

## School Climate

Students with the highest reading achievement typically attend schools that emphasize academic success, as indicated by rigorous curricular goals, effective teachers, students that desire to do well, and parental support. In contrast, schools with discipline and safety problems are not conducive to high achievement. Students that attended schools with disorderly environments and reported more frequent bullying had much lower achievement than their counterparts in safe and orderly schools.

The school's educational values are reflected by the teachers, school leadership, the students themselves, and their parents. A school with a positive atmosphere toward high achievement and a rigorous academic program can overcome resource shortages and encourage students toward excellent performance. By contrast, a school with more disciplinary problems is not conducive to higher student achievement. When students are fearful and worried about their safety, for example, it is difficult to focus on academics. Chapter 6 presents the PIRLS 2011 results about positive and negative aspects of the atmosphere in schools around the world.

## Schools Emphasize Academic Success

Studies of academic optimism show that a positive school atmosphere emphasizing academic achievement can even overcome socioeconomic disadvantages (McGuigan \& Hoy, 2006). There are several dimensions of academic optimism, including a school communicating its academic emphasis through clear and rigorous academic goals. However, because individuals are the actors within schools, the effect on achievement is greatest when there is a collective influence. This includes a school administration and teachers that support and trust in students' achievement. In addition to making it clear that academic success is important, principals and teachers need to emphasize it can be achieved. Parents' support for their children's learning also contributes to a schools' collective efficacy or belief that the school's academic goals can be implemented.

## School Emphasis on Academic Success

The PIRLS 2011 School Emphasis on Academic Success scale characterizes five aspects of academic optimism:

- Teachers' understanding of the school's curricular goals;
- Teachers' degree of success in implementing the school's curriculum;
- Teachers' expectations for student achievement;
- Parental support for student achievement; and
- Students' desire to do well in school.

This set of questions was given to both students' principals and teachers, with the respective responses used to create scales.

Exhibit 6.1 shows the principals' reports on the School Emphasis on Academic Success scale. As might be anticipated, principals had very positive attitudes about the emphasis on academics in their schools, so the three regions of the scale have been described as Very High, High, and Medium. Students were scored according to their principals' characterization of their school in terms of the five aspects. Students in schools with Very High Emphasis on academic success had principals characterizing three of the five aspects as "very high" and the other two as "high," on average. Students in Medium Emphasis schools had principals characterizing three of the five aspects as "medium" and the other two as "high," on average. All other students attended schools with a High Emphasis on academic success.

On average, across the fourth grade countries, 9 percent of the students attended schools where the principal reported a Very High Emphasis on academic success, 59 percent a school with a High Emphasis, and 32 percent a school with a Medium Emphasis. Although the results were not entirely consistent from country to country, internationally at the fourth grade, on average, there was a direct correspondence between average reading achievement and principals' reports, with higher emphasis on academic success related to higher average reading achievement. The results were similar for the sixth grade, benchmarking, and prePIRLS participants.

Exhibit 6.2 shows the teachers' reports on the School Emphasis on Academic Success scale, which were remarkably similar to those of the principals. That is, across countries at the fourth grade, 9 percent of the students, on average, were schools with Very High Emphasis on academic success, 60 percent in High Emphasis schools, and 31 percent in Medium Emphasis schools. Also, with each reported decrease in academic emphasis, the students had progressively lower average reading achievement. Finally, the results also were similar for the sixth grade, benchmarking, and prePIRLS participants.

Reported by Principals
Students were scored according to their principals' responses characterizing five aspects on the School Emphasis on Academic Success scale. Students in
schools where their principals reported a Very High Emphasis on academic success had a score on the scale of at least 13.0 , which corresponds to their
principals characterizing three of the five aspects as "very high" and the other two as "high," on average. Students in schools with a Medium Emphasis on
academic success had a score no higher than 8.8 , which corresponds to their principals characterizing three of the five aspects as "medium" and the other two as "high," on average. All other students attended schools with a High Emphasis on academic success.

| 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 |  |
| Northern Ireland | 33 (4.2) | 570 (4.9) | 60 (4.3) | 556 (2.9) | 7 (2.5) | 529 (9.8) | 11.9 (0.19) |
| Qatar | 31 (2.9) | 447 (9.3) | 54 (3.2) | 424 (5.3) | 15 (2.4) | 383 (8.4) | 11.5 (0.14) |
| Ireland | 28 (3.7) | 563 (3.6) | 67 (3.8) | 549 (3.3) | 5 (1.8) | 526 (7.4) | 11.8 (0.16) |
| England | 27 (4.3) | 562 (5.9) | 57 (4.6) | 552 (4.4) | 16 (2.8) | 528 (5.8) | 11.3 (0.20) |
| New Zealand | 25 (3.4) | 555 (4.6) | 63 (4.2) | 531 (3.7) | 12 (2.2) | 508 (9.3) | 11.2 (0.14) |
| United States | 24 (2.1) | 578 (3.8) | 59 (2.6) | 555 (2.4) | 17 (2.2) | 538 (4.8) | 11.2 (0.12) |
| United Arab Emirates | 21 (1.6) | 470 (5.6) | 61 (2.0) | 433 (3.2) | 18 (1.7) | 400 (5.7) | 11.0 (0.09) |
| Chinese Taipei | 17 (3.0) | 555 (4.5) | 71 (3.7) | 554 (2.4) | 12 (2.5) | 544 (4.8) | 11.2 (0.15) |
| Australia | 16 (3.0) | 554 (6.6) | 64 (3.8) | 531 (3.1) | 21 (3.0) | 498 (5.3) | 10.8 (0.14) |
| Israel | 15 (3.0) | 564 (7.8) | 72 (3.7) | 545 (4.5) | 14 (2.9) | 499 (11.9) | 11.0 (0.14) |
| Malta | 13 (0.1) | 488 (4.3) | 69 (0.1) | 488 (1.7) | 18 (0.1) | 431 (3.8) | 11.0 (0.01) |
| Canada | 12 (1.7) | 570 (3.8) | 67 (2.5) | 549 (2.4) | 21 (2.0) | 535 (2.8) | 10.5 (0.09) |
| Indonesia | 9 (2.6) | 433 (9.6) | 56 (5.2) | 428 (5.9) | 34 (5.1) | 429 (7.7) | 10.3 (0.18) |
| Iran, Islamic Rep. of | 9 (2.0) | 466 (12.8) | 70 (3.4) | 464 (3.9) | 21 (2.7) | 433 (5.7) | 10.5 (0.12) |
| Saudi Arabia | 9 (2.7) | 473 (14.3) | 59 (4.1) | 439 (4.9) | 32 (3.4) | 402 (8.6) | 10.1 (0.18) |
| Croatia | 9 (2.5) | 567 (7.2) | 70 (3.8) | 553 (2.0) | 21 (3.4) | 546 (4.3) | 10.6 (0.14) |
| Sweden | 9 (2.7) | 553 (6.8) | 59 (4.8) | 543 (3.0) | 32 (5.0) | 535 (3.8) | 10.2 (0.17) |
| Oman | 9 (1.8) | 394 (9.5) | 73 (3.0) | 388 (3.4) | 18 (2.2) | 365 (6.9) | 10.5 (0.10) |
| Austria | 8 (2.1) | 535 (6.9) | 75 (4.4) | 530 (2.1) | 17 (3.9) | 520 (5.1) | 10.2 (0.14) |
| Singapore | 8 (0.0) | 594 (10.9) | 62 (0.0) | 573 (4.4) | 31 (0.0) | 549 (6.4) | 10.1 (0.00) |
| Denmark | 6 (1.7) | 568 (7.2) | 64 (3.3) | 557 (2.1) | 30 (3.4) | 544 (3.6) | 10.1 (0.13) |
| Finland | 6 (1.9) | 576 (5.7) | 71 (4.2) | 571 (2.1) | 24 (4.2) | 559 (3.8) | 10.2 (0.16) |
| Lithuania | 6 (2.0) | 532 (12.2) | 65 (3.6) | 535 (2.7) | 29 (3.4) | 514 (4.8) | 9.9 (0.13) |
| Bulgaria | 5 (1.7) | 568 (19.5) | 53 (4.1) | 544 (4.7) | 42 (4.2) | 512 (6.5) | 9.5 (0.15) |
| Colombia | 5 (1.7) | 516 (15.0) | 46 (4.7) | 453 (6.5) | 50 (4.5) | 436 (5.5) | 9.2 (0.20) |
| Portugal | 4 (1.9) | 551 (8.6) | 64 (4.8) | 546 (3.9) | 31 (4.4) | 530 (4.8) | 9.9 (0.13) |
| Trinidad and Tobago | 4 (1.7) | 524 (12.9) | 44 (4.0) | 486 (7.1) | 52 (4.1) | 454 (5.0) | 9.0 (0.15) |
| Azerbaijan | 4 (1.7) | 481 (8.0) | 44 (3.8) | 463 (6.7) | 53 (3.8) | 459 (4.2) | 9.1 (0.15) |
| Romania | 4 (1.6) | 543 (21.1) | 55 (4.1) | 515 (5.5) | 41 (4.1) | 481 (7.9) | 9.3 (0.15) |
| Poland | 3 (1.6) | 559 (22.8) | 70 (3.5) | 529 (2.5) | 26 (3.7) | 515 (3.9) | 9.6 (0.15) |
| Morocco | 3 (1.0) | 401 (15.6) | 24 (2.8) | 339 (8.1) | 73 (2.7) | 300 (4.9) | 7.9 (0.13) |
| Spain | 3 (1.3) | 556 (8.2) | 58 (4.0) | 520 (3.3) | 39 (3.8) | 501 (4.6) | 9.5 (0.11) |
| France | 2 (1.2) | ~ ~ | 64 (4.3) | 525 (3.0) | 34 (4.3) | 510 (5.1) | 9.7 (0.13) |
| Slovenia | 2 (0.8) | $\sim \sim$ | 63 (2.9) | 530 (2.4) | 35 (3.1) | 530 (3.3) | 9.5 (0.11) |
| Russian Federation | 2 (0.9) | $\sim \sim$ | 50 (4.4) | 576 (3.8) | 48 (4.3) | 562 (3.5) | 9.1 (0.11) |
| Hong Kong SAR | 1 (0.9) | $\sim \sim$ | 60 (4.5) | 570 (2.7) | 39 (4.6) | 570 (4.7) | 9.6 (0.15) |
| Italy | 1 (0.8) | $\sim \sim$ | 52 (3.7) | 541 (3.2) | 46 (3.7) | 544 (3.2) | 9.3 (0.10) |
| Hungary | 1 (0.9) | $\sim \sim$ | 49 (3.9) | 559 (3.6) | 50 (3.9) | 521 (4.8) | 8.9 (0.13) |
| Czech Republic | 1 (0.9) | $\sim \sim$ | 45 (3.9) | 547 (3.5) | 54 (4.0) | 544 (2.6) | 8.8 (0.13) |
| Norway | 1 (0.1) | $\sim \sim$ | 64 (4.7) | 510 (2.8) | 34 (4.7) | 500 (2.7) | 9.7 (0.13) |
| Germany | 1 (0.8) | $\sim \sim$ | 66 (3.4) | 551 (2.4) | 33 (3.3) | 524 (4.6) | 9.7 (0.11) |
| Georgia | 1 (0.9) | $\sim \sim$ | 46 (3.9) | 490 (5.2) | 53 (3.6) | 485 (4.0) | 9.0 (0.11) |
| Belgium (French) | 1 (0.0) | $\sim \sim$ | 47 (4.7) | 513 (4.4) | 52 (4.7) | 500 (4.2) | 9.0 (0.15) |
| Slovak Republic | 1 (0.7) | $\sim \sim$ | 41 (3.4) | 545 (3.6) | 58 (3.4) | 528 (3.9) | 8.7 (0.10) |
| Netherlands | 0 (0.0) | ~ ~ | 59 (5.1) | 548 (3.0) | 41 (5.1) | 544 (3.3) | 9.4 (0.16) |
| International Avg. | 9 (0.3) | 527 (1.9) | 59 (0.6) | 517 (0.6) | 32 (0.5) | 497 (0.8) |  |

[^0]() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

A tilde ( $\sim$ ) indicates insufficient data to report achievement.
$A n$ " $r$ " indicates data are available for at least $70 \%$ but less than $85 \%$ of the students.

