

## SECTION 6

# School Composition, Resources, and Climate

The data in this section about School Composition, Resources, and Climate were collected from school principals via the PIRLS 2021 School Questionnaire. In countries where the assessment of the fourth grade cohort was delayed to the beginning of the fifth year of schooling, typically the schools had both fourth and fifth grades and principals were asked to answer in terms of the fourth grade cohort from the previous school year. The TIMSS & PIRLS International Study Center conducted a series of analyses to establish that there was little or no discernable impact in the responses to the School Questionnaire due to COVID-19 or delayed testing.

Many of the PIRLS 2021 Context Questionnaire items were combined into scales measuring a single underlying latent construct related to reading achievement. This section provides results for three scales: *Instruction Affected by Reading Resource Shortages*, *School Emphasis on Academic Success*, and *School Discipline*.

PIRLS used item response theory (IRT) scaling methods, specifically the Rasch partial credit model (PCM), to place items on a scale and produce scale scores (see Chapter 15 in [Methods and Procedures: PIRLS 2021 Technical Report](#)). Each context questionnaire scale enabled students to be classified into regions corresponding to high, middle, and low values on the construct. The “About the Scale” tab associated with each exhibit contains the questionnaire items and describes how the three regions reported in the exhibit were defined in terms of combinations of response categories.

## Socioeconomic Background of the Student Body

PIRLS asked school principals to estimate the percentages of economically affluent and economically disadvantaged students in the school. As described in “About the Index,” the principals’ reports were combined to characterize schools as “more affluent,” “neither more affluent nor more disadvantaged,” or “more disadvantaged.”

For each country, Exhibit 6.1 presents the percentages of fourth grade students attending schools in each of the three categories of socioeconomic composition together with the students’ average reading achievement. On average, 43 percent of

students attended schools with relatively “more affluent” students than disadvantaged students and 25 percent attended schools with relatively “more disadvantaged” than affluent students. The remaining 32 percent of students attended schools classified as “neither more affluent nor more disadvantaged.”

Consistent with the results of considerable research, PIRLS 2021 found that students who attended schools with higher proportions of economically affluent students had higher reading achievement than students attending schools with lower proportions of economically affluent students. The average achievement was highest for students in the “more affluent” schools and lowest in the “more disadvantaged” schools (521 and 479, respectively). Average reading achievement for students attending “neither more affluent nor more disadvantaged” schools was in the middle—502 scale score points, on average.

## Exhibit 6.1: School Composition by Socioeconomic Background of the Student Body

Students' Results based on Principals' Reports

## 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	More Affluent		Neither More Affluent Nor More Disadvantaged		More Disadvantaged	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Kazakhstan	78 (3.0)	509 (3.0)	20 (3.1)	481 (5.8)	2 ~	~ ~
Lithuania s	78 (4.0)	555 (2.7)	18 (3.5)	532 (5.6)	4 (2.0)	525 (11.1)
Russian Federation	77 (2.8)	576 (3.7)	19 (2.8)	538 (7.1)	5 (1.7)	547 (17.8)
Uzbekistan r	73 (3.9)	442 (3.6)	24 (3.8)	430 (5.5)	3 (1.4)	426 (15.0)
Qatar	66 (3.5)	491 (5.0)	26 (3.5)	483 (7.9)	8 (1.9)	461 (12.1)
North Macedonia r	64 (5.3)	453 (5.9)	27 (4.3)	436 (14.0)	9 (3.8)	402 (21.2)
Sweden r	63 (4.0)	560 (3.7)	26 (4.1)	524 (4.6)	10 (2.5)	514 (8.5)
Croatia	61 (4.1)	561 (3.0)	33 (4.0)	555 (3.9)	6 (1.9)	521 (16.8)
Spain	61 (3.0)	530 (2.4)	28 (3.2)	515 (4.0)	11 (2.1)	483 (6.9)
Denmark	60 (3.9)	550 (2.8)	32 (3.8)	521 (4.3)	8 (1.9)	525 (6.5)
Netherlands r	58 (4.4)	536 (3.6)	24 (4.3)	518 (5.0)	19 (3.5)	506 (8.6)
Singapore	57 (0.0)	600 (3.6)	36 (0.0)	573 (5.5)	7 (0.0)	552 (16.6)
Saudi Arabia	57 (5.4)	456 (5.4)	25 (4.7)	441 (10.2)	18 (3.9)	450 (13.4)
United Arab Emirates s	56 (1.4)	519 (3.2)	27 (1.5)	510 (4.5)	17 (1.2)	479 (8.6)
Belgium (Flemish)	56 (4.3)	518 (3.1)	29 (4.5)	512 (3.8)	15 (3.4)	479 (5.7)
Hungary	53 (4.0)	563 (3.6)	27 (4.3)	528 (7.0)	20 (3.3)	488 (8.1)
Slovenia r	51 (4.8)	524 (3.0)	36 (4.7)	517 (3.1)	13 (3.0)	508 (6.1)
Kosovo s	50 (5.6)	423 (5.4)	34 (5.0)	415 (7.2)	16 (4.0)	412 (5.9)
Norway (5)	49 (4.1)	548 (2.7)	45 (4.0)	533 (2.4)	6 (2.1)	513 (12.8)
Czech Republic	48 (3.5)	550 (3.4)	43 (3.5)	535 (3.7)	10 (2.1)	506 (9.0)
Montenegro	47 (0.7)	492 (2.0)	34 (0.8)	486 (3.3)	19 (0.6)	475 (3.6)
Belgium (French) r	47 (3.3)	511 (3.7)	26 (3.8)	484 (5.2)	28 (3.4)	475 (5.1)
France	46 (3.5)	530 (3.1)	26 (3.6)	516 (6.0)	27 (3.2)	485 (4.6)
Cyprus	46 (4.0)	529 (4.3)	41 (3.9)	501 (3.4)	13 (2.2)	471 (5.2)
Israel ☒	44 (3.5)	537 (3.7)	26 (3.6)	520 (4.2)	30 (2.9)	465 (5.8)
Ireland	42 (4.8)	595 (3.3)	33 (4.3)	582 (3.9)	25 (3.2)	550 (4.9)
Oman	41 (3.7)	435 (5.9)	36 (3.5)	440 (6.9)	24 (3.4)	403 (8.5)
Australia ☒	40 (3.8)	562 (3.0)	34 (3.6)	540 (3.4)	26 (3.1)	508 (5.6)
Macao SAR	39 (0.1)	546 (1.9)	35 (0.1)	526 (1.7)	26 (0.1)	532 (2.1)
Northern Ireland r	38 (4.5)	587 (4.1)	31 (4.8)	564 (4.1)	31 (3.5)	543 (5.2)
New Zealand r	38 (3.7)	553 (3.9)	36 (3.8)	528 (4.7)	27 (3.3)	483 (6.5)
Serbia	37 (4.1)	524 (4.2)	43 (4.0)	513 (4.7)	20 (3.5)	494 (7.0)
Albania	37 (4.2)	527 (5.6)	30 (3.6)	516 (5.6)	33 (4.3)	495 (4.6)
Finland	37 (4.3)	561 (3.1)	52 (3.9)	548 (2.6)	11 (2.7)	518 (9.4)
Bulgaria	37 (4.1)	572 (4.1)	45 (4.1)	550 (4.1)	18 (2.7)	483 (9.5)
Italy	35 (4.0)	548 (3.4)	44 (3.8)	540 (3.1)	22 (3.0)	517 (6.3)
Malta	33 (5.4)	538 (4.2)	61 (5.4)	506 (4.0)	6 (2.6)	458 (13.3)
Brazil ☒ r	32 (4.7)	473 (9.6)	16 (3.9)	438 (14.5)	51 (5.0)	389 (11.5)
Georgia	32 (3.5)	502 (3.8)	36 (3.7)	490 (4.9)	32 (3.8)	489 (3.7)
Latvia	32 (4.0)	531 (5.3)	61 (4.1)	528 (3.3)	7 (1.8)	509 (12.5)
United States	32 (5.0)	587 (8.0)	12 (4.1)	555 (12.2)	56 (5.0)	524 (9.2)
Portugal	32 (2.9)	537 (3.6)	37 (3.4)	517 (2.8)	32 (3.3)	506 (4.5)
England ☒ r	32 (4.1)	578 (5.0)	25 (4.3)	565 (3.8)	43 (4.4)	539 (3.7)
Austria	30 (3.7)	543 (3.1)	43 (4.1)	537 (3.5)	26 (3.1)	504 (5.0)
Germany r	29 (3.6)	543 (3.9)	36 (3.4)	533 (3.5)	35 (2.8)	501 (4.4)
Iran, Islamic Rep. of ☒	29 (3.5)	458 (8.0)	21 (2.8)	422 (6.9)	50 (3.6)	382 (6.7)
Poland	29 (3.9)	555 (3.7)	65 (4.2)	547 (3.0)	7 (2.3)	537 (7.3)
Bahrain r	28 (2.6)	494 (8.4)	27 (2.9)	449 (8.5)	44 (3.1)	439 (5.1)
Turkiye	28 (3.3)	530 (5.3)	21 (3.3)	505 (7.3)	51 (3.4)	474 (4.6)
Hong Kong SAR	28 (3.5)	588 (4.3)	28 (4.1)	572 (6.7)	45 (4.3)	564 (4.1)
Egypt	27 (3.3)	410 (7.6)	25 (3.8)	389 (10.7)	49 (3.7)	359 (8.8)
Chinese Taipei	25 (3.2)	558 (3.2)	67 (3.7)	540 (2.4)	8 (2.1)	521 (9.3)
Azerbaijan r	13 (2.8)	410 (11.6)	22 (3.3)	450 (10.4)	64 (4.1)	444 (5.2)
Jordan r	13 (3.1)	423 (13.3)	33 (4.2)	385 (10.6)	55 (4.3)	367 (9.0)
South Africa ☒ r	11 (1.9)	420 (22.2)	16 (2.7)	331 (15.2)	73 (3.1)	264 (5.7)
Morocco r	7 (1.6)	452 (20.1)	7 (2.0)	402 (15.8)	86 (2.1)	363 (5.7)
<b>International Average</b>	<b>43 (0.5)</b>	<b>521 (0.9)</b>	<b>32 (0.5)</b>	<b>502 (0.9)</b>	<b>25 (0.4)</b>	<b>479 (1.2)</b>
Slovak Republic	- -	- -	- -	- -	- -	- -
<b>Benchmarking Participants</b>						
Quebec, Canada r	54 (5.6)	559 (4.1)	30 (4.7)	544 (4.9)	16 (3.7)	540 (6.2)
British Columbia, Canada r	49 (4.7)	549 (5.8)	41 (4.5)	535 (5.3)	11 (2.9)	508 (11.7)
Newfoundland & Labrador, Canada r	35 (6.8)	536 (5.9)	54 (7.1)	522 (3.8)	11 (3.1)	496 (7.8)
Alberta, Canada	32 (4.8)	561 (5.2)	47 (5.3)	538 (5.7)	21 (3.9)	516 (8.7)
Moscow City, Russian Federation	91 (2.1)	598 (2.2)	7 (2.0)	593 (6.4)	2 ~	~ ~
South Africa (6) ☒ r	11 (2.6)	465 (32.9)	15 (3.1)	447 (19.5)	74 (3.4)	360 (6.1)
Dubai, UAE s	65 (0.4)	581 (2.0)	30 (0.3)	560 (2.7)	5 (0.2)	527 (4.8)
Abu Dhabi, UAE r	57 (2.1)	478 (5.9)	27 (2.6)	467 (6.6)	16 (2.9)	470 (16.6)

