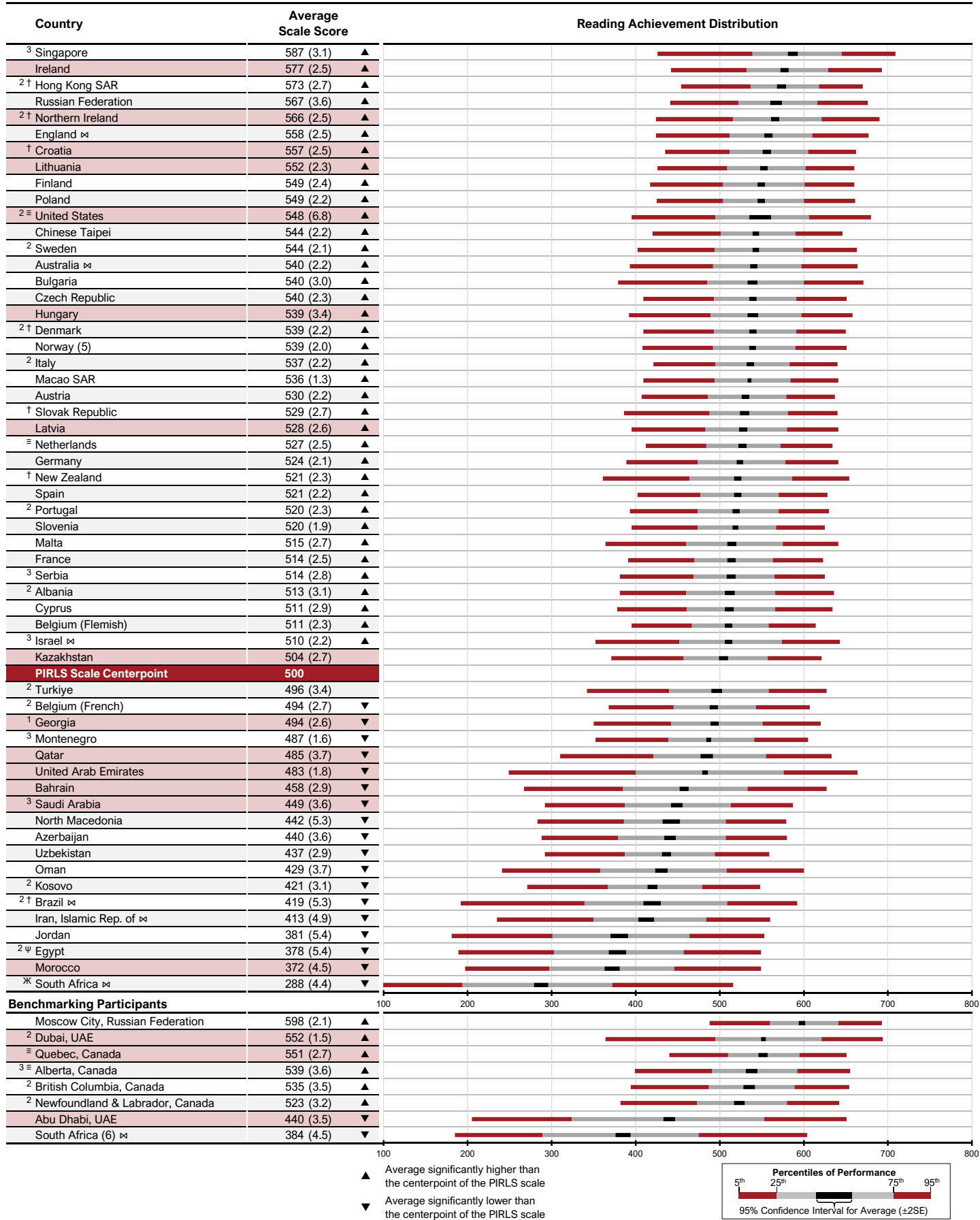


## Exhibit 1.3: Average Reading Achievement and Scale Score Distributions

## Assessed Fourth Grade Students at the End of the School Year

⌘ Assessed one year later than originally scheduled

■ Delayed Assessment of Fourth Grade Cohort at the Beginning of Fifth Grade



The PIRLS achievement scale was established in 2001 based on the combined achievement distribution of all countries that participated in PIRLS 2001. To provide a point of reference for country comparisons, the scale centerpoint of 500 was located at the mean of the combined achievement distribution. The units of the scale were chosen so that 100 scale score points corresponded to the standard deviation of the distribution.