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Exhibit 6.1: School Emphasis on Academic Success - Principal Reports (Continued)

| 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 |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |
| Honduras | 10 (2.5) | 435 (14.2) | 61 (4.5) | 448 (7.7) | 29 (4.1) | 456 (5.7) | 10.1 (0.17) |
| Kuwait | 7 (2.3) | 453 (26.5) | 51 (4.0) | 417 (10.3) | 41 (4.0) | 411 (7.8) | 9.4 (0.17) |
| Botswana | 5 (1.8) | 522 (23.7) | 29 (3.8) | 441 (9.1) | 66 (4.1) | 401 (3.7) | 8.7 (0.18) |
| Morocco | 3 (0.8) | 501 (15.7) | 23 (2.7) | 449 (7.6) | 74 (2.7) | 415 (4.9) | 7.8 (0.15) |
| Benchmarking Participants ${ }^{\circ}$ |  |  |  |  |  |  |  |
| Dubai, UAE | 35 (0.3) | 507 (3.4) | 49 (0.5) | 473 (2.9) | 16 (0.4) | 401 (6.1) | 11.7 (0.02) |
| Florida, US | 26 (4.7) | 594 (5.4) | 58 (5.3) | 559 (4.5) | 16 (4.6) | 569 (9.8) | 11.4 (0.27) |
| Alberta, Canada | 25 (4.0) | 566 (5.7) | 62 (4.5) | 545 (3.6) | 13 (2.7) | 537 (7.2) | 11.4 (0.17) |
| Abu Dhabi, UAE | 17 (3.4) | 443 (12.1) | 68 (3.8) | 418 (5.1) | 15 (3.0) | 397 (14.6) | 10.9 (0.17) |
| Maltese - Malta | 13 (0.1) | 470 (3.9) | 69 (0.1) | 459 (1.9) | 18 (0.1) | 438 (3.3) | 11.0 (0.01) |
| Ontario, Canada | 10 (3.1) | 568 (10.7) | 62 (4.0) | 554 (3.3) | 28 (4.1) | 538 (4.4) | 10.2 (0.17) |
| Eng/Afr (5) - RSA | 9 (3.3) | 509 (66.0) | 44 (5.5) | 444 (9.7) | 46 (6.0) | 371 (11.6) | 9.3 (0.28) |
| Quebec, Canada | $5(1.6)$ | 580 (8.3) | 75 (3.6) | 538 (2.1) | 21 (3.4) | 528 (4.8) | 10.3 (0.12) |
| Andalusia, Spain | 3 (1.5) | 536 (15.2) | 61 (3.7) | 522 (3.0) | 36 (3.7) | 500 (4.2) | 9.6 (0.12) |

$\diamond$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRLS $2011 \underset{\text { Grade }}{4^{\text {th }}}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Very High Emphasis |  | High Emphasis |  | Medium Emphasis |  | Average <br> Scale Score |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Colombia | 5 (1.7) | 631 (12.3) | 46 (4.7) | 580 (5.0) | 50 (4.5) | 568 (4.8) | 9.2 (0.20) |
| South Africa | 4 (1.4) | 536 (49.7) | 40 (3.4) | 469 (7.2) | 56 (3.5) | 439 (5.0) | 8.9 (0.15) |
| Botswana | 3 (1.4) | 538 (22.5) | 41 (4.1) | 487 (7.3) | 56 (4.2) | 442 (3.4) | 8.9 (0.19) |



Reported by Teachers
Students were scored according to their teachers' responses characterizing five aspects on the School Emphasis on Academic Success scale. Students in schools where their teachers reported a Very High Emphasis on academic success had a score on the scale of at least 13.0, which corresponds to their teachers characterizing three of the five aspects as "very high" and the other two as "high," on average. Students in schools with a Medium Emphasis on academic success had a score no higher than 8.7, which corresponds to their teachers characterizing three of the five aspects as "medium" and the other two as "high," on average. All other students attended schools with a High Emphasis on academic success.

| Country |  | Very High Emphasis |  | High Emphasis |  | Medium Emphasis |  | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Scale Score |
| Northern Ireland | $r$ | 28 (4.2) | 572 (3.9) | 65 (4.4) | 557 (3.7) | 7 (2.2) | 533 (8.5) | 11.7 (0.19) |
| England |  | 25 (4.2) | 566 (7.3) | 58 (4.8) | 552 (3.4) | 17 (3.1) | 523 (5.9) | 11.1 (0.16) |
| Ireland |  | 22 (3.1) | 566 (3.5) | 69 (3.0) | 552 (2.9) | 9 (1.9) | 519 (6.8) | 11.4 (0.15) |
| Croatia |  | 21 (3.0) | 554 (3.7) | 69 (3.6) | 553 (2.2) | 10 (2.2) | 555 (6.3) | 11.3 (0.12) |
| Indonesia |  | 20 (3.5) | 442 (7.9) | 57 (4.7) | 431 (6.0) | 23 (3.9) | 415 (6.9) | 10.8 (0.18) |
| Israel |  | 19 (2.9) | 564 (6.8) | 68 (3.9) | 547 (4.0) | 13 (2.9) | 492 (11.9) | 11.1 (0.14) |
| New Zealand |  | 18 (2.0) | 567 (4.9) | 65 (2.8) | 529 (3.3) | 17 (2.3) | 511 (4.7) | 11.1 (0.11) |
| Qatar |  | 17 (3.1) | 439 (14.2) | 66 (3.9) | 423 (5.0) | 17 (3.0) | 416 (11.2) | 10.8 (0.15) |
| Australia | $r$ | 17 (3.0) | 554 (8.8) | 63 (4.4) | 533 (3.6) | 20 (3.1) | 507 (4.3) | 10.7 (0.16) |
| United States |  | 16 (1.7) | 575 (4.9) | 63 (2.4) | 558 (2.1) | 21 (2.0) | 538 (4.5) | 10.8 (0.10) |
| United Arab Emirates |  | 15 (1.8) | 470 (9.1) | 67 (2.7) | 437 (3.2) | 18 (1.8) | 417 (6.9) | 10.9 (0.09) |
| Saudi Arabia |  | 15 (3.4) | 454 (9.1) | 61 (4.1) | 437 (6.5) | 25 (3.0) | 398 (10.0) | 10.4 (0.16) |
| Malta |  | 12 (0.1) | 515 (3.7) | 65 (0.1) | 475 (1.8) | 23 (0.1) | 462 (3.1) | 10.4 (0.00) |
| Austria |  | 10 (2.1) | 544 (6.2) | 71 (2.8) | 531 (2.3) | 19 (2.6) | 514 (4.4) | 10.4 (0.12) |
| Canada |  | 10 (1.2) | 570 (4.3) | 68 (2.5) | 549 (2.2) | 22 (2.4) | 536 (3.4) | 10.4 (0.11) |
| Iran, Islamic Rep. of |  | 9 (1.8) | 467 (11.6) | 68 (3.5) | 466 (3.9) | 23 (3.0) | 427 (6.6) | 10.4 (0.13) |
| Romania |  | 9 (2.3) | 497 (15.2) | 61 (3.7) | 513 (5.4) | 30 (3.3) | 477 (8.2) | 10.1 (0.16) |
| Azerbaijan |  | 8 (2.1) | 478 (13.6) | 40 (3.5) | 464 (4.9) | 52 (3.5) | 459 (5.3) | 9.4 (0.14) |
| Chinese Taipei |  | 7 (1.9) | 557 (6.9) | 67 (3.8) | 554 (2.3) | 26 (3.6) | 548 (3.9) | 10.0 (0.16) |
| Poland |  | 7 (2.0) | 526 (4.8) | 76 (3.2) | 527 (2.5) | 17 (2.8) | 519 (4.8) | 10.2 (0.12) |
| Oman |  | 7 (1.5) | 415 (6.3) | 72 (2.9) | 398 (3.3) | 21 (2.7) | 361 (5.5) | 10.4 (0.11) |
| Hong Kong SAR |  | 7 (2.0) | 583 (6.4) | 58 (4.1) | 572 (3.1) | 36 (4.2) | 565 (4.6) | 9.6 (0.16) |
| Spain |  | 7 (1.9) | 517 (12.8) | 54 (4.1) | 522 (3.0) | 39 (3.8) | 499 (3.8) | 9.6 (0.15) |
| Sweden |  | 7 (1.7) | 549 (6.8) | 65 (4.2) | 547 (2.6) | 29 (4.1) | 530 (4.0) | 10.0 (0.14) |
| Colombia |  | 6 (1.7) | 496 (15.6) | 45 (4.8) | 453 (6.9) | 49 (4.8) | 437 (4.8) | 9.4 (0.19) |
| Denmark |  | 5 (1.5) | 574 (5.5) | 65 (3.2) | 558 (1.9) | 30 (3.0) | 544 (3.4) | 9.9 (0.12) |
| Bulgaria |  | 5 (1.5) | 551 (14.1) | 66 (3.5) | 547 (3.7) | 29 (3.4) | 494 (8.2) | 9.9 (0.13) |
| Trinidad and Tobago |  | 4 (1.5) | 496 (20.0) | 46 (4.2) | 481 (6.5) | 49 (4.0) | 459 (5.6) | 9.2 (0.15) |
| Portugal |  | 4 (1.7) | 576 (21.6) | 56 (4.8) | 547 (3.1) | 40 (4.6) | 527 (4.9) | 9.8 (0.17) |
| Finland |  | 4 (1.6) | 572 (7.3) | 62 (3.2) | 571 (1.9) | 34 (3.4) | 561 (3.4) | 9.8 (0.12) |
| Singapore |  | 3 (1.0) | 600 (16.5) | 61 (2.4) | 576 (4.5) | 36 (2.3) | 548 (5.2) | 9.6 (0.10) |
| Lithuania |  | 3 (1.0) | 536 (10.7) | 74 (3.2) | 531 (2.8) | 23 (3.2) | 518 (4.2) | 10.1 (0.09) |
| Norway |  | 2 (1.2) | ~ ~ | 70 (4.6) | 508 (2.4) | 28 (4.5) | 502 (3.5) | 9.9 (0.17) |
| Hungary |  | 2 (1.3) | $\sim \sim$ | 57 (4.0) | 553 (3.4) | 41 (3.8) | 516 (5.3) | 9.4 (0.15) |
| Slovenia |  | 2 (1.1) | $\sim \sim$ | 66 (3.7) | 533 (2.0) | 32 (3.5) | 524 (3.3) | 9.6 (0.10) |
| Georgia |  | 2 (0.8) | $\sim \sim$ | 59 (3.8) | 495 (3.5) | 39 (3.7) | 475 (4.9) | 9.5 (0.11) |
| Italy |  | 2 (0.7) | $\sim \sim$ | 59 (3.4) | 544 (2.8) | 39 (3.4) | 538 (3.8) | 9.5 (0.09) |
| France |  | 2 (1.0) | $\sim \sim$ | 57 (3.6) | 529 (2.5) | 41 (3.7) | 508 (4.3) | 9.4 (0.12) |
| Morocco |  | 2 (0.6) | $\sim \sim$ | 25 (2.7) | 341 (9.1) | 74 (2.7) | 299 (5.0) | 7.8 (0.11) |
| Czech Republic |  | 2 (0.9) | $\sim \sim$ | 45 (4.6) | 550 (3.0) | 54 (4.6) | 541 (3.2) | 9.0 (0.14) |
| Slovak Republic |  | 1 (0.5) | $\sim \sim$ | 49 (3.2) | 543 (2.5) | 50 (3.3) | 527 (4.9) | 9.1 (0.12) |
| Russian Federation |  | 1 (0.0) | $\sim \sim$ | 52 (3.9) | 574 (3.5) | 47 (4.0) | 563 (3.7) | 9.2 (0.12) |
| Belgium (French) |  | 0 (0.5) | $\sim \sim$ | 49 (4.2) | 517 (3.6) | 51 (4.2) | 498 (4.0) | 8.9 (0.17) |
| Netherlands |  | 0 (0.0) | $\sim$ | 55 (4.3) | 552 (2.1) | 45 (4.3) | 539 (3.7) | 9.2 (0.12) |
| Germany |  | 0 (0.0) | ~~ | 60 (3.4) | 550 (2.4) | 40 (3.4) | 528 (3.7) | 9.2 (0.09) |
| International Avg. |  | 9 (0.3) | 529 (1.8) | 60 (0.6) | 517 (0.6) | 31 (0.5) | 497 (0.8) |  |

[^1]() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

A tilde ( $\sim$ ) indicates insufficient data to report achievement.
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.