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

An "r" indicates data are available for at least 70% but less than 85% of the students.

An "s" indicates data are available for at least 50% but less than 70% of the students.

A tilde (~) indicates insufficient data to report result. A dash (-) indicates comparable data not available.

**Exhibit 6.1: School Composition by Socioeconomic Background of the Student Body***Students' Results based on Principals' Reports*

About the Index				
<b>Approximately what percentage of students in your school have the following backgrounds?</b>				
	0 to 10%	11 to 25%	26 to 50%	More than 50%
	↓	↓	↓	↓
1) Come from economically disadvantaged homes -----	○	○	○	○
2) Come from economically affluent homes -----	○	○	○	○
<b>More Affluent:</b> Schools where more than 25% of the student body comes from economically affluent homes and not more than 25% from economically disadvantaged homes				
<b>More Disadvantaged:</b> Schools where more than 25% of the student body comes from economically disadvantaged homes and not more than 25% from economically affluent homes				
<b>Neither More Affluent Nor More Disadvantaged:</b> All other possible response combinations				

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021  
 Downloaded from <https://pirls2021.org/results>

## Students Begin Primary Grades with Literacy Skills

To provide information about students' foundation for formal reading instruction when they began school, PIRLS asked principals about how many students in the school have basic literacy skills (e.g., write the alphabet, write sentences) when they begin the primary grades—less than 25%, 25–50%, 51–75%, or more than 75%.

Exhibit 6.2 presents the average percentages of students attending schools with each of the four amounts of students having basic literacy skills when they begin primary school together with the students' average reading achievement. The country-by-country results are ordered from highest to lowest according to the percentage of students in schools with “more than 75%” of students beginning with basic literacy skills, and there was considerable variation across countries. This variation might be related to a number of factors, such as students' home SES, countries' policies on preprimary school attendance, or the age of entry to primary school (see Curriculum Questionnaire results in the [PIRLS 2021 Encyclopedia](#)).

On average across countries, 26 percent of students were in schools where “more than 75%” of students begin the primary grades with literacy skills, 19 percent were in schools where “51–75%” of students begin with literacy skills, 22 percent were in schools where “25–50%” of students begin with literacy skills, and 33 percent were in schools where “less than 25%” of students begin with literacy skills.

In general, average reading achievement was higher for fourth grade students in schools where greater percentages of students begin primary school equipped with basic literacy skills. Students who attended schools where “more than 75%” of students begin the primary grades with basic literacy skills had the highest average achievement (511), followed by “51–75%” with basic literacy skills (503). Students in schools where fewer students begin school with basic literacy skills—“25–50%” and “less than 25%”—had somewhat lower average reading achievement (495 and 491, respectively).