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

See Appendix A.2 for population coverage notes 1, 2, and 3. See Appendix A.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

✱ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 25%.

Issues identified in Albania's data quality led to reduced comparability and framework coverage.

South Africa continued investigating its PIRLS 2021 results at the time of publication and will deal with the findings through its national report.

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021

Downloaded from <https://pirls2021.org/results>

## Average Achievement by Gender

Exhibit 1.4 presents average reading achievement by gender in the 43 countries and 5 benchmarking entities where the fourth grade cohort was assessed at the end of the school year. Exhibit 1.5 presents the results for all 57 countries and 8 benchmarking entities, including the countries with delayed assessments at the fifth grade (highlighted in pink). In each exhibit, the countries are presented according to the size of the gender gap in average reading achievement from little or no difference between girls and boys to a rather large difference favoring girls.

The results show a pervasive advantage in reading achievement at the fourth grade for girls compared to boys, and this was no different for the countries with delayed testing at the fifth grade. Fourth grade girls had higher average achievement than boys in almost all the countries, with an average advantage of 16 points across the 43 countries (Exhibit 1.4) and 18 points across the 57 countries (Exhibit 1.5). According to Exhibit 1.5, there was no significant difference in achievement between boys and girls in Spain, the Czech Republic, Israel, Malta, and Iran.