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Exhibit 6.2: School Emphasis on Academic Success - Teacher Reports (Continued)

| 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 |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |
| Honduras | 12 (3.0) | 485 (15.3) | 52 (4.4) | 449 (6.5) | 37 (4.4) | 438 (8.1) | 10.1 (0.21) |
| Kuwait | 8 (2.8) | 476 (13.4) | 56 (4.9) | 420 (10.1) | 35 (4.8) | 401 (12.0) | 10.1 (0.20) |
| Botswana | 6 (1.9) | 532 (22.6) | 35 (4.1) | 433 (6.8) | 59 (4.1) | 402 (4.7) | 8.8 (0.19) |
| Morocco | $2(0.8)$ | ~ ~ | 22 (3.4) | 454 (7.9) | 76 (3.4) | 410 (5.7) | 7.9 (0.16) |
| Benchmarking Participants ${ }^{\circ}$ |  |  |  |  |  |  |  |
| Florida, US | 22 (3.8) | 597 (6.5) | 54 (5.3) | 566 (5.6) | 24 (4.3) | 556 (8.6) | 11.0 (0.19) |
| Alberta, Canada | 22 (3.4) | 569 (5.5) | 68 (3.9) | 546 (3.1) | 11 (2.8) | 520 (7.8) | 11.2 (0.17) |
| Dubai, UAE | 16 (3.2) | 490 (16.0) | 66 (3.7) | 478 (5.2) | 17 (2.0) | 464 (7.9) | 10.9 (0.13) |
| Abu Dhabi, UAE | 15 (3.4) | 469 (15.0) | 66 (4.4) | 421 (6.1) | 19 (3.6) | 399 (13.3) | 10.9 (0.20) |
| Maltese - Malta | 12 (0.1) | 453 (3.9) | 68 (0.1) | 460 (1.9) | 20 (0.1) | 455 (3.6) | 10.5 (0.01) |
| Ontario, Canada | 8 (2.5) | 572 (12.6) | 68 (4.2) | 550 (3.2) | 24 (3.7) | 545 (6.3) | 10.3 (0.18) |
| Quebec, Canada | 6 (1.9) | 558 (9.9) | 66 (4.1) | 541 (2.6) | 28 (4.1) | 525 (2.8) | 10.2 (0.15) |
| Eng/Afr (5) - RSA | $5(2.2)$ | 534 (35.6) | 56 (5.6) | 440 (12.1) | 39 (5.6) | 392 (12.8) | 9.3 (0.24) |
| Andalusia, Spain | 4 (1.8) | 542 (6.0) | 53 (3.8) | 523 (3.8) | 42 (3.4) | 502 (3.1) | 9.6 (0.12) |

$\bigcirc$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRLS $2011 \underset{\text { Grad }}{4 \text { th }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 |  |
| Colombia | 6 (1.7) | 607 (13.5) | 45 (4.8) | 580 (5.6) | 49 (4.8) | 569 (4.0) | 9.4 (0.19) |
| South Africa | 4 (1.2) | 554 (28.4) | 50 (3.7) | 474 (5.3) | 46 (3.7) | 438 (5.1) | 9.3 (0.15) |
| Botswana | 3 (1.4) | 550 (42.0) | 35 (4.1) | 487 (7.7) | 63 (3.9) | 445 (3.4) | 8.6 (0.17) |



## Principals Spend Time on Leadership Activities

The effectiveness of school leadership has become a central issue, as principals worldwide are held increasingly accountable for their students' achievement outcomes. However, the effects of principal leadership are often indirect and difficult to measure. A meta-analysis of multinational studies conducted between 1986 and 1996 found that "defining and communicating the school's mission" had the largest direct effect on student achievement (Witziers, Bosker, \& Kruger, 2003), whereas a different meta-analysis of 27 studies conducted between 1978 and 2006 found strong effects for promoting teacher learning and development, and establishing goals (Robinson, Lloyd, \& Rowe, 2008).

PIRLS 2011 used research conducted in the Netherlands (ten Bruggencate, Luyten, Scheerens, \& Sleegers, 2012) to develop questions about principals' leadership styles. Exhibit 6.3 presents principals' reports about the various activities upon which they spend "a lot of time." The pattern of varying reports from country to country held for the fourth grade, the sixth grade, the benchmarking participants, and prePIRLS.

The results for the fourth grade were averaged across countries to provide some summary data. The first two questions related to defining and communicating the schools mission, and 59 percent of the fourth grade students, on average, were in schools where this occupied "a lot" of the principal's time. The next two questions addressed monitoring whether goals are achieved by teachers and students, with about of half the students ( $48 \%$ and $55 \%$ ) in schools where principals reported spending "a lot of time" on these activities. The next two categories asked about maintaining discipline: two-thirds of students were in schools where the principal spent "a lot of time" keeping an orderly atmosphere, and 44 percent had principals that needed to spend "a lot of time" addressing disruptive student behavior. The last three areas appear to occupy less time: advising teachers, initiating projects, and participating in professional development activities.

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Schools' Emphasis on Reading Skills and Strategies in the Early Grades
To become proficient readers, students should be introduced to increasingly complex reading skills and strategies as they advance through school. Also, if students are to be able to learn to read by the third grade, as expressed by a number of the countries in the PIRLS 2011 Encyclopedia, then introduction to reading skills and strategies should begin when students enter the first grade, if not before.

Exhibit 6.4 summarizes principals' reports of the grade by which certain reading skills or strategies were emphasized. Students were scored according to their principals' responses about the earliest grade at which each of eleven reading skills and strategies were emphasized (the eleven skills or strategies are listed on the second page of the exhibit). Schools where reading skills and strategies were emphasized At or Before Second Grade had principals who reported that all eleven skills and strategies are emphasized at second grade (or earlier). Students in those schools had the highest average reading achievement as fourth grade students. Fourth grade students had the next highest achievement if the skills were emphasized At Third Grade, and the lowest average reading achievement if the skills and strategies were emphasized in the curriculum At Fourth Grade (or Later). There were major differences among countries in curricula. At one end of the continuum, 84 percent of the students in England were in schools emphasizing the full range of reading skills and strategies by the second grade. At the other end of the continuum, the majority students in Kuwait and Morocco were in schools emphasizing the skills and strategies in the fourth grade (or later). Internationally, on average, two-thirds of the fourth grade students attended schools where the skills and strategies were emphasized at the third grade.