**Exhibit 6.2: Schools Where Students Begin the Primary Grades with Literacy Skills***Students' Results based on Principals' Reports***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	More than 75% Begin with Literacy Skills		51–75% Begin with Literacy Skills		25–50% Begin with Literacy Skills		Less than 25% Begin with Literacy Skills	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Singapore	89 (0.0)	590 (3.2)	6 (0.0)	565 (14.4)	3 (0.0)	541 (24.9)	2 ~	~ ~
Ireland	73 (3.3)	587 (2.5)	18 (3.4)	554 (6.1)	4 (1.9)	533 (7.3)	5 (2.0)	564 (24.7)
United Arab Emirates	54 (1.8)	539 (3.9)	17 (1.2)	501 (3.4)	10 (0.9)	444 (8.5)	18 (1.5)	458 (5.4)
Spain	51 (3.5)	527 (2.5)	29 (3.1)	519 (4.2)	9 (1.5)	515 (8.2)	11 (2.5)	500 (10.9)
Qatar	50 (3.8)	505 (6.1)	22 (3.0)	475 (5.6)	16 (2.6)	456 (9.4)	11 (2.4)	464 (10.8)
Denmark	49 (3.7)	542 (3.5)	19 (2.9)	536 (4.3)	16 (2.9)	533 (7.2)	15 (2.8)	535 (5.1)
Bahrain	49 (2.5)	489 (4.9)	19 (2.5)	444 (8.8)	20 (2.3)	413 (6.3)	12 (2.1)	434 (12.4)
United States	46 (5.8)	574 (7.3)	25 (4.0)	526 (19.8)	14 (4.2)	527 (7.8)	15 (4.8)	521 (14.4)
Chinese Taipei	46 (3.7)	549 (2.6)	22 (3.1)	542 (4.4)	20 (3.2)	534 (4.5)	12 (2.4)	545 (7.6)
Hong Kong SAR	44 (3.8)	579 (4.1)	31 (3.7)	572 (4.5)	18 (2.9)	557 (7.7)	8 (2.3)	577 (9.4)
Sweden	44 (4.6)	554 (4.9)	23 (4.0)	547 (7.2)	19 (3.9)	543 (7.9)	14 (3.0)	521 (9.1)
England ☒	42 (4.3)	572 (4.1)	38 (4.0)	553 (4.1)	11 (2.6)	540 (6.9)	9 (2.4)	542 (7.9)
Saudi Arabia	41 (4.7)	448 (6.3)	22 (3.7)	455 (9.7)	19 (3.9)	455 (10.7)	19 (3.7)	438 (10.4)
Oman	38 (3.6)	444 (5.9)	21 (3.1)	424 (8.5)	22 (2.9)	420 (9.2)	19 (2.8)	419 (8.4)
Kazakhstan	32 (3.3)	513 (4.9)	27 (3.4)	504 (5.2)	34 (3.5)	494 (4.3)	8 (1.9)	500 (6.5)
Malta	32 (7.3)	530 (8.9)	17 (4.9)	503 (8.6)	15 (5.2)	507 (9.1)	36 (7.1)	505 (9.0)
Latvia	31 (3.6)	534 (5.0)	33 (3.5)	532 (4.5)	26 (3.6)	519 (4.5)	10 (2.3)	515 (11.9)
France	30 (3.5)	525 (3.9)	28 (3.7)	520 (4.7)	16 (3.1)	501 (6.5)	26 (3.4)	508 (4.6)
Kosovo	30 (4.4)	417 (6.8)	21 (4.3)	428 (5.6)	29 (3.6)	430 (7.6)	20 (3.5)	404 (6.2)
Poland	29 (3.6)	552 (4.5)	19 (3.4)	546 (4.6)	29 (3.4)	552 (4.3)	23 (3.3)	544 (4.7)
Iran, Islamic Rep. of ☒	29 (3.9)	425 (8.2)	16 (2.7)	403 (11.5)	14 (3.4)	401 (17.7)	42 (3.7)	412 (8.5)
Albania	28 (3.4)	526 (6.2)	31 (4.2)	520 (5.8)	22 (3.5)	505 (6.2)	19 (3.6)	497 (7.2)
Cyprus	27 (3.5)	535 (5.7)	6 (1.9)	513 (14.3)	13 (3.4)	522 (6.1)	54 (4.7)	496 (3.5)
Lithuania	25 (5.4)	552 (4.8)	17 (3.5)	549 (6.6)	30 (4.3)	552 (4.4)	28 (4.8)	543 (6.0)
Finland	25 (3.5)	554 (3.2)	23 (3.6)	551 (4.6)	36 (3.4)	547 (4.4)	15 (2.8)	544 (6.3)
Uzbekistan	25 (3.8)	453 (5.1)	20 (3.2)	430 (5.1)	30 (3.8)	432 (5.6)	25 (3.4)	431 (5.0)
Macao SAR	25 (0.1)	537 (2.0)	22 (0.1)	532 (2.5)	15 (0.1)	525 (3.0)	38 (0.1)	540 (1.5)
Belgium (French)	25 (3.7)	505 (4.5)	27 (4.1)	492 (6.9)	21 (3.6)	490 (5.6)	27 (3.8)	489 (5.4)
Egypt	24 (3.2)	395 (7.6)	35 (3.9)	370 (7.8)	21 (3.4)	367 (12.4)	20 (2.9)	385 (16.1)
Netherlands	22 (4.5)	530 (5.1)	28 (4.7)	525 (5.8)	17 (4.2)	532 (8.9)	32 (5.6)	520 (6.7)
Bulgaria	21 (3.1)	564 (5.6)	23 (3.3)	558 (7.0)	27 (3.9)	542 (9.3)	29 (3.6)	508 (7.1)
Georgia	20 (2.5)	507 (4.4)	14 (2.5)	492 (7.0)	22 (3.0)	497 (5.6)	43 (3.8)	489 (4.0)
Australia ☒	20 (2.9)	556 (3.7)	21 (3.1)	542 (6.0)	19 (3.1)	541 (5.1)	40 (3.8)	532 (4.3)
Jordan	18 (2.8)	410 (11.9)	22 (3.4)	386 (12.7)	26 (4.1)	382 (14.1)	34 (3.8)	362 (8.9)
Belgium (Flemish)	17 (3.7)	518 (4.8)	17 (3.2)	528 (3.6)	10 (2.7)	506 (8.7)	56 (4.9)	504 (3.6)
Türkiye	16 (2.7)	505 (6.8)	5 (1.7)	497 (14.0)	6 (1.8)	474 (20.6)	73 (3.4)	496 (4.1)
Brazil ☒	16 (2.7)	475 (12.4)	17 (3.7)	442 (18.1)	32 (5.1)	383 (15.5)	35 (3.9)	415 (7.0)
Italy	16 (2.9)	542 (6.1)	11 (2.4)	538 (7.6)	22 (3.1)	542 (3.8)	52 (3.6)	534 (3.4)
Azerbaijan	16 (3.2)	421 (9.3)	32 (3.6)	437 (8.5)	36 (3.8)	451 (7.2)	16 (2.9)	439 (10.0)
Israel ☒	15 (2.8)	503 (10.3)	14 (2.9)	529 (9.6)	27 (3.7)	523 (5.3)	44 (3.9)	500 (6.6)
South Africa ☒	14 (2.5)	323 (19.9)	25 (3.5)	273 (9.9)	29 (4.1)	275 (10.8)	31 (3.1)	284 (9.1)
Portugal	14 (2.5)	534 (4.6)	6 (1.8)	522 (9.7)	21 (3.1)	522 (4.7)	59 (3.6)	515 (3.1)
North Macedonia	13 (3.1)	440 (14.0)	8 (2.1)	446 (13.0)	31 (4.4)	449 (9.0)	48 (4.6)	439 (9.0)
Montenegro	11 (0.2)	481 (3.4)	1 ~	~ ~	20 (0.6)	470 (3.4)	67 (0.6)	494 (2.2)
Russian Federation	11 (2.3)	601 (6.9)	28 (3.9)	574 (5.8)	32 (3.5)	567 (5.2)	29 (3.6)	548 (6.9)
Serbia	9 (2.3)	516 (12.2)	17 (3.5)	517 (8.3)	26 (3.7)	512 (5.4)	47 (4.4)	512 (4.4)
Croatia	9 (2.6)	561 (8.4)	23 (3.4)	563 (5.4)	42 (4.4)	555 (4.2)	26 (3.7)	553 (5.2)
Morocco	8 (1.9)	385 (17.9)	22 (3.3)	399 (14.8)	35 (3.5)	367 (6.7)	36 (3.3)	362 (7.0)
Slovak Republic	8 (2.1)	544 (8.0)	10 (2.6)	544 (5.8)	26 (3.6)	537 (4.4)	56 (3.6)	522 (4.3)
Slovenia	6 (2.3)	531 (5.8)	6 (2.1)	508 (7.6)	41 (5.0)	521 (2.9)	47 (4.5)	517 (3.1)
Hungary	6 (2.2)	538 (24.4)	4 (1.7)	553 (21.9)	10 (3.0)	549 (11.5)	80 (3.7)	536 (3.8)
Germany	4 (1.5)	537 (8.5)	6 (1.4)	536 (8.5)	13 (2.4)	544 (6.5)	78 (3.0)	518 (2.8)
Norway (5)	4 (1.7)	538 (13.0)	6 (1.8)	543 (10.2)	28 (3.8)	543 (3.6)	62 (4.3)	537 (2.9)
Czech Republic	2 ~	~ ~	7 (1.9)	544 (11.2)	24 (3.3)	541 (5.9)	67 (3.6)	538 (2.7)
Austria	2 ~	~ ~	3 (1.3)	550 (10.5)	16 (3.4)	547 (7.2)	80 (3.6)	525 (2.3)
<b>International Average</b>	<b>26 (0.4)</b>	<b>511 (1.1)</b>	<b>19 (0.4)</b>	<b>503 (1.3)</b>	<b>22 (0.5)</b>	<b>495 (1.2)</b>	<b>33 (0.5)</b>	<b>491 (1.1)</b>
New Zealand	--	--	--	--	--	--	--	--
Northern Ireland	--	--	--	--	--	--	--	--
<b>Benchmarking Participants</b>								
Dubai, UAE	71 (0.3)	571 (1.8)	17 (0.3)	578 (4.1)	5 (0.1)	545 (7.9)	7 (0.1)	575 (3.6)
Newfoundland & Labrador, Canada	57 (5.2)	527 (4.8)	19 (4.2)	522 (9.2)	14 (3.9)	532 (4.8)	10 (3.0)	498 (7.3)
British Columbia, Canada	50 (5.0)	552 (4.9)	26 (4.1)	528 (5.4)	16 (3.8)	531 (9.0)	8 (2.6)	497 (13.9)
Abu Dhabi, UAE	39 (2.1)	537 (5.3)	16 (1.8)	458 (5.4)	16 (1.2)	404 (10.8)	28 (1.2)	427 (5.6)
Alberta, Canada	37 (5.1)	545 (6.5)	28 (4.9)	542 (8.4)	14 (3.5)	533 (10.7)	22 (4.6)	536 (8.5)
Quebec, Canada	36 (5.3)	559 (5.5)	17 (3.6)	553 (6.5)	18 (3.8)	537 (5.9)	28 (4.7)	552 (4.6)
Moscow City, Russian Federation	24 (3.4)	607 (4.9)	32 (3.3)	598 (3.3)	34 (3.8)	595 (3.2)	10 (2.2)	590 (4.0)
South Africa (6) ☒	19 (3.4)	419 (16.9)	24 (3.5)	365 (12.5)	24 (3.8)	382 (12.8)	33 (3.7)	374 (9.8)

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

An "r" indicates data are available for at least 70% but less than 85% of the students.

An "s" indicates data are available for at least 50% but less than 70% of the students.

A tilde (~) indicates insufficient data to report result. A dash (-) indicates comparable data not available.

**Exhibit 6.2: Schools Where Students Begin the Primary Grades with Literacy Skills***Students' Results based on Principals' Reports***About the Item**

**About how many of the students in your school have basic literacy skills (e.g., can write letters of the alphabet, write sentences) when they begin the first grade of primary/elementary school?**

- Less than 25% ----
- 25-50% ----
- 51-75% ----
- More than 75% ----

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021  
Downloaded from <https://pirls2021.org/results>

## Instruction Affected by Resource Shortages

The PIRLS 2021 *Instruction Affected by Reading Resources* scale summarizes principals' reports about how much two kinds of resource shortages affect instruction: general school resources and resources specific to reading instruction. Students were categorized according to three levels of resource shortages experienced by their school—"not affected," "somewhat affected," and "affected a lot" (see "About the Scale").