## Exhibit 1.4: Average Reading Achievement by Gender

Assessed Fourth Grade Students at the End of the School Year

⌘ Assessed one year later than originally scheduled

Country	Girls		Boys		Difference	Gender Difference	
	Percent of Students	Average Scale Score	Percent of Students	Average Scale Score		Girls Scored Higher	Boys Scored Higher
Spain	47 (0.9)	522 (2.6)	53 (0.9)	520 (2.5)	2 (2.6)		
Czech Republic	49 (0.9)	541 (2.8)	51 (0.9)	538 (2.7)	4 (3.0)		
<sup>3</sup> Israel ⌘	50 (1.1)	512 (2.8)	50 (1.1)	508 (2.6)	4 (3.0)		
<sup>2</sup> Portugal	48 (0.7)	523 (2.3)	52 (0.7)	517 (2.7)	6 (2.0)		
Malta	46 (3.4)	518 (3.6)	54 (3.4)	512 (3.2)	6 (4.1)		
<sup>2</sup> Italy	49 (0.6)	541 (2.4)	51 (0.6)	534 (2.4)	7 (2.0)		
Belgium (Flemish)	49 (0.8)	515 (2.6)	51 (0.8)	507 (2.8)	8 (2.8)		
<sup>2,1</sup> Hong Kong SAR	51 (1.0)	577 (2.8)	49 (1.0)	569 (3.3)	8 (2.8)		
<sup>†</sup> Slovak Republic	52 (0.9)	533 (2.9)	48 (0.9)	525 (3.2)	8 (2.8)		
Cyprus	51 (0.7)	515 (3.2)	49 (0.7)	506 (3.1)	9 (2.7)		
<sup>3</sup> Serbia	49 (0.8)	518 (3.4)	51 (0.8)	509 (3.2)	9 (3.5)		
Macao SAR	50 (0.7)	540 (1.5)	50 (0.7)	531 (1.9)	10 (2.2)		
England ⌘	51 (0.9)	562 (3.1)	49 (0.9)	553 (3.1)	10 (3.7)		
<sup>2</sup> Belgium (French)	49 (0.8)	499 (3.2)	51 (0.8)	489 (2.9)	10 (3.2)		
<sup>2,†</sup> Denmark	52 (0.6)	545 (2.5)	48 (0.6)	533 (2.8)	12 (3.0)		
<sup>≡</sup> Netherlands	50 (0.8)	534 (2.9)	50 (0.8)	521 (2.8)	13 (2.6)		
Chinese Taipei	48 (0.5)	551 (2.5)	52 (0.5)	537 (2.4)	13 (2.3)		
Russian Federation	49 (0.7)	574 (3.4)	51 (0.7)	561 (4.5)	13 (3.7)		
France	50 (0.7)	521 (3.0)	50 (0.7)	507 (2.7)	14 (2.6)		
Austria	49 (0.9)	537 (2.6)	51 (0.9)	523 (2.6)	14 (2.7)		
<sup>2</sup> Sweden	50 (0.9)	551 (2.5)	50 (0.9)	536 (2.3)	15 (2.3)		
Bulgaria	48 (0.9)	548 (3.0)	52 (0.9)	533 (4.0)	15 (3.9)		
Germany	49 (0.8)	532 (2.5)	51 (0.8)	516 (2.5)	15 (2.6)		
<sup>2,ψ</sup> Egypt	49 (1.5)	386 (5.7)	51 (1.5)	370 (6.4)	16 (5.6)		
Norway (5)	49 (0.7)	547 (2.3)	51 (0.7)	531 (2.4)	16 (2.4)		
Iran, Islamic Rep. of ⌘	46 (2.3)	422 (7.5)	54 (2.3)	405 (5.9)	17 (9.1)		
<sup>2</sup> Türkiye	49 (0.6)	505 (3.8)	51 (0.6)	488 (3.6)	17 (2.8)		
Australia ⌘	50 (0.7)	549 (2.5)	50 (0.7)	532 (2.8)	17 (3.0)		
Finland	50 (0.8)	558 (2.7)	50 (0.8)	541 (2.7)	18 (2.7)		
<sup>3</sup> Singapore	49 (0.6)	596 (3.0)	51 (0.6)	578 (3.7)	18 (2.7)		
Azerbaijan	47 (0.8)	450 (4.1)	53 (0.8)	432 (4.0)	18 (3.7)		
Slovenia	49 (0.7)	529 (2.1)	51 (0.7)	511 (2.3)	18 (2.3)		
<sup>†</sup> New Zealand	49 (0.7)	531 (2.9)	51 (0.7)	512 (2.7)	19 (3.2)		
<sup>3</sup> Montenegro	48 (0.6)	497 (2.0)	52 (0.6)	478 (2.2)	20 (2.6)		
Poland	47 (1.0)	560 (2.5)	53 (1.0)	540 (2.7)	20 (2.9)		
<sup>2</sup> Albania	49 (1.0)	523 (3.5)	51 (1.0)	503 (3.4)	20 (3.2)		
<sup>2</sup> Kosovo	51 (0.9)	431 (3.1)	49 (0.9)	410 (3.8)	21 (3.1)		
<sup>2,†</sup> Brazil ⌘	49 (1.1)	431 (6.0)	51 (1.1)	408 (6.1)	23 (6.0)		
Uzbekistan	48 (0.9)	449 (3.1)	52 (0.9)	425 (3.5)	24 (3.4)		
North Macedonia	51 (1.0)	454 (5.8)	49 (1.0)	429 (6.0)	25 (5.2)		
Oman	50 (0.6)	447 (4.2)	50 (0.6)	412 (4.1)	36 (3.8)		
Jordan	51 (2.6)	398 (6.8)	49 (2.6)	362 (7.9)	36 (10.3)		
<sup>⋈</sup> South Africa ⌘	49 (0.6)	317 (4.4)	51 (0.6)	260 (5.0)	57 (3.6)		
<b>International Average</b>	<b>49 (0.2)</b>	<b>509 (0.5)</b>	<b>51 (0.2)</b>	<b>493 (0.6)</b>			
<b>Benchmarking Participants</b>							
Moscow City, Russian Federation	49 (0.7)	604 (2.2)	51 (0.7)	593 (2.5)	11 (2.1)		
<sup>2</sup> British Columbia, Canada	49 (1.0)	542 (3.5)	51 (1.0)	529 (4.3)	13 (3.3)		
<sup>2</sup> Newfoundland & Labrador, Canada	50 (1.2)	530 (3.1)	50 (1.2)	516 (4.3)	14 (4.0)		
<sup>3,≡</sup> Alberta, Canada	49 (1.5)	546 (4.1)	51 (1.5)	531 (4.2)	15 (4.3)		
South Africa (6) ⌘	52 (0.7)	408 (4.5)	48 (0.7)	359 (5.2)	50 (3.9)		

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

See Appendix A.2 for population coverage notes 1, 2, and 3. See Appendix A.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

⋈ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 25%.

Issues identified in Albania's data quality led to reduced comparability and framework coverage.

