

Exhibit 10.7: Students Value Science

Reported by Students

Students were scored according to their degree of agreement with nine statements on the *Students Value Science* scale. Students who **Strongly Value Science** had a score on the scale of at least 10.7, which corresponds to their “agreeing a lot” with five of the nine statements and “agreeing a little” with the other four, on average. Students who **Do Not Value Science** had a score no higher than 8.4, which corresponds to their “disagreeing a little” with five of the nine statements and “agreeing a little” with the other four, on average. All other students **Value Science**.

| Country | Strongly Value Science | | Value Science | | Do Not Value Science | | Average Scale Score | Difference in Average Scale Score from 2011 | |
|-----------------------|------------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---|---|
| | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement | | | |
| Botswana (9) | 73 (0.8) | 423 (2.3) | 23 (0.7) | 332 (4.2) | 4 (0.3) | 292 (9.6) | 11.6 (0.03) | 0.2 (0.04) | ▲ |
| Jordan | 68 (0.9) | 440 (3.2) | 25 (0.8) | 414 (4.4) | 7 (0.5) | 391 (7.3) | 11.4 (0.04) | 0.2 (0.06) | ▲ |
| Egypt | 65 (1.2) | 392 (3.9) | 29 (0.9) | 347 (5.4) | 6 (0.4) | 334 (6.9) | 11.3 (0.05) | ◊ ◊ | |
| Oman | 62 (1.0) | 469 (2.7) | 32 (0.9) | 438 (3.5) | 6 (0.4) | 429 (5.7) | 11.1 (0.04) | -0.1 (0.05) | |
| Morocco | 59 (1.0) | 402 (2.7) | 33 (0.7) | 387 (3.4) | 8 (0.4) | 389 (4.5) | 11.0 (0.04) | -- | |
| Lebanon | 58 (1.3) | 420 (5.0) | 32 (1.1) | 381 (6.4) | 10 (0.7) | 359 (9.2) | 11.0 (0.05) | -- | |
| Iran, Islamic Rep. of | 57 (1.1) | 465 (4.8) | 32 (0.8) | 446 (4.2) | 10 (0.6) | 446 (5.1) | 10.9 (0.05) | 0.4 (0.06) | ▲ |
| South Africa (9) | 57 (1.2) | 366 (5.6) | 31 (0.8) | 344 (6.1) | 12 (0.8) | 383 (9.4) | 10.8 (0.05) | 0.1 (0.07) | |
| Kuwait | 54 (1.1) | 422 (5.8) | 36 (1.0) | 405 (6.1) | 10 (0.6) | 381 (7.8) | 10.7 (0.04) | ◊ ◊ | |
| Bahrain | 52 (1.1) | 485 (2.6) | 34 (0.9) | 457 (3.6) | 14 (0.6) | 435 (5.0) | 10.6 (0.04) | 0.4 (0.06) | ▲ |
| Qatar | 50 (1.0) | 486 (3.8) | 35 (0.9) | 443 (3.6) | 15 (0.5) | 411 (4.7) | 10.6 (0.04) | 0.1 (0.07) | |
| Thailand | 49 (1.2) | 472 (4.6) | 45 (1.1) | 442 (4.2) | 6 (0.4) | 427 (7.2) | 10.7 (0.04) | 0.2 (0.06) | ▲ |
| Saudi Arabia | 49 (1.5) | 411 (5.5) | 36 (1.0) | 391 (5.0) | 15 (1.1) | 381 (6.3) | 10.5 (0.07) | 0.0 (0.09) | |
| United Arab Emirates | 48 (0.7) | 504 (2.8) | 39 (0.5) | 460 (2.6) | 13 (0.5) | 438 (4.1) | 10.5 (0.03) | 0.1 (0.05) | |
| Turkey | 46 (1.0) | 505 (4.5) | 40 (0.8) | 485 (4.5) | 14 (0.8) | 485 (5.2) | 10.4 (0.05) | 0.4 (0.06) | ▲ |
| Georgia | 43 (1.2) | 454 (3.7) | 45 (1.1) | 444 (4.0) | 12 (0.8) | 430 (6.8) | 10.5 (0.05) | -- | |
| Kazakhstan | 41 (1.2) | 546 (4.8) | 49 (1.0) | 525 (5.2) | 10 (0.8) | 527 (6.6) | 10.5 (0.05) | -- | |
| Israel | 40 (1.1) | 523 (4.6) | 36 (0.7) | 512 (4.4) | 24 (1.0) | 481 (4.9) | 10.0 (0.06) | 0.3 (0.08) | ▲ |
| England | 39 (1.1) | 558 (4.1) | 43 (0.8) | 536 (3.9) | 18 (0.9) | 502 (4.5) | 10.1 (0.05) | 0.0 (0.07) | |
| United States | 38 (0.8) | 550 (3.2) | 42 (0.7) | 529 (2.8) | 19 (0.6) | 501 (3.1) | 10.1 (0.03) | 0.3 (0.05) | ▲ |
| Malaysia | 38 (1.0) | 483 (3.4) | 54 (0.8) | 481 (4.3) | 9 (0.8) | 387 (8.9) | 10.4 (0.04) | 0.1 (0.08) | |
| Russian Federation | 38 (1.4) | 544 (5.2) | 48 (1.2) | 545 (4.1) | 14 (0.6) | 543 (5.9) | 10.2 (0.05) | -- | |
| Lithuania | 38 (1.1) | 525 (3.5) | 47 (0.9) | 517 (3.1) | 15 (0.8) | 515 (5.2) | 10.2 (0.04) | -- | |
| Singapore | 37 (0.8) | 621 (3.4) | 53 (0.7) | 589 (3.4) | 10 (0.5) | 548 (4.7) | 10.2 (0.03) | 0.1 (0.04) | |
| Malta | 37 (0.7) | 536 (2.9) | 37 (0.8) | 475 (2.8) | 26 (0.7) | 436 (3.6) | 9.9 (0.03) | ◊ ◊ | |
| Canada | 37 (0.8) | 546 (2.5) | 44 (0.8) | 525 (2.4) | 19 (0.8) | 501 (2.9) | 10.1 (0.03) | ◊ ◊ | |
| Chile | 32 (1.1) | 458 (4.3) | 41 (0.9) | 453 (3.6) | 27 (0.8) | 455 (3.4) | 9.7 (0.05) | -0.2 (0.06) | ▼ |
| New Zealand | 30 (0.8) | 537 (4.1) | 46 (0.7) | 514 (3.4) | 24 (0.9) | 486 (3.2) | 9.7 (0.04) | 0.5 (0.06) | ▲ |
| Ireland | 30 (0.9) | 557 (3.4) | 43 (0.8) | 540 (3.0) | 27 (1.0) | 501 (3.8) | 9.6 (0.05) | ◊ ◊ | |
| Australia | 27 (0.9) | 547 (3.2) | 41 (0.6) | 517 (2.7) | 32 (0.8) | 482 (3.4) | 9.4 (0.04) | 0.3 (0.08) | ▲ |
| Hong Kong SAR | 24 (1.0) | 565 (5.0) | 46 (1.0) | 549 (4.2) | 31 (1.2) | 528 (4.3) | 9.4 (0.05) | -0.1 (0.07) | |
| Sweden | 21 (1.0) | 535 (5.7) | 50 (0.9) | 532 (3.7) | 28 (1.3) | 503 (3.8) | 9.4 (0.05) | -- | |
| Norway (9) | 21 (0.9) | 526 (4.4) | 51 (0.8) | 515 (3.1) | 29 (0.9) | 489 (3.4) | 9.4 (0.04) | ◊ ◊ | |
| Hungary | 21 (0.9) | 539 (6.8) | 48 (0.8) | 526 (3.4) | 32 (1.1) | 522 (3.5) | 9.3 (0.04) | -- | |
| Slovenia | 20 (0.8) | 577 (4.2) | 52 (0.9) | 556 (2.9) | 28 (1.0) | 525 (3.2) | 9.3 (0.04) | -- | |
| Italy | 15 (0.7) | 516 (4.5) | 46 (1.1) | 502 (2.9) | 40 (1.1) | 490 (3.3) | 9.0 (0.04) | 0.1 (0.05) | |
| Korea, Rep. of | 13 (0.6) | 605 (4.2) | 51 (0.9) | 566 (1.9) | 36 (0.9) | 522 (2.5) | 9.0 (0.04) | 0.1 (0.05) | |
| Chinese Taipei | 11 (0.5) | 616 (4.5) | 38 (0.9) | 589 (2.5) | 51 (1.0) | 546 (2.1) | 8.6 (0.03) | 0.1 (0.06) | |
| Japan | 9 (0.5) | 605 (3.6) | 44 (0.8) | 586 (2.0) | 47 (0.9) | 550 (2.3) | 8.6 (0.03) | 0.1 (0.05) | |
| International Avg. | 40 (0.2) | 506 (0.7) | 41 (0.1) | 482 (0.6) | 19 (0.1) | 460 (0.9) | | | |

SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS 2015

This TIMSS questionnaire scale was established in 2011 based on the combined response distribution of all countries that participated in TIMSS 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.

A diamond (◊) indicates the country did not participate in the 2011 assessment.

A dash (-) indicates comparable data are not available.

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

Significantly higher than 2011 ▲

Significantly lower than 2011 ▼

Exhibit 10.7: Students Value Science (Continued)

| Country | Strongly Value Science | | Value Science | | Do Not Value Science | | Average Scale Score | Difference in Average Scale Score from 2011 | |
|----------------------------------|------------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---|---|
| | Percent of Students | Average Achievement | Percent of Students | Average Achievement | Percent of Students | Average Achievement | | | |
| Benchmarking Participants | | | | | | | | | |
| Dubai, UAE | 52 (1.0) | 546 (2.5) | 36 (0.8) | 509 (2.7) | 12 (0.7) | 489 (5.0) | 10.7 (0.04) | 0.3 (0.06) | ▲ |
| Abu Dhabi, UAE | 47 (1.6) | 484 (6.4) | 40 (1.0) | 438 (5.8) | 13 (1.0) | 415 (7.2) | 10.5 (0.08) | 0.1 (0.09) | |
| Ontario, Canada | 41 (1.2) | 542 (2.8) | 41 (0.9) | 521 (3.0) | 19 (0.9) | 500 (3.4) | 10.2 (0.04) | 0.4 (0.06) | ▲ |
| Florida, US | 37 (1.1) | 526 (6.8) | 42 (1.0) | 511 (6.6) | 21 (0.7) | 484 (5.7) | 10.0 (0.05) | 0.2 (0.09) | ▲ |
| Quebec, Canada | 30 (1.4) | 552 (4.3) | 50 (1.5) | 534 (3.8) | 20 (1.3) | 505 (4.4) | 9.8 (0.06) | 0.4 (0.07) | ▲ |
| Norway (8) | 24 (0.9) | 503 (3.6) | 49 (0.8) | 490 (2.9) | 27 (0.9) | 479 (2.9) | 9.5 (0.04) | 0.2 (0.06) | ▲ |
| Buenos Aires, Argentina | 24 (1.2) | 383 (6.3) | 45 (1.2) | 392 (5.5) | 31 (1.0) | 394 (5.5) | 9.3 (0.05) | 0 | ◊ |

Significantly higher than 2011 ▲
Significantly lower than 2011 ▼

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