In Exhibit 6.3, countries are ordered by the percentage of fourth grade students in schools "not affected" by resource shortages. There was a positive association between the availability of resources and fourth grade students' reading achievement. On average, 31 percent of students attended schools "not affected" by resource shortages, and they had the highest average reading achievement (519). Average reading achievement was comparatively lower for the 61 percent of students in schools "somewhat affected" by resource shortages (498) and even lower for the 8 percent of students in schools "affected a lot" by resource shortages (472).



## Exhibit 6.3: Instruction Affected by Reading Resource Shortages – Principals' Reports

Students' Results based on Principals' Reports

## 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	Not Affected		Somewhat Affected		Affected A Lot		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Bulgaria	83 (3.1)	544 (3.4)	15 (3.0)	516 (14.3)	2 ~	~ ~	12.4 (0.15)
Netherlands	r 73 (4.4)	525 (4.1)	27 (4.4)	529 (4.8)	1 ~	~ ~	11.7 (0.13)
Australia ☒	65 (3.8)	545 (3.1)	33 (3.6)	532 (4.6)	1 ~	~ ~	11.5 (0.18)
Poland	57 (4.2)	553 (3.0)	42 (4.2)	544 (3.4)	1 ~	~ ~	11.3 (0.15)
Singapore	56 (0.0)	586 (4.2)	31 (0.0)	589 (5.5)	13 (0.0)	589 (8.7)	10.9 (0.00)
Denmark	55 (4.1)	538 (3.3)	43 (4.0)	540 (3.7)	2 ~	~ ~	11.4 (0.12)
Sweden	r 55 (5.3)	547 (4.3)	43 (5.2)	545 (5.8)	2 ~	~ ~	11.2 (0.18)
Norway (5)	54 (4.1)	540 (2.4)	46 (4.1)	537 (3.3)	0 ~	~ ~	11.3 (0.14)
United Arab Emirates	s 53 (2.2)	530 (3.5)	35 (2.0)	473 (4.0)	12 (1.3)	506 (5.3)	10.8 (0.13)
Qatar	53 (3.4)	496 (5.4)	25 (2.7)	474 (7.2)	22 (3.1)	474 (10.6)	10.5 (0.28)
United States	53 (7.2)	558 (7.7)	46 (7.3)	534 (11.8)	2 ~	~ ~	11.2 (0.29)
New Zealand	r 52 (4.3)	532 (5.2)	45 (4.4)	511 (5.1)	2 ~	~ ~	11.2 (0.14)
Czech Republic	51 (4.0)	542 (3.9)	49 (4.0)	537 (2.9)	0 ~	~ ~	11.1 (0.11)
Finland	50 (4.1)	559 (2.5)	49 (4.2)	539 (3.5)	1 ~	~ ~	11.2 (0.14)
Croatia	42 (4.4)	559 (3.3)	58 (4.4)	556 (3.7)	0 ~	~ ~	10.6 (0.14)
Kazakhstan	42 (3.2)	506 (3.6)	41 (3.5)	500 (5.3)	17 (2.5)	505 (4.9)	10.1 (0.19)
England ☒	42 (4.2)	563 (4.1)	58 (4.2)	556 (3.5)	1 ~	~ ~	10.8 (0.14)
Cyprus	41 (4.5)	519 (4.6)	57 (4.5)	504 (3.4)	2 ~	~ ~	10.7 (0.17)
Lithuania	s 41 (4.9)	549 (3.9)	59 (4.8)	549 (3.1)	1 ~	~ ~	10.6 (0.15)
Bahrain	39 (2.6)	477 (6.2)	41 (2.6)	443 (4.9)	21 (2.4)	456 (8.4)	9.8 (0.15)
Spain	38 (3.0)	531 (3.3)	61 (3.2)	515 (2.9)	2 ~	~ ~	10.6 (0.10)
Hungary	36 (3.9)	539 (5.8)	63 (4.0)	538 (4.7)	1 ~	~ ~	10.6 (0.15)
Austria	36 (3.8)	535 (3.9)	64 (3.8)	527 (2.6)	0 ~	~ ~	10.7 (0.10)
Georgia	35 (3.7)	500 (3.7)	62 (3.7)	492 (3.4)	3 (1.1)	482 (22.2)	10.6 (0.14)
Slovak Republic	35 (3.1)	540 (4.5)	65 (3.2)	524 (3.4)	1 ~	~ ~	10.5 (0.09)
Slovenia	r 34 (4.0)	517 (3.7)	66 (4.0)	520 (2.5)	0 ~	~ ~	10.8 (0.10)
Russian Federation	34 (3.2)	582 (5.0)	59 (3.8)	560 (4.4)	7 (2.0)	554 (12.3)	10.2 (0.16)
Israel ☒	33 (3.9)	526 (5.9)	58 (4.2)	510 (4.3)	9 (2.1)	462 (17.2)	10.0 (0.15)
Malta	31 (5.9)	525 (7.8)	60 (5.5)	507 (5.5)	9 (3.8)	503 (15.6)	10.0 (0.26)
Uzbekistan	30 (3.8)	441 (4.5)	49 (4.2)	433 (4.2)	21 (3.5)	439 (6.0)	9.5 (0.22)
Serbia	30 (3.7)	524 (4.4)	70 (3.8)	509 (4.1)	1 ~	~ ~	10.3 (0.13)
Ireland	27 (3.9)	586 (5.0)	72 (4.0)	574 (3.0)	1 ~	~ ~	10.2 (0.14)
Brazil ☒	26 (2.7)	481 (9.3)	73 (2.9)	398 (7.4)	1 ~	~ ~	10.1 (0.12)
Belgium (Flemish)	25 (3.5)	516 (5.7)	75 (3.5)	508 (2.8)	0 ~	~ ~	10.4 (0.10)
Latvia	24 (3.5)	526 (5.3)	75 (3.5)	528 (3.0)	1 ~	~ ~	10.3 (0.13)
Oman	22 (2.8)	437 (9.3)	59 (3.4)	423 (5.4)	19 (3.1)	439 (6.9)	9.2 (0.18)
Montenegro	21 (1.0)	484 (4.6)	77 (1.0)	488 (1.6)	2 ~	~ ~	9.7 (0.03)
Germany	r 21 (3.0)	535 (5.5)	79 (3.0)	520 (2.8)	0 ~	~ ~	10.3 (0.09)
France	19 (3.2)	527 (6.7)	79 (3.3)	513 (2.5)	2 ~	~ ~	10.0 (0.10)
Northern Ireland	18 (3.4)	558 (5.7)	81 (3.4)	568 (3.4)	1 ~	~ ~	10.0 (0.12)
Portugal	17 (2.6)	534 (8.1)	83 (2.6)	517 (2.4)	0 ~	~ ~	10.1 (0.09)
Iran, Islamic Rep. of ☒	14 (3.2)	432 (9.7)	73 (3.8)	406 (6.3)	13 (2.4)	431 (8.8)	9.1 (0.20)
Azerbaijan	13 (2.9)	436 (10.5)	66 (4.1)	439 (4.7)	20 (3.3)	445 (10.0)	8.6 (0.18)
Saudi Arabia	13 (3.1)	458 (10.3)	69 (4.3)	444 (4.8)	18 (3.7)	462 (12.4)	8.6 (0.19)
Albania	13 (2.3)	535 (11.4)	66 (3.9)	507 (3.6)	21 (3.4)	519 (7.4)	8.8 (0.16)
Egypt	11 (1.9)	407 (13.7)	81 (2.7)	375 (6.4)	7 (2.3)	375 (14.0)	9.2 (0.13)
Chinese Taipei	11 (2.1)	549 (4.8)	74 (3.2)	544 (2.7)	15 (2.6)	541 (5.0)	8.6 (0.13)
Belgium (French)	11 (2.6)	500 (9.4)	89 (2.6)	494 (3.0)	0 ~	~ ~	9.7 (0.10)
Italy	11 (2.7)	546 (10.3)	89 (2.7)	536 (2.1)	0 ~	~ ~	9.7 (0.09)
South Africa ☒	8 (1.8)	444 (24.7)	89 (2.0)	272 (5.1)	3 (1.1)	295 (30.0)	9.2 (0.09)
Macao SAR	8 (0.1)	546 (3.2)	55 (0.1)	534 (1.6)	37 (0.1)	536 (1.6)	7.6 (0.00)
Türkiye	7 (1.7)	513 (8.4)	59 (3.8)	495 (4.9)	34 (3.8)	496 (6.8)	7.8 (0.15)
Kosovo	5 (1.5)	424 (15.1)	74 (3.2)	420 (3.9)	21 (3.1)	422 (5.7)	8.3 (0.14)
Hong Kong SAR	2 ~	~ ~	66 (3.8)	573 (3.6)	31 (3.8)	572 (4.5)	7.6 (0.14)
Jordan	2 ~	~ ~	80 (3.0)	375 (6.3)	18 (2.8)	403 (12.1)	8.2 (0.12)
Morocco	2 ~	~ ~	91 (2.5)	367 (4.4)	7 (2.3)	449 (31.9)	8.8 (0.10)
North Macedonia	0 ~	~ ~	84 (3.6)	443 (6.3)	16 (3.6)	440 (12.7)	8.0 (0.11)
<b>International Average</b>	<b>31 (0.5)</b>	<b>519 (1.0)</b>	<b>61 (0.5)</b>	<b>498 (0.6)</b>	<b>8 (0.3)</b>	<b>472 (2.7)</b>	
<b>Benchmarking Participants</b>							
Dubai, UAE	s 67 (0.3)	577 (1.8)	24 (0.3)	558 (2.9)	9 (0.2)	552 (4.8)	11.6 (0.02)
Alberta, Canada	62 (5.3)	545 (5.0)	37 (5.3)	535 (6.2)	1 ~	~ ~	11.8 (0.23)
Moscow City, Russian Federation	62 (3.7)	597 (2.4)	34 (3.5)	598 (3.5)	4 (1.5)	623 (11.9)	11.8 (0.20)
Quebec, Canada	59 (5.0)	553 (3.3)	41 (5.0)	550 (5.1)	0 ~	~ ~	11.5 (0.18)
Newfoundland & Labrador, Canada	r 51 (8.5)	525 (5.7)	46 (8.1)	520 (4.0)	4 (2.5)	558 (15.0)	11.2 (0.28)
British Columbia, Canada	r 46 (4.8)	546 (5.7)	53 (4.6)	532 (4.9)	2 ~	~ ~	10.9 (0.17)
Abu Dhabi, UAE	r 45 (3.5)	502 (6.3)	44 (2.2)	436 (5.8)	11 (2.4)	481 (19.1)	10.4 (0.26)
South Africa (6) ☒	8 (2.1)	512 (28.5)	86 (2.2)	368 (5.5)	6 (2.1)	399 (28.2)	9.2 (0.15)