■ Difference statistically significant  
■ Difference not statistically significant

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021

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## Exhibit 1.5: Average Reading Achievement by Gender

Assessed Fourth Grade Students at the End of the School Year

☒ Assessed one year later than originally scheduled

☐ Delayed Assessment of Fourth Grade Cohort at the Beginning of Fifth Grade

Country	Girls		Boys		Difference	Gender Difference	
	Percent of Students	Average Scale Score	Percent of Students	Average Scale Score		Girls Scored Higher	Boys Scored Higher
Spain	47 (0.9)	522 (2.6)	53 (0.9)	520 (2.5)	2 (2.6)		
Czech Republic	49 (0.9)	541 (2.8)	51 (0.9)	538 (2.7)	4 (3.0)		
<sup>3</sup> Israel ☒	50 (1.1)	512 (2.8)	50 (1.1)	508 (2.6)	4 (3.0)		
<sup>2</sup> Portugal	48 (0.7)	523 (2.3)	52 (0.7)	517 (2.7)	6 (2.0)		
Malta	46 (3.4)	518 (3.6)	54 (3.4)	512 (3.2)	6 (4.1)		
<sup>2</sup> Italy	49 (0.6)	541 (2.4)	51 (0.6)	534 (2.4)	7 (2.0)		
<sup>2=</sup> United States	50 (1.3)	551 (7.2)	50 (1.3)	544 (7.1)	7 (4.4)		
Belgium (Flemish)	49 (0.8)	515 (2.6)	51 (0.8)	507 (2.8)	8 (2.8)		
<sup>2†</sup> Hong Kong SAR	51 (1.0)	577 (2.8)	49 (1.0)	569 (3.3)	8 (2.8)		
<sup>†</sup> Slovak Republic	52 (0.9)	533 (2.9)	48 (0.9)	525 (3.2)	8 (2.8)		
Cyprus	51 (0.7)	515 (3.2)	49 (0.7)	506 (3.1)	9 (2.7)		
<sup>3</sup> Serbia	49 (0.8)	518 (3.4)	51 (0.8)	509 (3.2)	9 (3.5)		
Macao SAR	50 (0.7)	540 (1.5)	50 (0.7)	531 (1.9)	10 (2.2)		
England ☒	51 (0.9)	562 (3.1)	49 (0.9)	553 (3.1)	10 (3.7)		
<sup>2</sup> Belgium (French)	49 (0.8)	499 (3.2)	51 (0.8)	489 (2.9)	10 (3.2)		
<sup>†</sup> Croatia	48 (0.9)	562 (3.0)	52 (0.9)	551 (3.0)	10 (3.3)		
Ireland	49 (1.0)	583 (3.3)	51 (1.0)	572 (2.8)	11 (3.5)		
<sup>2†</sup> Denmark	52 (0.6)	545 (2.5)	48 (0.6)	533 (2.8)	12 (3.0)		
<sup>≡</sup> Netherlands	50 (0.8)	534 (2.9)	50 (0.8)	521 (2.8)	13 (2.6)		
Chinese Taipei	48 (0.5)	551 (2.5)	52 (0.5)	537 (2.4)	13 (2.3)		
Russian Federation	49 (0.7)	574 (3.4)	51 (0.7)	561 (4.5)	13 (3.7)		
France	50 (0.7)	521 (3.0)	50 (0.7)	507 (2.7)	14 (2.6)		
Austria	49 (0.9)	537 (2.6)	51 (0.9)	523 (2.6)	14 (2.7)		
Hungary	50 (1.0)	547 (3.7)	50 (1.0)	532 (4.0)	15 (3.4)		
<sup>2</sup> Sweden	50 (0.9)	551 (2.5)	50 (0.9)	536 (2.3)	15 (2.3)		
Bulgaria	48 (0.9)	548 (3.0)	52 (0.9)	533 (4.0)	15 (3.9)		
Germany	49 (0.8)	532 (2.5)	51 (0.8)	516 (2.5)	15 (2.6)		
<sup>2ψ</sup> Egypt	49 (1.5)	386 (5.7)	51 (1.5)	370 (6.4)	16 (5.6)		
Norway (5)	49 (0.7)	547 (2.3)	51 (0.7)	531 (2.4)	16 (2.4)		
Qatar	51 (1.6)	493 (4.2)	49 (1.6)	476 (4.8)	17 (5.0)		
Iran, Islamic Rep. of ☒	46 (2.3)	422 (7.5)	54 (2.3)	405 (5.9)	17 (9.1)		
<sup>2</sup> Turkiye	49 (0.6)	505 (3.8)	51 (0.6)	488 (3.6)	17 (2.8)		
Kazakhstan	50 (0.7)	512 (2.8)	50 (0.7)	495 (3.3)	17 (2.7)		
Australia ☒	50 (0.7)	549 (2.5)	50 (0.7)	532 (2.8)	17 (3.0)		