Reported by Principals

|  | Percent of Students Whose Principals Spend "A Lot of Time" |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country | Promoting the School's Educational Vision or Goals | Developing the School's Curricular and Educational Goals | Monitoring Teachers' Implementation of the School's Educational Goals in Their Teaching | Monitoring <br> Students' <br> Learning <br> Progress to <br> Ensure that <br> the School's <br> Educational <br> Goals Are <br> Reached | Keeping an Orderly Atmosphere in the School | Addressing <br> Disruptive <br> Student <br> Behavior | Advising Teachers Who Have Questions or Problems with Their Teaching | Initiating <br> Educational <br> Projects or Improvements | Participating in Professional Development Activities Specifically for School Principals |
| Australia | 60 (4.1) | 73 (3.8) | 52 (4.6) | 68 (3.8) | 63 (3.6) | 35 (3.8) | 27 (3.4) | 53 (4.4) | 33 (3.7) |
| Austria | 41 (3.9) | 13 (3.0) | 24 (3.4) | 27 (3.2) | 73 (4.3) | 41 (4.6) | 39 (4.5) | 22 (3.6) | 44 (3.9) |
| Azerbaijan | 50 (4.4) | 55 (4.3) | 33 (4.0) | 40 (4.8) | 79 (3.7) | 38 (4.4) | 29 (3.3) | 27 (3.9) | 38 (4.0) |
| Belgium (French) | 23 (4.3) | 14 (3.8) | 8 (2.6) | 10 (3.2) | 37 (4.4) | 40 (4.4) | 24 (4.2) | 16 (2.7) | 8 (2.2) |
| Bulgaria | 49 (4.2) | 47 (4.5) | 60 (4.0) | 55 (4.2) | 72 (3.9) | 45 (4.3) | 17 (3.3) | 32 (3.8) | 29 (3.6) |
| Canada | 57 (2.5) | 62 (2.6) | 40 (2.5) | 50 (2.6) | 67 (2.7) | 47 (2.8) | 29 (2.3) | 38 (3.2) | 26 (2.3) |
| Chinese Taipei | 72 (3.6) | 69 (3.8) | 59 (3.9) | 54 (3.6) | 49 (4.4) | 15 (3.0) | 44 (4.2) | 53 (4.2) | 57 (4.4) |
| Colombia | 55 (4.8) | 73 (4.2) | 53 (4.8) | 57 (4.5) | 72 (4.5) | 48 (4.8) | 32 (4.1) | 52 (4.4) | 51 (4.8) |
| Croatia | 64 (3.9) | 69 (3.9) | 39 (4.2) | 41 (3.8) | 84 (2.9) | 50 (4.0) | 43 (4.3) | 32 (4.0) | 70 (3.7) |
| Czech Republic | 69 (3.9) | 64 (4.0) | 54 (4.3) | 66 (3.8) | 95 (1.7) | 58 (4.2) | 40 (4.5) | 61 (3.7) | 42 (4.1) |
| Denmark | 24 (3.2) | 20 (2.8) | 6 (1.8) | 11 (2.2) | 67 (3.2) | 25 (2.8) | 27 (2.7) | 21 (2.6) | 19 (2.8) |
| England | 53 (4.6) | 68 (4.5) | 56 (4.4) | 76 (4.1) | 48 (4.7) | 21 (3.6) | 17 (3.6) | 34 (4.3) | 13 (3.0) |
| Finland | 36 (3.8) | 34 (4.4) | 18 (3.0) | 12 (2.1) | 33 (4.6) | 26 (4.1) | 16 (2.9) | 28 (4.1) | 23 (3.6) |
| France | 41 (4.7) | 26 (4.4) | 8 (2.6) | 15 (3.2) | 46 (4.7) | 55 (4.2) | 15 (3.0) | 26 (3.6) | 5 (1.8) |
| Georgia | 42 (4.8) | 36 (4.5) | 39 (4.0) | 55 (3.7) | 72 (3.9) | 51 (4.2) | 19 (3.5) | 20 (3.3) | 27 (3.5) |
| Germany | 49 (3.4) | 47 (3.3) | 15 (2.6) | 18 (2.6) | 56 (3.6) | 49 (3.5) | 28 (3.2) | 24 (3.2) | 17 (2.6) |
| Hong Kong SAR | 53 (4.6) | 67 (4.5) | 57 (4.6) | 60 (4.2) | 59 (4.3) | 9 (2.2) | 15 (3.2) | 41 (4.9) | 31 (4.4) |
| Hungary | 80 (3.6) | 72 (4.0) | 59 (4.0) | 62 (4.2) | 79 (3.2) | 59 (4.0) | 34 (4.0) | 41 (4.4) | 35 (4.2) |
| Indonesia | 86 (2.8) | 85 (3.1) | 82 (3.3) | 86 (3.3) | 98 (1.1) | 78 (3.9) | 70 (4.1) | 37 (4.2) | 70 (4.0) |
| Iran, Islamic Rep. of | 77 (3.1) | 88 (2.7) | 79 (3.9) | 86 (2.5) | 89 (2.0) | 82 (2.7) | 61 (3.6) | 44 (3.9) | 67 (3.3) |
| Ireland | 41 (4.4) | 61 (4.3) | 20 (3.4) | 34 (4.3) | 65 (3.8) | 30 (4.0) | 10 (2.5) | 31 (3.8) | 17 (2.7) |
| Israel | 79 (3.6) | 82 (3.6) | 71 (4.1) | 86 (2.6) | 85 (3.6) | 78 (4.1) | 74 (3.8) | r 78 (3.5) | 81 (3.1) |
| Italy | 83 (3.6) | 62 (3.8) | 43 (3.9) | 47 (4.2) | 49 (3.7) | 31 (3.3) | 48 (3.7) | 61 (3.7) | 35 (3.3) |
| Lithuania | 74 (3.7) | 90 (2.4) | 60 (3.6) | 68 (4.0) | 62 (4.5) | 42 (3.8) | 48 (4.3) | 41 (4.3) | 44 (3.9) |
| Malta | 58 (0.1) | 67 (0.1) | 32 (0.1) | 40 (0.1) | 71 (0.1) | 39 (0.1) | 39 (0.1) | 44 (0.1) | 26 (0.1) |
| Morocco | 64 (3.4) | 58 (3.9) | 63 (3.9) | 59 (4.1) | 91 (2.1) | 66 (3.1) | 56 (3.7) | 43 (3.7) | 42 (4.0) |
| Netherlands | r 75 (3.9) | r 77 (3.1) | r 49 (5.1) | r 63 (5.3) | r 48 (4.7) | r 25 (3.7) | r 42 (5.6) | r 36 (5.1) | r 26 (4.2) |
| New Zealand | 59 (4.4) | 68 (3.9) | 40 (3.9) | 64 (4.2) | 50 (3.8) | 17 (3.0) | 23 (3.0) | 41 (3.9) | 26 (3.8) |
| Northern Ireland | 47 (4.5) | 73 (3.9) | r 35 (4.6) | 61 (4.2) | 54 (5.2) | 13 (2.9) | r 7 (2.1) | r 35 (4.5) | r 23 (4.5) |
| Norway | 27 (4.5) | 19 (3.8) | 17 (3.3) | 17 (3.2) | 56 (4.6) | 31 (4.4) | 16 (3.6) | 23 (4.0) | 24 (4.3) |
| Oman | 40 (3.2) | r 18 (2.4) | 75 (3.4) | 80 (3.1) | 82 (2.5) | 45 (3.5) | 51 (3.5) | 36 (3.4) | 24 (2.5) |
| Poland | 56 (3.9) | 49 (4.2) | 59 (4.0) | 75 (3.3) | 76 (3.8) | 40 (3.9) | 29 (3.9) | 51 (4.1) | 54 (4.2) |
| Portugal | 63 (4.2) | 50 (5.3) | 35 (4.7) | 41 (4.9) | 49 (4.8) | 38 (5.2) | 8 (2.7) | 28 (5.3) | 6 (2.2) |
| Qatar | 70 (2.5) | 81 (2.3) | 81 (2.4) | 81 (2.5) | 85 (2.5) | 64 (2.7) | 69 (2.9) | 61 (3.4) | 54 (3.2) |
| Romania | 84 (3.3) | 84 (3.2) | 81 (3.5) | 84 (3.0) | 87 (2.5) | 73 (3.6) | 57 (4.3) | 63 (3.8) | 69 (4.2) |
| Russian Federation | 80 (2.8) | 81 (2.6) | 81 (2.6) | 74 (2.9) | 87 (2.1) | 64 (3.1) | 34 (3.1) | 52 (3.6) | 64 (4.0) |
| Saudi Arabia | 48 (4.4) | 61 (4.1) | 77 (3.3) | 76 (3.5) | 78 (3.5) | 57 (3.7) | 52 (3.9) | 45 (4.4) | 40 (4.3) |
| Singapore | 76 (0.0) | 80 (0.0) | 66 (0.0) | 77 (0.0) | 66 (0.0) | 32 (0.0) | 33 (0.0) | 58 (0.0) | 47 (0.0) |
| Slovak Republic | 56 (3.6) | 69 (3.6) | 45 (3.9) | 42 (3.9) | 60 (3.7) | 55 (3.3) | 34 (3.6) | 46 (3.7) | 46 (3.8) |
| Slovenia | 68 (3.1) | 62 (4.1) | 61 (3.5) | 69 (4.0) | 92 (2.2) | 59 (3.8) | 53 (4.0) | 62 (3.9) | 73 (3.4) |
| Spain | 57 (3.3) | 58 (3.6) | 40 (3.9) | 46 (3.8) | 66 (3.2) | 39 (3.7) | 20 (3.3) | 49 (3.5) | 31 (3.4) |
| Sweden | 52 (4.4) | 40 (4.8) | 17 (3.2) | 28 (4.2) | 24 (3.7) | 19 (3.6) | 28 (4.1) | 28 (4.1) | 16 (3.6) |
| Trinidad and Tobago | 55 (4.2) | 55 (4.0) | 40 (4.4) | 55 (4.4) | 87 (2.9) | 74 (3.7) | 37 (4.5) | 37 (4.2) | 42 (4.0) |
| United Arab Emirates | 69 (2.1) | 77 (2.2) | 82 (1.8) | 85 (1.4) | 82 (1.8) | 55 (2.1) | 62 (2.0) | 65 (2.0) | 47 (1.9) |
| United States | 74 (2.6) | 69 (2.7) | 71 (2.4) | 78 (2.3) | 70 (2.8) | 42 (2.8) | 42 (2.8) | 45 (3.3) | 36 (2.7) |
| International Avg. | 59 (0.6) | 59 (0.5) | 48 (0.5) | 55 (0.5) | 68 (0.5) | 44 (0.5) | 35 (0.5) | 41 (0.6) | 38 (0.5) |

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

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| Country | Percent of Students Whose Principals Spend "A Lot of Time" |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Promoting the School's Educational Vision or Goals | Developing the School's Curricular and Educational Goals | Monitoring Teachers' Implementation of the School's Educational Goals in Their Teaching | Monitoring Students' Learning Progress to Ensure that the School's Educational Goals Are Reached | Keeping an Orderly Atmosphere in the School | Addressing Disruptive Student Behavior | Advising Teachers Who Have Questions or Problems with Their Teaching | Initiating Educational Projects or Improvements | Participating in Professional Development Activities Specifically for School Principals |
| Sixth Grade Participants |  |  |  |  |  |  |  |  |  |
| Botswana | 68 (3.7) | 67 (3.9) | 83 (2.8) | 82 (3.0) | 87 (2.5) | 62 (4.6) | 57 (3.6) | 45 (4.2) | 52 (4.7) |
| Honduras | 58 (4.5) | 63 (4.7) | 51 (5.1) | 65 (4.4) | 90 (2.5) | 72 (4.8) | 56 (4.6) | 63 (4.7) | 51 (4.9) |
| Kuwait | 75 (3.9) | 56 (4.6) | 84 (3.5) | 83 (2.9) | 89 (2.8) | 69 (3.9) | 58 (4.4) | 65 (3.8) | 72 (4.2) |
| Morocco | 67 (3.5) | 58 (3.5) | 64 (4.2) | 60 (4.0) | 92 (1.8) | 68 (3.0) | 56 (4.7) | 44 (4.2) | 43 (4.4) |
| Benchmarking Participants ${ }^{\circ}$ |  |  |  |  |  |  |  |  |  |
| Alberta, Canada | 59 (4.1) | 59 (3.9) | 42 (4.1) | 45 (4.4) | 69 (3.7) | 33 (4.5) | 28 (4.3) | 41 (4.5) | 33 (4.3) |
| Ontario, Canada | 63 (4.5) | 74 (4.4) | 61 (4.8) | 59 (4.8) | 75 (4.2) | 54 (5.0) | 30 (4.9) | 38 (5.2) | 36 (5.1) |
| Quebec, Canada | 44 (4.7) | 41 (4.3) | 18 (3.4) | 36 (3.8) | 47 (4.3) | 47 (4.7) | 29 (4.0) | 31 (4.0) | 19 (3.2) |
| Maltese - Malta | 58 (0.1) | 67 (0.1) | 31 (0.1) | 40 (0.1) | 72 (0.1) | 39 (0.1) | 39 (0.1) | 44 (0.1) | 26 (0.1) |
| Eng/Afr (5) - RSA | r 52 (6.2) | r 59 (6.8) | r 51 (5.8) | 54 (6.2) | r 88 (3.7) | 68 (5.4) | r 46 (5.8) | r 33 (5.3) | r 56 (5.6) |
| Andalusia, Spain | 66 (4.0) | 69 (3.7) | 44 (3.6) | 49 (3.9) | 62 (4.1) | 38 (4.2) | 24 (3.8) | 50 (4.4) | 33 (4.1) |
| Abu Dhabi, UAE | 78 (3.9) | 79 (3.6) | 83 (3.3) | 87 (2.7) | 82 (3.0) | 51 (4.4) | 66 (4.1) | 64 (4.4) | 59 (3.7) |
| Dubai, UAE | 72 (0.4) | 83 (0.4) | 79 (0.4) | 80 (0.4) | 80 (0.2) | 58 (0.5) | 55 (0.5) | 71 (0.4) | 43 (0.3) |
| Florida, US | r 82 (4.1) | r 79 (5.6) | r 78 (5.1) | r 88 (3.0) | r 76 (6.2) | r 39 (6.6) | r 36 (6.1) | r 38 (6.0) | r 42 (6.2) |

${ }^{\diamond}$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country | Percent of Students Whose Principals Spend "A Lot of Time" |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Promoting the School's Educational Vision or Goals | Developing the School's Curricular and Educational Goals | Monitoring <br> Teachers' Implementation of the School's Educational Goals in Their Teaching | Monitoring <br> Students' <br> Learning <br> Progress to Ensure that the School's Educational Goals Are Reached | $\begin{aligned} & \text { Keeping } \\ & \text { an Orderly } \\ & \text { Atmosphere in } \\ & \text { the School } \end{aligned}$ | Addressing Disruptive Student Behavior | Advising Teachers Who Have Questions or Problems with Their Teaching | Initiating <br> Educational <br> Projects or Improvements | Participating in Professional Development Activities Specifically for School Principals |
| Botswana | 71 (3.8) | 70 (4.2) | 88 (2.9) | 85 (3.3) | 90 (2.8) | 62 (4.4) | 65 (4.3) | 41 (4.2) | 56 (4.7) |
| Colombia | 55 (4.8) | 73 (4.2) | 53 (4.8) | 57 (4.5) | 72 (4.5) | 48 (4.8) | 32 (4.1) | 52 (4.4) | 51 (4.8) |
| South Africa | 63 (4.0) | 66 (3.5) | 64 (3.1) | 69 (3.2) | 91 (2.4) | 69 (3.4) | 49 (3.7) | 41 (3.8) | 65 (3.1) |