This PIRLS context questionnaire scale was established in 2011 based on the combined response distribution of countries that participated in PIRLS 2011. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of the scale were chosen so that 2 scale score points corresponded to the standard deviation of the distribution.

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

An "r" indicates data are available for at least 70% but less than 85% of the students.

An "s" indicates data are available for at least 50% but less than 70% of the students.

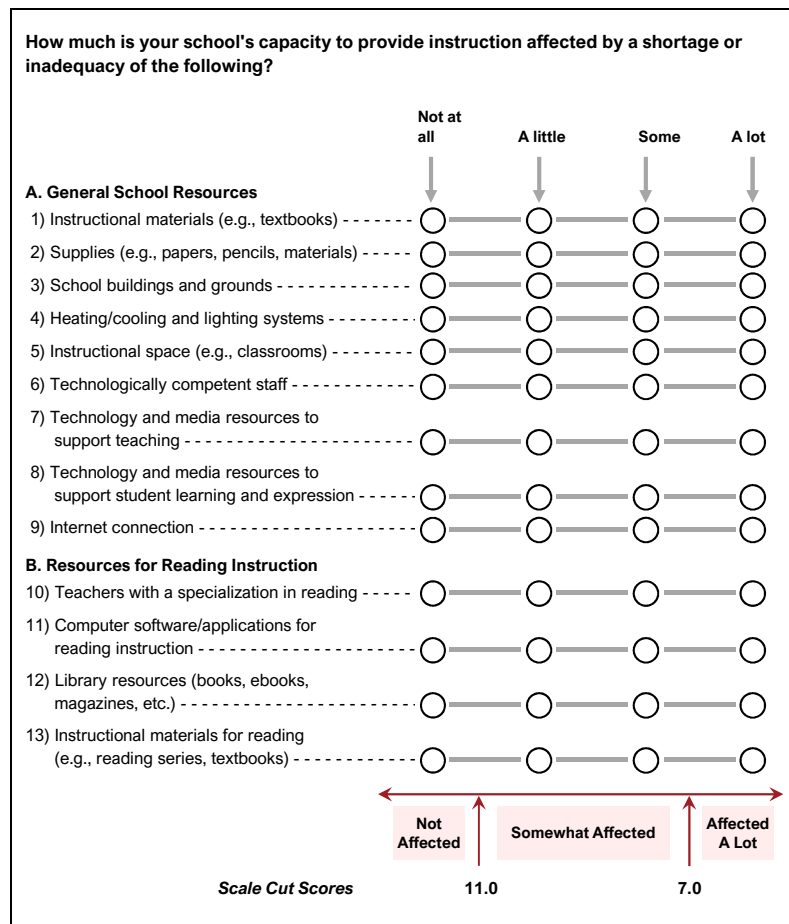
A tilde (~) indicates insufficient data to report result.

**Exhibit 6.3: Instruction Affected by Reading Resource Shortages – Principals' Reports**

Students' Results based on Principals' Reports

**About the Scale**

Students were scored according to their principals' responses regarding thirteen school and classroom resources on the *Instruction Affected by Reading Resource Shortages* scale. Cut scores divide the scale into three categories. Students in schools where instruction was **Not Affected** by resource shortages had a score at or above the cut score corresponding to their principals reporting that shortages affected instruction "not at all" for seven of the thirteen resources and "a little" for the other six, on average. Students in schools where instruction was **Affected A Lot** had a score at or below the cut score corresponding to their principals reporting that shortages affected instruction "a lot" for seven of the thirteen resources and "some" for the other six, on average. All other students attended schools where instruction was **Somewhat Affected** by resource shortages.



SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021  
 Downloaded from <https://pirls2021.org/results>

## School Emphasis on Academic Success

The *School Emphasis on Academic Success* scale was administered to school principals of fourth grade students to collect information about their schools' expectations regarding academic achievement. Based on the IRT scaling, students were placed into three categories according to their principals' responses regarding 12 aspects of the school climate oriented toward academics (see the description in "About the Scale"). Consistent with previous PIRLS results, principals in PIRLS 2021 reported a high degree of emphasis on academics in their schools, so the three categories are described as "very high," "high," and "medium" emphasis.

Exhibit 6.4 shows countries' results, ordered according to the percentage of students attending schools in the "very high emphasis" category from highest to lowest. Across countries, on average, 10 percent of fourth grade students attended schools where the principal reported a "very high emphasis" on academic success, 58 percent attended schools with a "high emphasis," and 32 percent attended schools with a "medium emphasis." Students who attended schools with a higher emphasis on academic success had higher average reading achievement. Students in the "very high emphasis" category had the highest average achievement (525), followed by the "high emphasis" category (509). Students in the "medium emphasis" category had the lowest average reading achievement (486).