Finland	50 (0.8)	558 (2.7)	50 (0.8)	541 (2.7)	18 (2.7)		
<sup>3</sup> Singapore	49 (0.6)	596 (3.0)	51 (0.6)	578 (3.7)	18 (2.7)		
Azerbaijan	47 (0.8)	450 (4.1)	53 (0.8)	432 (4.0)	18 (3.7)		
Slovenia	49 (0.7)	529 (2.1)	51 (0.7)	511 (2.3)	18 (2.3)		
<sup>†</sup> New Zealand	49 (0.7)	531 (2.9)	51 (0.7)	512 (2.7)	19 (3.2)		
<sup>3</sup> Montenegro	48 (0.6)	497 (2.0)	52 (0.6)	478 (2.2)	20 (2.6)		
Poland	47 (1.0)	560 (2.5)	53 (1.0)	540 (2.7)	20 (2.9)		
<sup>2</sup> Albania	49 (1.0)	523 (3.5)	51 (1.0)	503 (3.4)	20 (3.2)		
<sup>2</sup> Kosovo	51 (0.9)	431 (3.1)	49 (0.9)	410 (3.8)	21 (3.1)		
Lithuania	50 (0.8)	563 (2.5)	50 (0.8)	542 (2.7)	21 (2.8)		
<sup>1</sup> Georgia	49 (0.8)	506 (2.8)	51 (0.8)	483 (3.1)	23 (2.9)		
<sup>2†</sup> Brazil ☒	49 (1.1)	431 (6.0)	51 (1.1)	408 (6.1)	23 (6.0)		
Uzbekistan	48 (0.9)	449 (3.1)	52 (0.9)	425 (3.5)	24 (3.4)		
<sup>2†</sup> Northern Ireland	52 (1.0)	578 (2.9)	48 (1.0)	553 (3.1)	24 (3.4)		
North Macedonia	51 (1.0)	454 (5.8)	49 (1.0)	429 (6.0)	25 (5.2)		
Latvia	49 (1.3)	542 (2.6)	51 (1.3)	514 (3.3)	27 (3.1)		
United Arab Emirates	51 (1.7)	497 (2.7)	49 (1.7)	468 (3.6)	29 (5.2)		
Morocco	48 (0.8)	390 (4.5)	52 (0.8)	356 (5.2)	33 (3.7)		
<sup>3</sup> Saudi Arabia	58 (1.5)	464 (5.0)	42 (1.5)	428 (4.9)	35 (6.8)		
Oman	50 (0.6)	447 (4.2)	50 (0.6)	412 (4.1)	36 (3.8)		
Jordan	51 (2.6)	398 (6.8)	49 (2.6)	362 (7.9)	36 (10.3)		
Bahrain	50 (1.1)	483 (3.9)	50 (1.1)	434 (3.2)	49 (4.5)		
<sup>✕</sup> South Africa ☒	49 (0.6)	317 (4.4)	51 (0.6)	260 (5.0)	57 (3.6)		
<b>International Average</b>	<b>50 (0.1)</b>	<b>512 (0.5)</b>	<b>50 (0.1)</b>	<b>494 (0.5)</b>			
<b>Benchmarking Participants</b>							
<sup>2</sup> Dubai, UAE	51 (2.6)	557 (2.7)	49 (2.6)	547 (2.5)	9 (4.3)		
<sup>≡</sup> Quebec, Canada	50 (0.9)	556 (3.3)	50 (0.9)	546 (2.9)	11 (3.0)		
Moscow City, Russian Federation	49 (0.7)	604 (2.2)	51 (0.7)	593 (2.5)	11 (2.1)		
<sup>2</sup> British Columbia, Canada	49 (1.0)	542 (3.5)	51 (1.0)	529 (4.3)	13 (3.3)		
<sup>2</sup> Newfoundland & Labrador, Canada	50 (1.2)	530 (3.1)	50 (1.2)	516 (4.3)	14 (4.0)		
<sup>3≡</sup> Alberta, Canada	49 (1.5)	546 (4.1)	51 (1.5)	531 (4.2)	15 (4.3)		
Abu Dhabi, UAE	51 (2.0)	457 (3.9)	49 (2.0)	422 (5.3)	35 (6.3)		
South Africa (6) ☒	52 (0.7)	408 (4.5)	48 (0.7)	359 (5.2)	50 (3.9)		

( ) Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

See Appendix A.2 for population coverage notes 1, 2, and 3. See Appendix A.5 for sampling guidelines and sampling participation notes †, ‡, and ≡.

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

✕ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 25%.

Issues identified in Albania's data quality led to reduced comparability and framework coverage.

■ Difference statistically significant

■ Difference not statistically significant