Reported by Principals
Students were scored according to their principals' responses about the earliest grade at which each of eleven reading skills and strategies were emphasized. Students in schools where their principals reported reading skills and strategies were emphasized At or Before Second Grade had a score on the scale of at least 11.1, which corresponds to all eleven skills and strategies being emphasized at second grade, on average. Students in schools where their principals reported reading skills and strategies were emphasized At Fourth Grade or Later had a score no higher than 6.5, which corresponds to all eleven skills and strategies being emphasized at fourth grade, on average. All other students attended schools where reading skills and strategies were emphasized At Third Grade.

| Country | At or Before Second Grade |  | At Third Grade |  | At Fourth Grade or Later |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| England | 84 (3.3) | 553 (3.2) | 15 (3.2) | 538 (7.3) | 1 (0.9) | ~~ | 12.6 (0.20) |
| United States | 75 (2.7) | 558 (1.7) | 24 (2.7) | 557 (3.8) | 1 (0.5) | ~ | 12.2 (0.11) |
| Australia | 73 (4.0) | 528 (2.9) | 27 (4.0) | 531 (5.9) | 0 (0.0) | ~ ~ | 12.6 (0.19) |
| New Zealand | 73 (3.6) | 538 (2.8) | 27 (3.6) | 523 (7.2) | $0(0.0)$ | ~~ | 12.2 (0.16) |
| Israel | 59 (4.7) | 549 (4.7) | 41 (4.7) | 529 (6.1) | 0 (0.0) | ~ ~ | 11.5 (0.16) |
| Canada | 55 (2.7) | 549 (2.5) | 44 (2.7) | 547 (2.9) | 1 (0.4) | ~~ | 11.4 (0.09) |
| Northern Ireland | 55 (4.6) | 561 (3.0) | 45 (4.6) | 557 (4.6) | 0 (0.0) | ~ ~ | 11.6 (0.17) |
| Russian Federation | 50 (3.7) | 567 (4.0) | 50 (3.7) | 570 (3.7) | 0 (0.0) | ~ | 11.1 (0.10) |
| Singapore | 46 (0.0) | 567 (4.0) | 54 (0.0) | 566 (5.4) | 0 (0.0) | $\sim$ | 10.9 (0.00) |
| Ireland | 40 (4.0) | 558 (3.9) | 60 (4.0) | 547 (3.4) | 0 (0.0) | ~ | 10.6 (0.13) |
| Sweden | 37 (4.5) | 543 (4.0) | 63 (4.5) | 541 (3.1) | 0 (0.0) | ~~ | 10.5 (0.17) |
| Trinidad and Tobago | 32 (3.8) | 464 (8.1) | 66 (4.0) | 475 (5.2) | 2 (1.1) | ~ | 10.3 (0.13) |
| Croatia | 31 (4.1) | 556 (2.5) | 68 (4.2) | 552 (2.6) | 1 (0.0) | ~ ~ | 10.3 (0.14) |
| Germany | 30 (3.4) | 547 (4.0) | 69 (3.3) | 541 (2.5) | 1 (0.4) | ~~ | 10.4 (0.10) |
| Austria | 29 (4.2) | 529 (4.2) | 71 (4.2) | 529 (2.6) | 0 (0.0) | ~~ | 10.3 (0.12) |
| Belgium (French) | 29 (5.0) | 509 (4.5) | 70 (5.1) | 505 (3.7) | 1 (0.0) | $\sim$ | 10.2 (0.20) |
| Spain | 29 (3.2) | 511 (4.5) | 71 (3.2) | 515 (3.0) | 1 (0.8) | $\sim \sim$ | 10.2 (0.12) |
| Hungary | 28 (4.1) | 542 (5.9) | 71 (4.0) | 539 (4.5) | 1 (0.0) | ~ | 10.2 (0.13) |
| Portugal | 25 (4.1) | 536 (5.5) | 75 (4.1) | 542 (3.2) | 0 (0.0) | ~ ~ | 10.3 (0.11) |
| Bulgaria | 25 (3.5) | 548 (5.9) | 74 (3.6) | 528 (5.0) | 1 (0.0) | ~~ | 10.4 (0.11) |
| Qatar | 24 (3.0) | 457 (10.2) | 66 (3.4) | 416 (5.8) | 10 (1.7) | 407 (7.5) | 9.4 (0.15) |
| Czech Republic | 24 (3.8) | 540 (4.0) | 74 (4.0) | 547 (2.6) | 2 (1.2) | ~ ~ | 10.0 (0.16) |
| Slovak Republic | 24 (3.2) | 530 (8.2) | 76 (3.3) | 537 (2.5) | 1 (0.6) | ~~ | 10.1 (0.12) |
| Lithuania | 23 (3.3) | 537 (4.0) | 76 (3.4) | 528 (2.7) | 1 (0.6) | $\sim \sim$ | 10.1 (0.12) |
| Netherlands | 22 (4.4) | 551 (6.7) | 78 (4.4) | 546 (2.1) | 0 (0.0) | $\sim \sim$ | 9.9 (0.15) |
| Denmark | 21 (2.4) | 555 (4.5) | 79 (2.4) | 553 (1.9) | 1 (0.5) | ~~ | 9.7 (0.10) |
| Georgia | 20 (2.8) | 481 (10.5) | 79 (2.9) | 490 (3.2) | 1 (1.2) | $\sim \sim$ | 9.9 (0.12) |
| Azerbaijan | 19 (3.6) | 467 (8.3) | 79 (3.8) | 460 (3.8) | 2 (1.2) | ~~ | 9.7 (0.14) |
| France | 18 (3.3) | 533 (5.2) | 81 (3.4) | 517 (2.8) | 1 (0.7) | ~ | 9.6 (0.13) |
| Chinese Taipei | 17 (3.0) | 556 (5.2) | 80 (3.0) | 552 (2.0) | 3 (1.4) | 555 (7.1) | 9.4 (0.14) |
| Hong Kong SAR | 16 (3.5) | 579 (6.7) | 81 (3.8) | 569 (2.9) | 3 (1.6) | 548 (15.3) | 9.5 (0.14) |
| Italy | 15 (2.5) | 545 (5.3) | 84 (2.5) | 541 (2.3) | 1 (0.8) | ~ | 9.4 (0.12) |
| United Arab Emirates | 15 (1.3) | 487 (6.6) | 68 (2.2) | 433 (3.1) | 18 (2.0) | 399 (6.0) | 8.7 (0.09) |
| Romania | 14 (3.4) | 511 (11.7) | 85 (3.5) | 502 (4.7) | 1 (0.9) | ~ ~ | 9.8 (0.12) |
| Norway | 14 (3.4) | 508 (4.0) | 83 (3.9) | 506 (2.5) | 3 (1.9) | 505 (18.4) | 9.3 (0.16) |
| Colombia | 13 (3.3) | 464 (17.6) | 81 (3.6) | 446 (4.3) | 6 (1.9) | 422 (19.4) | 9.1 (0.18) |
| Malta | 13 (0.1) | 473 (3.8) | 87 (0.1) | 480 (1.6) | 0 (0.0) | ~ | 9.4 (0.00) |
| Finland | 10 (2.6) | 569 (5.6) | 87 (2.8) | 568 (2.0) | 3 (1.5) | 555 (8.2) | 9.2 (0.12) |
| Slovenia | 8 (1.8) | 531 (5.3) | 87 (2.4) | 530 (2.3) | 5 (1.9) | 532 (4.7) | 8.9 (0.11) |
| Saudi Arabia | 7 (1.7) | 431 (17.5) | 78 (3.5) | 434 (4.8) | 15 (3.1) | 411 (14.0) | 8.3 (0.13) |
| Iran, Islamic Rep. of | 7 (1.6) | 493 (9.5) | 85 (2.4) | 457 (3.2) | 8 (1.8) | 435 (13.5) | 8.7 (0.11) |
| Poland | 6 (2.1) | 523 (10.2) | 94 (2.1) | 527 (2.3) | $0(0.0)$ | ~ | 9.3 (0.10) |
| Oman | 4 (0.9) | 366 (12.0) | 86 (2.0) | 389 (3.2) | 11 (1.9) | 354 (8.1) | 8.4 (0.09) |
| Indonesia | 4 (1.9) | 450 (16.3) | 88 (3.2) | 429 (4.5) | 8 (2.5) | 418 (11.9) | 8.5 (0.12) |
| Morocco | 1 (0.6) | ~ | 48 (4.0) | 323 (6.4) | 51 (4.0) | 302 (5.9) | 6.8 (0.12) |
| International Avg. | 28 (0.5) | 522 (1.1) | 68 (0.5) | 511 (0.6) | $4(0.2)$ | 450 (3.3) |  |

Centerpoint of scale set at 10 .
() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

A tilde ( $\sim$ ) indicates insufficient data to report achievement.
$A n$ " $r$ " indicates data are available for at least $70 \%$ but less than $85 \%$ of the students.

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| Country | At or Before Second Grade |  | At Third Grade |  | At Fourth Grade or Later |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |
| Botswana | 31 (3.8) | 410 (6.8) | 67 (4.0) | 424 (6.0) | 2 (1.2) | $\sim \sim$ | 10.2 (0.19) |
| Honduras | 11 (3.2) | 480 (18.7) | 85 (3.7) | 444 (5.3) | 4 (1.9) | 456 (13.6) | 9.1 (0.18) |
| Kuwait | 3 (1.8) | 386 (34.9) | 28 (4.5) | 416 (12.4) | 69 (4.9) | 418 (9.4) | 5.7 (0.28) |
| Morocco | 1 (0.6) | ~ ~ | 48 (4.6) | 436 (6.5) | 50 (4.6) | 414 (6.6) | 6.8 (0.13) |
| Benchmarking Participants ${ }^{\diamond}$ |  |  |  |  |  |  |  |
| Florida, US | 82 (4.7) | 567 (3.6) | 18 (4.7) | 582 (13.2) | 0 (0.0) | $\sim \sim$ | 12.8 (0.21) |
| Ontario, Canada | 75 (4.0) | 550 (3.0) | 25 (4.0) | 553 (5.4) | 0 (0.1) | $\sim \sim$ | 12.5 (0.19) |
| Alberta, Canada | 52 (4.5) | 551 (4.4) | 48 (4.5) | 548 (4.4) | 0 (0.0) | $\sim \sim$ | 11.2 (0.17) |
| Dubai, UAE | 28 (0.3) | 515 (3.5) | 66 (0.3) | 465 (2.6) | 5 (0.2) | 384 (7.5) | 10.0 (0.01) |
| Andalusia, Spain | 26 (3.6) | 523 (5.0) | 74 (3.6) | 512 (2.7) | 0 (0.0) | $\sim \sim$ | 10.1 (0.13) |
| Quebec, Canada | 23 (3.9) | 536 (4.4) | 75 (4.1) | 538 (2.8) | 2 (1.5) | $\sim \sim$ | 9.8 (0.15) |
| Eng/Afr (5) - RSA | 19 (5.2) | 457 (30.9) | 65 (7.0) | 424 (11.6) | 16 (5.0) | 370 (20.5) | 9.0 (0.29) |
| Maltese - Malta | 14 (0.1) | 439 (4.1) | 86 (0.1) | 460 (1.6) | 0 (0.0) | ~ ~ | 9.3 (0.00) |
| Abu Dhabi, UAE | 11 (2.6) | 464 (16.6) | 61 (4.4) | 418 (6.4) | 28 (4.3) | 403 (9.1) | 8.2 (0.19) |

${ }^{\diamond}$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRLS2011 $\underset{\text { Grade }}{4 \text { th }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | At or Before Second Grade |  | At Third Grade |  | At Fourth Grade or Later |  | Average Scale Score |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| South Africa | 20 (3.0) | 491 (13.8) | 61 (3.5) | 455 (5.0) | 20 (2.5) | 422 (9.4) | 9.0 (0.19) |
| Colombia | 13 (3.3) | 591 (14.4) | 81 (3.6) | 575 (3.5) | 6 (1.9) | 553 (22.6) | 9.1 (0.18) |
| Botswana | 13 (3.0) | 457 (15.0) | 67 (3.7) | 465 (4.4) | 21 (3.1) | 457 (7.7) | 8.4 (0.19) |



## Schools with Discipline and Safety Problems

The sense of security that comes from attending a school with few behavior problems and having little or no concern about student or teacher safety promotes a stable learning environment. There is increasing research showing that a safe school environment is important for students' academic achievement. On the other hand, a general lack of discipline, especially if students and teachers are afraid for their safety, does not facilitate learning. Unfortunately, community and school violence are becoming an increasing problem, especially among urban youth.