## Exhibit 6.4: School Emphasis on Academic Success – Principals' Reports

Students' Results based on Principals' Reports

## 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	Very High Emphasis		High Emphasis		Medium Emphasis		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Saudi Arabia	43 (5.0)	459 (5.7)	51 (4.9)	442 (5.7)	5 (2.1)	435 (23.4)	12.5 (0.24)
Bahrain	37 (2.9)	474 (5.3)	55 (3.1)	451 (5.1)	8 (1.6)	440 (14.8)	12.3 (0.13)
Qatar	34 (3.3)	509 (6.2)	57 (3.5)	476 (5.5)	9 (1.9)	455 (7.9)	12.1 (0.14)
Oman	31 (3.5)	441 (6.9)	61 (3.6)	425 (5.1)	8 (1.9)	415 (13.7)	11.9 (0.15)
United Arab Emirates	27 (1.3)	545 (6.0)	57 (1.5)	512 (2.8)	16 (0.7)	430 (5.8)	11.6 (0.07)
Ireland	20 (3.3)	593 (4.7)	59 (4.0)	581 (3.5)	21 (2.7)	551 (4.6)	11.2 (0.17)
New Zealand	18 (3.2)	562 (5.4)	55 (4.6)	523 (4.8)	26 (3.7)	489 (6.7)	10.9 (0.18)
Kazakhstan	17 (2.9)	512 (5.7)	71 (3.4)	501 (3.3)	12 (2.3)	504 (9.5)	11.2 (0.13)
North Macedonia	16 (3.4)	447 (16.9)	56 (4.7)	450 (5.6)	28 (4.2)	426 (10.0)	10.7 (0.20)
Northern Ireland	16 (3.4)	585 (5.7)	70 (4.5)	568 (3.2)	14 (3.1)	538 (7.8)	11.0 (0.16)
Iran, Islamic Rep. of ☒	15 (3.1)	445 (8.8)	53 (4.0)	413 (7.6)	32 (3.7)	397 (8.3)	10.4 (0.22)
Kosovo	14 (2.6)	417 (8.9)	63 (4.3)	427 (4.3)	22 (3.8)	404 (8.6)	10.7 (0.18)
United States	13 (4.9)	587 (15.2)	45 (6.9)	560 (7.0)	41 (5.6)	521 (13.0)	10.1 (0.26)
Australia ☒	13 (2.6)	566 (4.5)	58 (3.9)	545 (3.2)	29 (3.1)	520 (4.3)	10.6 (0.14)
Chinese Taipei	12 (2.6)	564 (4.0)	60 (3.7)	546 (2.2)	28 (3.4)	531 (4.3)	10.5 (0.16)
Turkiye	12 (2.2)	539 (4.9)	51 (3.7)	509 (3.5)	37 (3.3)	464 (6.2)	10.2 (0.15)
England ☒	12 (2.6)	580 (7.0)	61 (4.0)	563 (3.4)	26 (3.4)	539 (4.0)	10.6 (0.15)
Albania	12 (2.2)	552 (6.4)	66 (3.5)	514 (4.1)	22 (3.2)	492 (7.0)	10.7 (0.13)
Singapore	11 (0.0)	615 (6.1)	73 (0.0)	589 (3.7)	16 (0.0)	559 (8.3)	10.9 (0.00)
Cyprus	10 (3.3)	541 (7.9)	51 (3.8)	518 (4.2)	38 (3.9)	493 (4.1)	10.0 (0.18)
Spain	10 (1.8)	529 (5.6)	68 (3.2)	524 (2.8)	22 (2.8)	506 (5.9)	10.7 (0.11)
Serbia	10 (2.5)	514 (10.1)	68 (3.9)	519 (3.3)	22 (3.6)	495 (6.7)	10.7 (0.16)
Uzbekistan	10 (2.3)	449 (8.8)	71 (3.5)	437 (3.3)	19 (2.9)	431 (6.2)	10.8 (0.13)
Jordan	10 (2.6)	405 (15.6)	55 (3.5)	396 (6.8)	35 (3.3)	351 (11.0)	10.1 (0.21)
Macao SAR	9 (0.0)	562 (2.6)	51 (0.1)	542 (1.5)	39 (0.1)	521 (1.9)	10.1 (0.00)
Lithuania	9 (4.3)	555 (10.9)	77 (4.4)	550 (2.4)	13 (2.4)	536 (6.7)	10.7 (0.15)
Bulgaria	9 (2.3)	577 (7.7)	58 (4.2)	554 (4.8)	33 (3.6)	505 (7.9)	10.2 (0.14)
Poland	9 (2.4)	558 (4.9)	56 (4.1)	553 (2.8)	35 (3.9)	540 (3.6)	10.2 (0.16)
Israel ☒	8 (2.1)	509 (11.9)	66 (3.7)	516 (3.9)	25 (3.3)	498 (7.4)	10.4 (0.15)
Egypt	8 (2.0)	404 (21.1)	61 (4.0)	383 (6.5)	31 (3.7)	363 (10.1)	10.1 (0.14)
Austria	8 (2.3)	539 (10.4)	62 (4.2)	535 (2.9)	30 (3.7)	516 (3.8)	10.4 (0.13)
Denmark	7 (2.1)	562 (9.6)	61 (3.7)	543 (3.1)	32 (3.4)	525 (3.9)	10.2 (0.14)
Azerbaijan	7 (2.3)	437 (18.4)	60 (3.9)	442 (5.4)	33 (3.8)	438 (7.3)	10.0 (0.15)
Finland	7 (2.3)	569 (8.5)	70 (3.5)	552 (2.5)	23 (3.2)	536 (4.4)	10.4 (0.14)
Sweden	7 (2.4)	583 (8.7)	50 (4.3)	555 (4.3)	44 (4.2)	529 (4.3)	9.7 (0.18)
Portugal	6 (1.7)	550 (11.4)	51 (3.5)	526 (2.6)	43 (3.3)	508 (3.7)	9.7 (0.13)
Croatia	5 (2.0)	560 (6.2)	73 (4.1)	558 (3.1)	22 (3.8)	553 (6.5)	10.4 (0.14)
South Africa ☒	5 (1.4)	392 (29.4)	37 (3.7)	302 (9.7)	58 (3.8)	268 (6.5)	9.2 (0.14)
France	5 (1.3)	526 (8.9)	66 (3.4)	522 (3.0)	29 (3.4)	495 (4.0)	10.2 (0.13)
Hong Kong SAR	5 (1.8)	582 (10.0)	53 (3.7)	578 (3.7)	42 (3.8)	565 (4.5)	9.7 (0.15)
Montenegro	5 (0.7)	492 (7.5)	75 (0.8)	487 (1.9)	20 (0.3)	486 (3.0)	10.4 (0.03)
Brazil ☒	4 (1.6)	474 (28.9)	51 (4.8)	439 (6.8)	45 (5.0)	391 (10.9)	9.5 (0.19)
Georgia	4 (1.4)	517 (9.7)	57 (4.1)	496 (3.5)	39 (4.1)	492 (4.4)	9.8 (0.14)
Germany	4 (1.4)	546 (7.5)	61 (3.2)	534 (3.0)	35 (3.1)	503 (3.8)	9.7 (0.10)
Belgium (French)	4 (1.6)	525 (7.9)	44 (3.8)	507 (4.5)	53 (3.7)	483 (3.5)	9.3 (0.14)
Hungary	3 (1.5)	584 (18.4)	50 (4.5)	551 (4.7)	47 (4.3)	521 (5.9)	9.4 (0.12)
Slovak Republic	3 (1.3)	564 (11.2)	50 (3.8)	541 (3.2)	47 (3.7)	516 (5.0)	9.4 (0.12)
Russian Federation	3 (1.1)	585 (18.1)	63 (3.3)	573 (3.8)	34 (2.9)	555 (6.4)	9.9 (0.11)
Netherlands	3 (1.8)	553 (10.4)	42 (5.4)	532 (4.3)	56 (5.0)	520 (4.9)	9.3 (0.16)
Latvia	3 (1.3)	500 (42.1)	54 (3.8)	536 (3.1)	43 (3.8)	518 (3.8)	9.5 (0.09)
Malta	2 ~	~	75 (5.3)	521 (3.7)	23 (5.2)	486 (6.3)	10.5 (0.17)
Norway (5)	1 ~	~	51 (4.2)	548 (2.4)	48 (4.3)	530 (2.9)	9.4 (0.13)
Morocco	1 ~	~	33 (3.4)	392 (8.7)	66 (3.3)	364 (5.9)	8.5 (0.12)
Belgium (Flemish)	1 ~	~	45 (4.6)	519 (3.4)	55 (4.7)	502 (3.3)	9.0 (0.14)
Czech Republic	1 ~	~	53 (4.0)	550 (2.9)	46 (4.0)	527 (3.2)	9.5 (0.10)
Italy	1 ~	~	45 (3.6)	545 (3.5)	54 (3.5)	532 (2.8)	9.1 (0.11)
Slovenia	0 ~	~	46 (4.6)	522 (3.1)	54 (4.6)	517 (2.8)	9.3 (0.12)
<b>International Average</b>	<b>10 (0.3)</b>	<b>525 (1.8)</b>	<b>58 (0.5)</b>	<b>509 (0.6)</b>	<b>32 (0.5)</b>	<b>486 (1.0)</b>	
<b>Benchmarking Participants</b>							
Dubai, UAE	49 (0.4)	592 (1.6)	38 (0.4)	560 (3.2)	12 (0.3)	512 (2.9)	13.0 (0.02)
Abu Dhabi, UAE	24 (3.2)	519 (8.5)	52 (3.6)	491 (7.0)	24 (1.7)	385 (10.0)	11.0 (0.14)
Alberta, Canada	18 (4.7)	554 (6.4)	65 (5.4)	540 (5.4)	16 (4.1)	530 (9.5)	11.3 (0.25)
Newfoundland & Labrador, Canada	12 (4.5)	564 (8.1)	73 (5.0)	521 (3.5)	16 (2.9)	509 (4.8)	10.8 (0.23)
British Columbia, Canada	11 (2.5)	571 (6.8)	55 (4.7)	544 (4.9)	34 (4.5)	519 (6.0)	10.2 (0.19)
Quebec, Canada	7 (2.5)	571 (4.3)	65 (4.5)	555 (3.6)	28 (4.4)	539 (3.7)	10.3 (0.16)
South Africa (6) ☒	6 (2.2)	399 (33.0)	27 (3.3)	409 (13.1)	67 (3.8)	370 (6.5)	8.8 (0.19)
Moscow City, Russian Federation	4 (1.0)	605 (6.5)	80 (2.8)	599 (2.4)	17 (2.8)	593 (3.8)	10.5 (0.09)

This PIRLS context questionnaire scale was established in 2011 based on the combined response distribution of countries that participated in PIRLS 2011. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of the scale were chosen so that 2 scale score points corresponded to the standard deviation of the distribution.

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

An "r" indicates data are available for at least 70% but less than 85% of the students.

An "s" indicates data are available for at least 50% but less than 70% of the students.

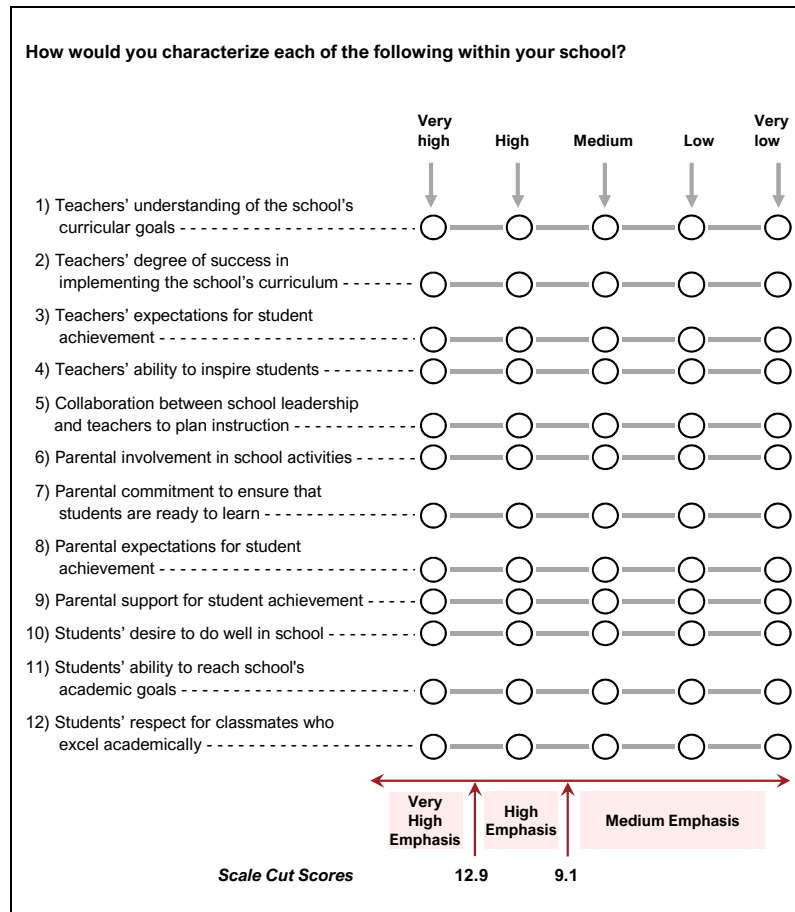
A tilde (~) indicates insufficient data to report result.

**Exhibit 6.4: School Emphasis on Academic Success – Principals' Reports**

Students' Results based on Principals' Reports

**About the Scale**

Students were scored according to their principals' responses characterizing twelve aspects on the *School Emphasis on Academic Success* scale. Cut scores divide the scale into three categories. Students in schools with a **Very High Emphasis** on academic success had a score at or above the cut score corresponding to their principals characterizing six of the twelve aspects as "very high" and the other six as "high," on average. Students in schools with a **Medium Emphasis** on academic success had a score at or below the cut score corresponding to their principals characterizing six of the twelve aspects as "medium" and the other six as "high," on average. All other students attended schools with a **High Emphasis** on academic success.



SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021  
 Downloaded from <https://pirls2021.org/results>

## School Discipline

Exhibit 6.5 presents the results of the PIRLS 2021 *School Discipline* scale. The PIRLS 2021 School Questionnaire asked school principals for their perceptions about the extent that ten discipline, disorder, and bullying behaviors were problems among fourth grade students in their school. In countries where the assessment of the fourth grade cohort was delayed to the beginning of the fifth year of schooling, principals were asked to answer in terms of the fourth grade cohort from the previous school year. As detailed in the “About the Scale,” IRT was used to create scale scores and students were categorized as attending three types of schools regarding discipline and safety, those with “hardly any problems,” “minor problems,” or “moderate to severe problems.”

In Exhibit 6.5, the countries’ results are presented according to the percentage of students in schools where principals reported “hardly any problems” with discipline and safety, from highest to lowest. On average, across countries, the majority of fourth grade students (64%) attended schools with “hardly any problems,” and 27 percent attended schools with “minor problems.” Although there was considerable variation across countries, only 9 percent of students, on average, attended schools where principals reported “moderate to severe problems” with discipline and safety.

Considerable research has shown that a higher degree of school safety is associated with higher student achievement. Consistent with this research and previous PIRLS assessments, PIRLS 2021 found that average reading achievement was relatively higher for students in schools with “hardly any problems” than for students in schools with “minor problems” (510 vs. 493). Average reading achievement for students who attended schools having “moderate to severe problems” with school discipline was 465, substantially lower (28 points) than for students in schools with “minor problems.”