## Safe and Orderly School

There is growing evidence that students' perceived school safety adversely affects academic performance, even for primary school children (Milam, Furr-Holden, \& Leaf, 2010). It seems that safety at school can no longer be taken for granted, even at the fourth grade. To provide information on the extent to which school safety might be affecting reading achievement, PIRLS 2011 developed the Safe and Orderly School scale. Teachers were asked the degree to which they agreed or disagreed with five statements:

- This school is located in a safe neighborhood;
- I feel safe at this school;
- This school's security policies and practices are sufficient;
- The students behave in an orderly manner; and
- The students are respectful of the teachers.

Exhibit 6.5 presents the results for the Safe and Orderly School scale. Students were scored according to their teachers' degree of agreement with the five statements. Students in Safe and Orderly schools had teachers that "agreed a lot" with three of the five qualities and "agreed a little" with other two, on average. There was substantial variation internationally, but on average, across the fourth grade countries, the majority of students (55\%) were attending schools judged by their teachers to be Safe and Orderly. Almost all the remaining students ( $41 \%$ ) were in schools judged to be Somewhat Safe and Orderly. In general, only small percentages of students (4\% on average) were in schools judged Not Safe and Orderly; at best, their teachers "disagreed
a little" with three of the five statements and "agreed a little" with the other two, on average. Across the fourth grade countries and for the sixth grade, benchmarking, and prePIRLS participants, on average, the safer the school as reported by their teachers, the higher the students' average reading achievement.

## School Discipline and Safety

Previous PIRLS assessments have asked principals for their perceptions about the degree to which a series of discipline, disorderly, and bullying behaviors are problems in their schools. For example, in PIRLS 2006 there was a positive relationship between principals' positive perception of school safety and average reading achievement.

Exhibit 6.6 presents the PIRLS 2011 results for the School Discipline and Safety scale based on asking principals about the extent of ten different discipline and school safety problems (see the second page of the exhibit for the complete list of problems). Countries are ordered by the percentage of students whose principals reported few student discipline and school safety problems. Principals in schools with Hardly Any Problems with discipline or safety reported "not a problem" for five of the ten discipline and safety issues and only "minor problems" for the other five, on average. Principals in schools with Moderate Problems reported "moderate problem" for five of the ten issues and "minor problem" for the other five, on average.

More than half of the students, on average, across the fourth grade countries were in the Hardly Any Problems category and 31 percent were in the Minor Problems category. Only 11 percent, on average, were attending schools where principals reported Moderate Problems with discipline and school safety. Students whose principals reported Moderate Problems in their schools had substantially lower reading achievement, by 43 points on average, than students whose principals reported Hardly Any Problems (476 vs. 519). The results for the sixth grade, benchmarking, and prePIRLS participants followed a similar pattern, but in several instances large percentages of students in the sixth grade and in the prePIRLS countries had principals reporting Moderate Problems with school discipline.

Reported by Teachers
Students were scored according to their teachers' degree of agreement with five statements on the Safe and Orderly School scale. Students in Safe and Orderly schools had a score on the scale of at least 10.1, which corresponds to their teachers "agreeing a lot" with three of the five qualities of a safe and orderly school and "agreeing a little" with the other two, on average. Students in Not Safe and Orderly schools had a score no higher than 6.2, which corresponds to their teachers "disagreeing a little" with three of the five qualities and "agreeing a little" with the other two, on average. All other students attended Somewhat Safe and Orderly schools.


Centerpoint of scale set at 10 .
() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

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

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## Exhibit 6.5: Safe and Orderly School (Continued)

| Country | Safe and Orderly |  | Somewhat Safe and Orderly |  | Not Safe and Orderly |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |
| Honduras | 62 (4.4) | 448 (6.8) | 33 (4.2) | 452 (8.9) | 5 (1.7) | 445 (36.1) | 10.3 (0.18) |
| Kuwait | 61 (4.4) | 422 (9.4) | 34 (4.2) | 415 (11.5) | 6 (1.7) | 391 (19.4) | 9.8 (0.17) |
| Morocco | 41 (4.2) | 428 (8.6) | 46 (4.6) | 421 (6.7) | 13 (2.9) | 406 (7.5) | 9.2 (0.22) |
| Botswana | 27 (4.1) | 450 (10.7) | 56 (4.3) | 412 (5.5) | 16 (2.9) | 399 (7.4) | 8.4 (0.19) |
| Benchmarking Participants ${ }^{\wedge}$ |  |  |  |  |  |  |  |
| Dubai, UAE | 79 (1.9) | 477 (3.3) | 20 (1.9) | 478 (7.8) | 0 (0.0) | ~ | 11.3 (0.08) |
| Abu Dhabi, UAE | 74 (3.6) | 427 (6.0) | 25 (3.6) | 416 (8.9) | 1 (0.6) | ~ | 10.6 (0.15) |
| Alberta, Canada | 72 (3.9) | 555 (3.0) | 27 (3.9) | 531 (6.0) | 1 (0.7) | ~ | 10.9 (0.15) |
| Florida, US | 61 (5.4) | 583 (4.9) | 35 (5.3) | 548 (6.0) | 5 (2.1) | 572 (16.8) | 10.3 (0.22) |
| Ontario, Canada | 60 (4.4) | 557 (3.6) | 34 (4.2) | 545 (5.0) | 6 (1.9) | 522 (6.6) | 10.0 (0.20) |
| Maltese - Malta | 52 (0.2) | 464 (2.2) | 46 (0.2) | 453 (2.5) | 2 (0.1) | ~ | 10.1 (0.01) |
| Quebec, Canada | 45 (4.5) | 540 (2.8) | 51 (4.5) | 537 (3.2) | 5 (1.9) | 519 (6.7) | 9.7 (0.17) |
| Eng/Afr (5) - RSA | 40 (5.7) | 461 (13.1) | 47 (5.6) | 417 (11.2) | 12 (3.6) | 336 (13.6) | 9.2 (0.24) |
| Andalusia, Spain | 39 (4.0) | 524 (4.2) | 55 (4.1) | 513 (3.2) | 6 (2.1) | 475 (11.7) | 9.3 (0.17) |

Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRES $2011 \underset{\text { Grade }}{4 \text { th }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Safe and Orderly |  | Somewhat Safe and Orderly |  | Not Safe and Orderly |  | Average Scale Score |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Colombia | 35 (4.4) | 581 (7.5) | 54 (4.7) | 574 (4.3) | 11 (2.8) | 574 (6.3) | 8.9 (0.21) |
| South Africa | 35 (3.2) | 467 (8.1) | 51 (3.1) | 463 (6.8) | 14 (2.2) | 433 (7.3) | 9.0 (0.15) |
| Botswana | 23 (3.3) | 483 (10.2) | 62 (3.8) | 461 (4.1) | 15 (3.2) | 439 (8.2) | 8.3 (0.17) |



Reported by Principals
Students were scored according to their principals' responses concerning ten potential school problems on the School Discipline and Safety scale. Students in schools with Hardly Any Problems had a score on the scale of at least 9.9, which corresponds to their principals reporting "not a problem" for five of the ten discipline and safety issues and "minor problem" for the other five, on average. Students in schools with Moderate Problems had a score no higher than 7.7, which corresponds to their principals reporting "moderate problem" for five of the ten issues and "minor problem" for the other five, on average. All other students attended schools with Minor Problems.