**Exhibit 6.5: School Discipline – Principals' Reports**

Students' Results based on Principals' Reports

**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	Hardly Any Problems		Minor Problems		Moderate to Severe Problems		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Hong Kong SAR	93 (2.2)	574 (2.7)	7 (2.2)	550 (11.7)	0 ~	~ ~	12.0 (0.11)
Malta	87 (4.8)	515 (3.3)	12 (4.4)	496 (14.3)	2 ~	~ ~	11.4 (0.17)
Bahrain	85 (2.1)	462 (3.6)	9 (1.7)	445 (11.9)	6 (1.4)	426 (12.0)	11.1 (0.10)
Qatar	84 (2.3)	487 (3.9)	12 (2.5)	473 (14.8)	4 (1.5)	486 (7.8)	11.1 (0.10)
Northern Ireland	84 (3.3)	571 (3.1)	15 (3.2)	540 (6.6)	1 ~	~ ~	11.1 (0.11)
Montenegro	83 (0.3)	489 (1.7)	14 (0.3)	486 (4.8)	2 ~	~ ~	11.4 (0.02)
Albania	82 (3.3)	515 (3.5)	11 (2.7)	502 (7.1)	8 (1.8)	512 (15.6)	11.1 (0.16)
Czech Republic	81 (2.9)	542 (2.7)	17 (2.7)	526 (6.2)	1 ~	~ ~	10.8 (0.10)
Chinese Taipei	81 (3.1)	545 (2.4)	18 (3.0)	541 (3.8)	1 ~	~ ~	11.2 (0.13)
Singapore	81 (0.0)	589 (3.5)	19 (0.0)	580 (8.1)	0 ~	~ ~	11.1 (0.00)
Spain	80 (2.8)	524 (2.6)	14 (2.6)	504 (8.3)	5 (1.1)	511 (9.3)	11.0 (0.11)
Bulgaria	80 (2.7)	549 (3.4)	15 (2.8)	515 (11.3)	4 (1.7)	458 (34.0)	11.0 (0.12)
Serbia	80 (3.2)	516 (3.1)	20 (3.2)	506 (7.8)	0 ~	~ ~	11.0 (0.13)
United Arab Emirates	s 79 (1.9)	523 (2.5)	14 (1.5)	449 (8.8)	7 (1.3)	474 (10.8)	10.8 (0.10)
Ireland	79 (3.0)	584 (2.8)	20 (3.2)	552 (6.7)	2 ~	~ ~	10.9 (0.10)
Macao SAR	77 (0.1)	539 (1.4)	13 (0.1)	531 (3.0)	9 (0.1)	515 (3.1)	10.9 (0.00)
Croatia	77 (3.8)	559 (2.7)	20 (3.7)	554 (7.0)	3 (1.4)	521 (24.7)	10.7 (0.13)
Kazakhstan	77 (2.8)	504 (2.8)	9 (2.1)	512 (11.9)	13 (2.4)	496 (7.4)	10.8 (0.16)
Georgia	77 (2.8)	494 (2.7)	15 (2.4)	495 (6.3)	7 (2.0)	500 (12.5)	10.7 (0.14)
North Macedonia	77 (4.0)	451 (5.2)	18 (4.1)	422 (12.4)	5 (2.2)	396 (25.4)	11.1 (0.17)
England ☒	76 (3.2)	564 (3.0)	22 (3.1)	542 (4.8)	2 ~	~ ~	10.5 (0.11)
Lithuania	s 75 (4.4)	550 (2.9)	24 (4.4)	547 (5.5)	1 ~	~ ~	10.7 (0.13)
Slovak Republic	74 (3.5)	536 (2.9)	22 (3.3)	515 (8.4)	4 (1.6)	504 (24.5)	10.6 (0.12)
Brazil ☒	72 (4.4)	427 (5.8)	25 (4.3)	397 (16.2)	3 (1.0)	411 (26.3)	10.7 (0.16)
United States	69 (5.6)	566 (6.7)	30 (5.5)	506 (13.8)	1 ~	~ ~	10.3 (0.17)
Australia ☒	69 (3.6)	548 (2.8)	29 (3.6)	525 (4.2)	2 ~	~ ~	10.4 (0.10)
Azerbaijan	69 (3.6)	436 (5.3)	14 (2.8)	469 (11.0)	18 (3.1)	431 (10.0)	10.1 (0.20)
Finland	68 (3.5)	554 (2.5)	30 (3.4)	541 (4.6)	2 ~	~ ~	10.3 (0.10)
Russian Federation	68 (3.4)	568 (4.5)	30 (3.4)	568 (5.2)	2 ~	~ ~	10.4 (0.10)
Slovenia	r 65 (4.3)	519 (2.6)	31 (3.9)	517 (3.8)	4 (2.3)	535 (6.9)	10.3 (0.14)
Iran, Islamic Rep. of ☒	65 (3.5)	421 (6.5)	28 (3.1)	395 (9.3)	7 (1.6)	410 (13.8)	10.3 (0.14)
Cyprus	62 (4.5)	518 (4.0)	34 (4.6)	498 (4.2)	4 (1.6)	502 (13.1)	10.0 (0.13)
Latvia	62 (4.1)	529 (3.2)	37 (4.0)	525 (4.5)	1 ~	~ ~	10.2 (0.10)
Denmark	62 (3.7)	543 (3.3)	36 (3.6)	532 (3.6)	3 (1.1)	514 (20.0)	10.2 (0.10)
Poland	61 (3.8)	551 (2.7)	37 (3.8)	546 (3.9)	2 ~	~ ~	10.1 (0.10)
Belgium (French)	59 (4.1)	503 (3.8)	37 (4.2)	485 (4.9)	4 (1.4)	467 (8.1)	10.2 (0.11)
France	59 (4.0)	523 (3.6)	37 (3.9)	505 (3.9)	4 (1.5)	466 (17.6)	10.2 (0.13)
Hungary	58 (4.2)	554 (3.2)	36 (4.1)	522 (6.7)	7 (2.6)	492 (29.0)	10.0 (0.14)
Uzbekistan	58 (4.1)	435 (3.6)	7 (2.2)	455 (7.3)	35 (4.0)	438 (5.2)	9.3 (0.28)
Belgium (Flemish)	57 (4.8)	517 (3.3)	37 (4.7)	506 (3.9)	6 (2.2)	477 (9.7)	10.2 (0.14)
Portugal	55 (3.9)	525 (3.1)	37 (3.8)	514 (3.1)	8 (2.2)	510 (12.6)	10.0 (0.15)
Oman	55 (3.5)	438 (5.1)	22 (2.8)	416 (6.6)	23 (3.0)	423 (7.6)	9.5 (0.19)
New Zealand	r 54 (4.2)	540 (4.3)	40 (4.5)	503 (5.6)	6 (2.0)	470 (10.1)	10.1 (0.12)
Austria	53 (4.0)	534 (3.5)	42 (4.1)	524 (3.1)	4 (1.7)	529 (15.6)	10.0 (0.11)
Italy	53 (4.0)	543 (2.8)	31 (3.5)	535 (3.8)	16 (2.8)	522 (6.3)	9.6 (0.16)
Norway (5)	49 (4.2)	544 (2.9)	48 (4.3)	535 (3.1)	3 (1.4)	534 (5.8)	9.8 (0.10)
Kosovo	48 (5.2)	426 (5.2)	32 (4.7)	417 (5.3)	20 (3.2)	413 (9.8)	9.4 (0.19)
Israel ☒	46 (4.0)	519 (5.3)	43 (3.6)	506 (4.8)	11 (2.6)	489 (10.3)	9.5 (0.14)
Saudi Arabia	45 (4.7)	463 (5.7)	13 (3.1)	430 (9.5)	41 (4.9)	439 (6.8)	9.0 (0.28)
Turkiye	43 (4.0)	504 (5.0)	27 (3.8)	492 (7.7)	30 (3.8)	489 (7.0)	8.9 (0.21)
Netherlands	r 43 (5.3)	529 (4.2)	50 (5.6)	524 (5.3)	7 (2.4)	518 (6.5)	9.5 (0.13)
Germany	r 42 (3.5)	538 (3.9)	52 (3.6)	516 (3.2)	6 (1.6)	492 (9.7)	9.6 (0.09)
Sweden	r 42 (5.0)	555 (4.9)	58 (5.0)	540 (3.7)	0 ~	~ ~	9.6 (0.12)
Jordan	30 (3.3)	399 (10.0)	41 (3.7)	363 (9.3)	30 (3.8)	386 (11.0)	8.6 (0.15)
South Africa ☒	30 (4.0)	347 (13.6)	55 (4.0)	268 (6.9)	15 (2.2)	240 (8.5)	9.0 (0.09)
Egypt	24 (3.0)	406 (10.2)	40 (3.5)	362 (7.2)	37 (3.4)	378 (9.7)	8.3 (0.17)
Morocco	16 (2.7)	367 (9.4)	23 (3.1)	378 (9.6)	61 (3.4)	373 (6.1)	7.2 (0.16)
<b>International Average</b>	<b>64 (0.5)</b>	<b>510 (0.6)</b>	<b>27 (0.5)</b>	<b>493 (1.0)</b>	<b>9 (0.3)</b>	<b>465 (2.3)</b>	
<b>Benchmarking Participants</b>							
Dubai, UAE	s 89 (0.3)	575 (1.6)	9 (0.3)	542 (5.7)	2 ~	~ ~	11.7 (0.01)
Abu Dhabi, UAE	r 76 (1.7)	501 (3.8)	17 (1.2)	376 (10.6)	7 (1.7)	417 (19.5)	10.7 (0.08)
Newfoundland & Labrador, Canada	r 73 (6.1)	529 (4.3)	25 (6.0)	510 (6.5)	1 ~	~ ~	10.6 (0.18)
Quebec, Canada	71 (5.0)	555 (3.1)	27 (5.0)	546 (5.4)	2 ~	~ ~	10.4 (0.14)
Alberta, Canada	70 (5.6)	548 (4.5)	28 (5.4)	525 (7.1)	1 ~	~ ~	10.7 (0.18)
British Columbia, Canada	r 67 (4.9)	545 (4.5)	32 (4.8)	523 (6.8)	2 ~	~ ~	10.4 (0.15)
Moscow City, Russian Federation	63 (3.8)	599 (2.5)	37 (3.8)	597 (3.5)	0 ~	~ ~	10.3 (0.08)
South Africa (6) ☒	29 (3.6)	425 (12.3)	53 (4.3)	377 (7.9)	19 (3.2)	340 (9.6)	8.9 (0.11)

This PIRLS context questionnaire scale was established in 2011 based on the combined response distribution of countries that participated in PIRLS 2011. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of the scale were chosen so that 2 scale score points corresponded to the standard deviation of the distribution.

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

An "r" indicates data are available for at least 70% but less than 85% of the students.

An "s" indicates data are available for at least 50% but less than 70% of the students.

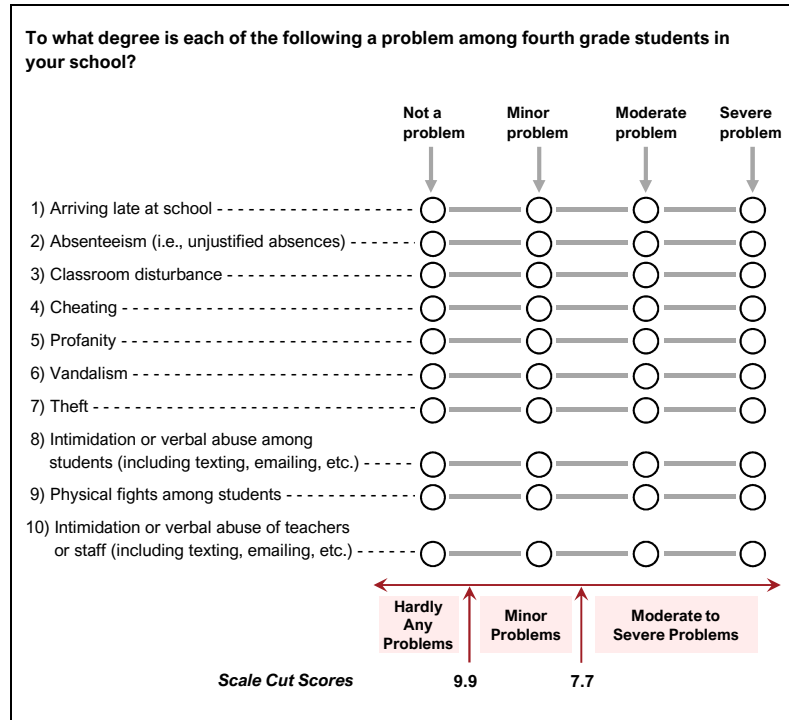
A tilde (~) indicates insufficient data to report result.

**Exhibit 6.5: School Discipline – Principals’ Reports**

Students’ Results based on Principals’ Reports

**About the Scale**

Students were scored according to their principals’ reports regarding ten potential problems on the *School Discipline* scale. Cut scores divide the scale into three categories. Students in schools with **Hardly Any Problems** had a score at or above the cut score corresponding to their principals reporting that five of the ten issues are a “not a problem” and the other five are a “minor problem,” on average. Students in schools with **Moderate to Severe Problems** had a score at or below the cut score corresponding to their principals reporting that five of the ten issues are a “moderate problem” and the other five are a “minor problem,” on average. All other students were in schools with **Minor Problems**.



SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2021  
Downloaded from <https://pirls2021.org/results>