| Country | Hardly Any Problems |  | Minor Problems |  | Moderate Problems |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Hong Kong SAR | 87 (2.9) | 570 (2.5) | 12 (2.8) | 566 (10.1) | 1 (0.0) | $\sim \sim$ | 11.4 (0.12) |
| Northern Ireland | 85 (3.7) | 561 (2.9) | 15 (3.7) | 546 (7.1) | 0 (0.0) | $\sim \sim$ | 11.1 (0.13) |
| Ireland | 83 (3.5) | 556 (2.5) | 16 (3.3) | 531 (9.0) | 1 (1.0) | ~ ~ | 11.2 (0.12) |
| Georgia | 81 (2.8) | 489 (3.6) | 13 (2.4) | 481 (9.5) | 6 (1.4) | 484 (13.2) | 10.8 (0.14) |
| Chinese Taipei | 77 (3.3) | 552 (2.1) | 23 (3.3) | 555 (4.5) | 0 (0.0) | $\sim \sim$ | 11.4 (0.13) |
| Spain | 77 (3.3) | 517 (2.8) | 14 (2.7) | 499 (6.7) | 10 (2.5) | 510 (9.2) | 10.7 (0.17) |
| Bulgaria | 75 (3.6) | 540 (4.2) | 19 (3.6) | 509 (11.8) | 6 (2.0) | 498 (14.7) | 10.6 (0.15) |
| Lithuania | 75 (3.5) | 531 (2.4) | 25 (3.5) | 522 (4.6) | 0 (0.0) | ~ ~ | 10.6 (0.11) |
| England | 75 (4.4) | 557 (3.3) | 24 (4.3) | 532 (5.8) | 1 (1.0) | $\sim \sim$ | 10.8 (0.15) |
| Iran, Islamic Rep. of | 74 (3.9) | 462 (4.1) | 26 (3.9) | 446 (6.8) | 0 (0.0) | $\sim \sim$ | 10.8 (0.11) |
| Czech Republic | 68 (3.6) | 547 (2.7) | 29 (3.5) | 542 (4.1) | 2 (1.0) | $\sim \sim$ | 10.3 (0.11) |
| New Zealand | 68 (3.3) | 544 (2.9) | 32 (3.3) | 514 (5.7) | 0 (0.4) | $\sim \sim$ | 10.6 (0.11) |
| Singapore | 67 (0.0) | 568 (4.0) | 33 (0.0) | 565 (5.8) | 0 (0.0) | $\sim \sim$ | 10.8 (0.00) |
| Portugal | 65 (5.2) | 543 (3.2) | 30 (5.3) | 538 (6.5) | 5 (1.7) | 524 (8.0) | 10.4 (0.17) |
| Croatia | 65 (4.0) | 557 (2.3) | 33 (4.0) | 544 (3.2) | 2 (1.2) | $\sim \sim$ | 10.5 (0.12) |
| Russian Federation | 65 (3.9) | 571 (3.5) | 35 (3.8) | 564 (4.3) | 0 (0.5) | $\sim \sim$ | 10.3 (0.09) |
| Australia | 64 (3.9) | 534 (3.5) | 34 (3.8) | 521 (4.5) | 2 (1.0) | $\sim \sim$ | 10.5 (0.12) |
| Finland | 64 (4.5) | 571 (2.3) | 34 (4.4) | 564 (3.2) | 2 (1.2) | ~ ~ | 10.3 (0.12) |
| Romania | 64 (4.1) | 512 (5.2) | 23 (3.4) | 500 (10.6) | 13 (2.9) | 454 (14.3) | 10.3 (0.17) |
| Malta | 64 (0.1) | 492 (1.9) | 30 (0.1) | 454 (2.8) | 6 (0.1) | 448 (6.3) | 10.2 (0.00) |
| United States | 63 (2.7) | 564 (2.0) | 35 (2.8) | 548 (2.7) | 2 (0.8) | ~ ~ | 10.3 (0.09) |
| Qatar | 63 (3.2) | 441 (5.2) | 23 (2.6) | 405 (8.7) | 14 (2.3) | 384 (12.2) | 10.1 (0.14) |
| Azerbaijan | 62 (4.2) | 464 (4.0) | 8 (2.3) | 455 (9.5) | 30 (3.9) | 461 (7.5) | 9.6 (0.26) |
| France | 62 (4.5) | 527 (2.6) | 33 (4.3) | 507 (5.5) | 5 (1.8) | 502 (14.3) | 10.4 (0.12) |
| United Arab Emirates | 61 (2.3) | 449 (3.1) | 24 (1.9) | 414 (4.7) | 15 (1.7) | 412 (6.6) | 10.0 (0.11) |
| Canada | 60 (2.4) | 554 (2.0) | 37 (2.4) | 539 (2.4) | 3 (0.7) | 531 (4.5) | 10.3 (0.07) |
| Norway | 58 (4.4) | 507 (2.9) | 39 (4.2) | 507 (3.2) | 3 (1.6) | 496 (10.2) | 10.0 (0.13) |
| Belgium (French) | 57 (4.7) | 515 (3.2) | 38 (4.5) | 496 (5.7) | 5 (2.2) | 496 (8.1) | 10.1 (0.16) |
| Slovak Republic | 57 (3.6) | 539 (2.6) | 35 (3.4) | 534 (5.5) | 9 (2.0) | 514 (15.0) | 10.0 (0.12) |
| Italy | 56 (3.9) | 541 (3.1) | 25 (3.8) | 546 (4.7) | 19 (2.9) | 538 (5.5) | 9.6 (0.14) |
| Denmark | 56 (3.5) | 557 (2.4) | 42 (3.3) | 550 (2.7) | 2 (1.0) | ~ ~ | 10.1 (0.09) |
| Slovenia | 53 (3.7) | 530 (2.8) | 42 (3.6) | 532 (3.2) | 4 (1.4) | 519 (7.6) | 10.1 (0.12) |
| Poland | 51 (3.9) | 527 (2.7) | 46 (4.2) | 524 (3.8) | 3 (1.4) | 530 (16.0) | 9.9 (0.09) |
| Hungary | 50 (4.2) | 553 (4.3) | 45 (4.2) | 533 (4.9) | 5 (1.5) | 470 (20.2) | 9.8 (0.13) |
| Sweden | 49 (4.7) | 551 (2.7) | 45 (4.7) | 534 (4.0) | 6 (1.2) | 523 (7.6) | 9.8 (0.13) |
| Austria | 46 (4.3) | 533 (2.9) | 42 (4.1) | 527 (3.6) | 12 (3.3) | 522 (5.1) | 9.5 (0.14) |
| Israel | 46 (4.5) | 550 (6.5) | 39 (4.3) | 549 (5.6) | 16 (3.1) | 493 (12.2) | 9.2 (0.21) |
| Saudi Arabia | 45 (3.9) | 440 (4.8) | 25 (3.8) | 412 (13.5) | 30 (3.8) | 430 (8.6) | 9.2 (0.18) |
| Germany | 41 (3.3) | 554 (3.1) | 53 (3.5) | 538 (3.2) | 6 (1.5) | 498 (9.3) | 9.6 (0.08) |
| Trinidad and Tobago | 38 (4.3) | 483 (7.2) | 52 (4.4) | 464 (6.0) | 10 (2.4) | 460 (10.6) | 9.4 (0.12) |
| Oman | 28 (2.9) | 397 (4.2) | 37 (3.1) | 377 (4.5) | 35 (3.0) | 382 (5.8) | 8.5 (0.15) |
| Netherlands | 25 (4.6) | 555 (3.9) | 67 (5.3) | 545 (2.3) | 8 (3.3) | 536 (14.0) | 9.1 (0.10) |
| Colombia | 25 (3.4) | 463 (9.0) | 33 (4.7) | 435 (6.8) | 42 (4.4) | 449 (7.2) | 8.0 (0.19) |
| Morocco | 14 (2.5) | 330 (11.0) | 22 (2.9) | 294 (6.6) | 63 (3.7) | 316 (5.1) | 7.3 (0.15) |
| Indonesia | 7 (2.4) | 442 (14.2) | 18 (3.6) | 428 (11.8) | 75 (4.3) | 428 (4.8) | 6.2 (0.21) |
| International Avg. | 58 (0.5) | 519 (0.7) | 31 (0.5) | 504 (1.0) | 11 (0.3) | 476 (2.0) |  |

[^2]() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

A tilde (~) indicates insufficient data to report achievement.
$A n$ " $r$ " indicates data are available for at least $70 \%$ but less than $85 \%$ of the students.

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| Country |  | Hardly Any Problems |  | Minor Problems |  | Moderate Problems |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |  |
| Honduras |  | 44 (4.5) | 459 (7.6) | 37 (4.9) | 448 (10.0) | 19 (3.3) | 430 (10.0) | 9.2 (0.17) |
| Botswana |  | 27 (3.9) | 443 (12.2) | 58 (4.2) | 415 (4.8) | 14 (2.9) | 384 (7.7) | 9.1 (0.12) |
| Morocco |  | 15 (2.7) | 439 (8.8) | 23 (3.0) | 417 (9.6) | 62 (3.8) | 426 (5.9) | 7.3 (0.16) |
| Kuwait |  | 13 (3.2) | 430 (16.3) | 54 (4.5) | 421 (10.1) | 33 (3.6) | 405 (10.0) | 8.0 (0.15) |
| Benchmarking Participants ${ }^{\diamond}$ |  |  |  |  |  |  |  |  |
| Dubai, UAE |  | 74 (0.4) | 489 (2.3) | 17 (0.4) | 428 (5.9) | 10 (0.1) | 448 (3.3) | 10.7 (0.01) |
| Andalusia, Spain |  | 71 (4.3) | 518 (3.0) | 20 (3.8) | 508 (6.4) | 9 (2.6) | 505 (9.1) | 10.4 (0.19) |
| Alberta, Canada |  | 68 (3.8) | 553 (3.6) | 30 (3.6) | 545 (4.8) | 2 (1.2) | ~ ~ | 10.4 (0.11) |
| Maltese - Malta |  | 64 (0.1) | 464 (2.0) | 30 (0.1) | 448 (2.6) | 6 (0.1) | 435 (5.0) | 10.2 (0.00) |
| Abu Dhabi, UAE |  | 63 (4.2) | 431 (5.7) | 25 (4.0) | 402 (9.9) | 12 (2.8) | 391 (9.3) | 10.1 (0.18) |
| Ontario, Canada |  | 61 (4.6) | 556 (3.6) | 36 (4.5) | 544 (4.3) | 4 (1.7) | 540 (5.2) | 10.3 (0.15) |
| Florida, US | $r$ | 60 (6.5) | 579 (4.6) | 40 (6.5) | 555 (5.6) | 0 (0.0) | ~ ~ | 10.4 (0.20) |
| Quebec, Canada |  | 56 (4.3) | 542 (3.0) | 40 (4.1) | 533 (3.3) | 4 (1.9) | 526 (5.2) | 10.1 (0.12) |
| Eng/Afr (5) - RSA | $r$ | 31 (5.4) | 470 (14.5) | 54 (6.2) | 408 (11.8) | 15 (5.4) | 336 (27.6) | 9.1 (0.20) |

${ }^{\bullet}$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRLS2011 $\underset{\text { Grade }}{4 \text { th }}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Hardly Any Problems |  | Minor Problems |  | Moderate Problems |  | Average |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Scale Score |
| Colombia | 25 (3.4) | 587 (7.3) | 33 (4.7) | 568 (5.9) | 42 (4.4) | 576 (5.9) | 8.0 (0.19) |
| South Africa | 24 (2.8) | 494 (10.4) | 56 (3.3) | 446 (5.2) | 21 (2.7) | 437 (10.3) | 8.8 (0.10) |
| Botswana | 24 (3.4) | 501 (12.4) | 60 (4.4) | 455 (3.8) | 16 (3.4) | 440 (6.8) | 8.9 (0.11) |


| To what degree is each of the following a problem among fourth grade students in your school? |
| :--- | :--- |
| Minor |
| Moderate |

## Students Bullied at School

In general, bullying involves aggression or negative behavior intended to harm or bother less physically or psychologically powerful persons, although a New Zealand review of the literature found a range of definitions and terminology relating bullying to violence and abuse (Carroll-Lind, 2009). There is growing evidence that bullying in schools is on the rise, especially with the emergence of cyber-bullying, and that bullying does have a negative impact on students' educational achievement. To provide data about bullying in the participating countries, PIRLS 2011 created the Students Bullied at School scale, based on how often students experienced six bullying behaviors:

- I was made fun of or called names;
- I was left out of games or activities by other students;
- Someone spread lies about me;
- Having something stolen;
- I was hit or hurt by other student(s); and
- I was made to do things I didn't want to do by other students.

Exhibit 6.7 provides the results for the Students Bullied at School scale. Students were scored according to their responses to how often they experienced six bullying behaviors (detailed on the second page of the exhibit). Students bullied Almost Never reported never experiencing three of six bullying behaviors and each of the other three behaviors "a few times a year," on average. Internationally, across the fourth grade countries, 47 percent of the students, on average, Almost Never experienced these bullying behaviors. However, the percentages ranged from 26 to 75 percent.

The majority of the fourth grade students reported being bullied either About Monthly or About Weekly. Internationally, across the fourth grade countries, 33 percent of the students, on average, were bullied About Monthly and 20 percent were bullied About Weekly. Students bullied About Weekly reported experiencing each of three of the six behaviors "once or twice a month" (bullied 3-6 times a month) and, in addition, each of the other three "a few times a year," on average.

Fourth grade students' reports about being bullied were directly related to their average reading achievement on PIRLS 2011. Each successive category of increased bullying was related to a decrease in average reading achievement to the extent that there was a 34-point difference in achievement between Almost Never being bullied and being bullied About Weekly (523 vs. 489). Higher percentages of students in the sixth grade and prePIRLS countries reported being bullied About Weekly than did students, on average, in the fourth grade. However, there were also several countries where relatively high percentages of fourth grade students (37-38\%) reported being bullied About Weekly.

Reported by Students
Students were scored according to their responses to how often they experienced six bullying behaviors on the Students Bullied at School scale. Students bullied Almost Never had a score on the scale of at least 10.1, which corresponds to "never" experiencing three of the six bullying behaviors and each of the other three behaviors "a few times a year," on average. Students bullied About Weekly had a score no higher than 8.3, which corresponds to their experiencing each of three of the six behaviors "once or twice a month" and each of the other three "a few times a year," on average. All other students were bullied About Monthly.

| Country | Almost Never |  | About Monthly |  | About Weekly |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Azerbaijan | 75 (1.5) | 476 (3.1) | 16 (1.1) | 461 (3.9) | 9 (0.7) | 429 (6.1) | 11.4 (0.08) |
| Sweden | 68 (1.0) | 548 (2.4) | 25 (1.0) | 535 (3.0) | 7 (0.5) | 509 (4.7) | 11.0 (0.04) |
| Georgia | 66 (1.1) | 502 (2.7) | 23 (0.8) | 486 (4.1) | 11 (0.8) | 441 (8.1) | 10.9 (0.06) |
| Denmark | 65 (0.9) | 559 (1.9) | 27 (0.9) | 550 (2.5) | 8 (0.4) | 534 (5.1) | 10.8 (0.04) |
| Ireland | 64 (1.2) | 563 (2.5) | 25 (0.9) | 545 (4.0) | 12 (0.8) | 510 (5.0) | 10.7 (0.05) |
| Finland | 61 (1.2) | 573 (2.1) | 30 (0.9) | 566 (2.7) | 9 (0.6) | 543 (4.0) | 10.6 (0.04) |
| Poland | 61 (0.9) | 533 (2.3) | 26 (0.8) | 524 (3.1) | 13 (0.6) | 500 (3.6) | 10.7 (0.04) |
| Croatia | 61 (1.1) | 560 (2.2) | 28 (0.9) | 550 (2.3) | 11 (0.6) | 526 (3.5) | 10.6 (0.05) |
| Northern Ireland | 57 (1.3) | 567 (2.7) | 29 (1.0) | 557 (3.8) | 14 (0.9) | 527 (5.0) | 10.4 (0.06) |
| France | 54 (1.2) | 529 (2.5) | 32 (0.9) | 513 (3.5) | 13 (0.8) | 503 (3.7) | 10.3 (0.05) |
| Austria | 53 (1.3) | 536 (2.1) | 30 (0.9) | 529 (3.0) | 17 (0.9) | 511 (3.2) | 10.2 (0.05) |
| Norway | 53 (1.8) | 514 (2.4) | 33 (1.1) | 504 (2.9) | 14 (0.9) | 494 (3.9) | 10.2 (0.06) |
| Chinese Taipei | 53 (1.3) | 562 (2.1) | 30 (0.8) | 552 (2.6) | 17 (0.8) | 528 (3.2) | 10.3 (0.06) |
| United States | 52 (0.7) | 568 (1.7) | 30 (0.5) | 557 (1.7) | 18 (0.5) | 531 (2.8) | 10.2 (0.03) |
| Netherlands | 51 (1.0) | 550 (2.2) | 33 (0.8) | 548 (2.0) | 16 (0.8) | 530 (3.3) | 10.1 (0.04) |
| Italy | 51 (1.2) | 549 (2.4) | 33 (1.0) | 543 (2.7) | 16 (0.7) | 521 (4.1) | 10.2 (0.05) |
| Hong Kong SAR | 51 (1.2) | 577 (2.4) | 33 (0.8) | 571 (2.6) | 17 (0.6) | 553 (3.7) | 10.1 (0.04) |
| Slovenia | 50 (1.3) | 538 (2.2) | 32 (0.8) | 535 (3.1) | 18 (1.0) | 502 (3.6) | 10.1 (0.06) |
| Portugal | 48 (1.4) | 548 (3.1) | 35 (1.2) | 541 (2.6) | 17 (0.9) | 521 (4.6) | 10.1 (0.06) |
| Germany | 48 (1.1) | 554 (2.7) | 36 (0.8) | 540 (2.1) | 16 (0.7) | 523 (4.4) | 10.1 (0.05) |
| Lithuania | 48 (1.3) | 539 (2.3) | 35 (0.9) | 529 (3.0) | 17 (0.8) | 498 (3.8) | 10.1 (0.05) |
| Romania | 47 (1.8) | 518 (4.5) | 32 (1.5) | 502 (5.5) | 21 (1.1) | 476 (6.8) | 10.0 (0.07) |
| Slovak Republic | 46 (1.1) | 545 (2.3) | 34 (0.8) | 535 (3.5) | 20 (0.9) | 516 (3.9) | 10.0 (0.05) |
| Bulgaria | 46 (1.3) | 544 (4.5) | 35 (1.0) | 534 (4.1) | 18 (0.8) | 511 (5.0) | 10.0 (0.05) |
| Czech Republic | 46 (1.2) | 553 (2.6) | 34 (1.0) | 547 (2.6) | 20 (0.8) | 526 (3.8) | 10.0 (0.05) |
| Russian Federation | 45 (1.4) | 576 (2.9) | 35 (1.0) | 567 (3.1) | 19 (1.0) | 555 (3.9) | 10.0 (0.06) |
| England | 45 (1.5) | 567 (3.2) | 35 (1.0) | 552 (3.0) | 20 (1.1) | 521 (4.8) | 9.9 (0.06) |
| Canada | 44 (0.7) | 561 (2.0) | 36 (0.6) | 548 (2.0) | 20 (0.6) | 526 (2.5) | 9.8 (0.03) |
| Spain | 43 (1.1) | 521 (2.7) | 34 (0.8) | 515 (2.6) | 23 (0.9) | 496 (3.6) | 9.8 (0.05) |
| Malta | 42 (0.8) | 494 (2.1) | 36 (0.8) | 478 (3.0) | 22 (0.7) | 447 (3.4) | 9.8 (0.03) |
| Iran, Islamic Rep. of | 41 (1.7) | 457 (4.6) | 35 (1.2) | 462 (3.4) | 23 (1.3) | 451 (4.1) | 9.9 (0.07) |
| Hungary | 40 (1.1) | 549 (4.8) | 36 (0.8) | 544 (3.3) | 24 (0.8) | 521 (3.4) | 9.7 (0.04) |
| Saudi Arabia | 39 (1.7) | 446 (4.4) | 33 (1.2) | 436 (5.1) | 27 (1.2) | 404 (6.3) | 9.6 (0.08) |
| Singapore | 39 (0.9) | 581 (3.2) | 38 (0.6) | 569 (3.5) | 23 (0.8) | 543 (4.3) | 9.7 (0.04) |
| Australia | 37 (1.1) | 539 (2.8) | 38 (1.0) | 529 (2.7) | 25 (0.8) | 509 (3.8) | 9.6 (0.04) |
| Colombia | 36 (1.9) | 461 (6.0) | 31 (1.2) | 462 (4.8) | 34 (1.9) | 431 (4.3) | 9.4 (0.10) |
| Morocco | 35 (1.9) | 331 (6.5) | 33 (1.0) | 313 (4.3) | 32 (1.6) | 296 (4.8) | 9.4 (0.08) |
| United Arab Emirates | 34 (0.8) | 460 (3.3) | 35 (0.5) | 443 (2.8) | 31 (0.8) | 415 (3.3) | 9.4 (0.04) |
| New Zealand | 33 (0.8) | 554 (2.6) | 37 (0.7) | 537 (2.7) | 30 (0.8) | 504 (2.9) | 9.3 (0.03) |
| Oman | 31 (1.2) | 407 (3.5) | 37 (0.9) | 392 (3.5) | 31 (1.0) | 377 (3.5) | 9.3 (0.05) |
| Qatar | 30 (1.1) | 459 (4.9) | 32 (1.0) | 438 (5.1) | 38 (1.0) | 399 (3.7) | 9.1 (0.05) |
| Belgium (French) | 28 (1.0) | 511 (3.7) | 39 (1.2) | 511 (3.4) | 33 (1.7) | 496 (3.4) | 9.2 (0.05) |
| Indonesia | 28 (1.5) | 434 (5.0) | 36 (1.2) | 436 (3.8) | 37 (1.4) | 425 (5.2) | 9.2 (0.07) |
| Trinidad and Tobago | 26 (1.1) | 488 (5.2) | 37 (1.1) | 478 (4.3) | 37 (1.2) | 455 (4.4) | 9.1 (0.05) |
| Israel | -- | -- | - - | -- | - - | - - | -- |
| International Avg. | 47 (0.2) | 523 (0.5) | 33 (0.1) | 513 (0.5) | 20 (0.1) | 489 (0.7) |  |

[^3]() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

A dash (-) indicates comparable data are not available

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| Country | Almost Never |  | About Monthly |  | About Weekly |  | Average Scale Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Sixth Grade Participants |  |  |  |  |  |  |  |
| Kuwait | 39 (1.1) | 459 (5.7) | 32 (1.0) | 432 (5.6) | 28 (1.2) | 375 (8.0) | 9.6 (0.05) |
| Morocco | 38 (1.5) | 438 (4.9) | 36 (1.1) | 430 (4.7) | 26 (1.5) | 398 (5.5) | 9.6 (0.06) |
| Honduras | 38 (1.2) | 461 (5.2) | 32 (0.9) | 457 (5.0) | 30 (1.1) | 431 (6.1) | 9.5 (0.06) |
| Botswana | 11 (0.7) | 450 (8.3) | 41 (0.9) | 426 (4.8) | 47 (1.1) | 409 (4.1) | 8.6 (0.03) |
| Benchmarking Participants ${ }^{\text {® }}$ |  |  |  |  |  |  |  |
| Florida, US | 53 (1.5) | 579 (3.2) | 28 (1.0) | 571 (3.6) | 19 (1.2) | 545 (3.9) | 10.2 (0.07) |
| Andalusia, Spain | 46 (1.2) | 523 (2.8) | 34 (1.0) | 515 (2.8) | 20 (0.8) | 498 (3.2) | 10.0 (0.05) |
| Alberta, Canada | 44 (1.1) | 560 (3.4) | 35 (1.0) | 547 (3.3) | 21 (0.8) | 527 (3.4) | 9.8 (0.04) |
| Quebec, Canada | 44 (1.3) | 550 (2.3) | 37 (1.1) | 534 (3.0) | 19 (1.1) | 517 (3.2) | 9.9 (0.05) |
| Maltese - Malta | 41 (0.9) | 476 (2.1) | 36 (0.8) | 456 (2.4) | 22 (0.6) | 426 (3.1) | 9.7 (0.03) |
| Ontario, Canada | 40 (1.2) | 567 (2.8) | 38 (1.1) | 552 (3.5) | 22 (1.0) | 526 (4.7) | 9.7 (0.05) |
| Dubai, UAE | 37 (1.5) | 501 (3.2) | 35 (0.7) | 483 (3.8) | 28 (1.1) | 445 (4.0) | 9.6 (0.06) |
| Abu Dhabi, UAE | 33 (1.4) | 441 (6.0) | 36 (0.9) | 430 (5.5) | 31 (1.4) | 407 (5.2) | 9.4 (0.07) |
| Eng/Afr (5) - RSA | 19 (1.1) | 500 (9.2) | 33 (1.1) | 445 (6.4) | 48 (1.6) | 386 (8.5) | 8.5 (0.06) |

${ }^{\bullet}$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

| Country |  |  |  |  | prePIRLS 2011 $4^{\text {th }}$$\square$ Grade |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Almost Never |  | About Monthly |  | About Weekly |  | Average Scale Score |
|  | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement |  |
| Colombia | 36 (1.9) | 587 (5.2) | 30 (1.1) | 588 (3.9) | 34 (1.8) | 562 (3.8) | 9.4 (0.10) |
| South Africa | 17 (1.1) | 511 (6.6) | 28 (0.6) | 483 (4.3) | 55 (1.3) | 447 (3.3) | 8.3 (0.06) |
| Botswana | 10 (1.3) | 497 (9.9) | 36 (1.2) | 473 (4.0) | 54 (1.7) | 454 (3.5) | 8.4 (0.06) |




[^0]:    Centerpoint of scale set at 10.

[^1]:    Centerpoint of scale set at 10 .

[^2]:    Centerpoint of scale set at 10

[^3]:    Centerpoint of scale set at 10

