

Exhibit 10.5: Students Confident in Science

Reported by Students

Students were scored according to their degree of agreement with seven statements on the *Students Confident in Science* scale. Students **Very Confident in Science** had a score on the scale of at least 10.2, which corresponds to their “agreeing a lot” with four of the seven statements and “agreeing a little” with the other three, on average. Students who were **Not Confident in Science** had a score no higher than 8.2, which corresponds to their “disagreeing a little” with four of the seven statements and “agreeing a little” with the other three, on average. All other students were **Confident in Science**.

Country	Very Confident in Science		Confident in Science		Not Confident in 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			
Turkey	61 (1.1)	514 (2.8)	28 (0.9)	453 (3.9)	11 (0.6)	399 (6.6)	10.8 (0.05)	0.2 (0.07)	▲
Bulgaria	60 (1.6)	569 (4.1)	28 (1.0)	514 (6.7)	12 (0.9)	445 (10.4)	10.8 (0.07)	◊ ◊	
Iran, Islamic Rep. of	56 (1.3)	452 (4.7)	30 (1.3)	402 (5.1)	14 (0.9)	348 (9.1)	10.7 (0.06)	-0.3 (0.08)	▼
Serbia	54 (1.4)	544 (5.2)	31 (1.0)	517 (4.4)	15 (1.0)	478 (5.6)	10.5 (0.06)	0.1 (0.09)	
Kuwait	52 (1.3)	373 (7.1)	33 (1.0)	314 (7.0)	15 (0.9)	277 (9.5)	10.4 (0.05)	◊ ◊	
Oman	50 (1.3)	470 (3.7)	35 (1.0)	413 (3.5)	15 (0.7)	359 (5.3)	10.4 (0.05)	-0.2 (0.07)	
Norway (5)	50 (1.2)	551 (2.7)	42 (1.0)	531 (3.0)	9 (0.6)	500 (5.7)	10.3 (0.05)	◊ ◊	
Kazakhstan	49 (1.4)	568 (5.0)	41 (1.2)	536 (4.8)	10 (0.8)	516 (8.9)	10.5 (0.06)	0.0 (0.09)	
Croatia	48 (1.3)	549 (2.3)	42 (1.1)	525 (2.5)	10 (0.7)	499 (5.3)	10.4 (0.05)	-0.5 (0.07)	▼
Bahrain	48 (1.0)	499 (3.1)	35 (1.0)	442 (4.0)	17 (0.7)	393 (6.1)	10.3 (0.04)	0.1 (0.08)	
Portugal	47 (1.3)	523 (2.5)	41 (1.0)	502 (2.4)	11 (0.8)	469 (4.5)	10.2 (0.05)	0.2 (0.08)	▲
Qatar	47 (1.2)	478 (3.7)	34 (0.8)	427 (4.2)	20 (0.9)	371 (7.1)	10.2 (0.05)	0.0 (0.07)	
Germany	47 (1.1)	548 (2.4)	40 (1.0)	529 (2.8)	14 (0.7)	496 (5.3)	10.1 (0.04)	-0.2 (0.06)	▼
Hungary	45 (1.2)	570 (2.7)	39 (0.9)	529 (3.8)	16 (0.8)	499 (6.2)	10.1 (0.05)	-0.1 (0.07)	
United States	44 (0.8)	569 (2.1)	38 (0.7)	542 (2.2)	17 (0.6)	506 (3.6)	10.0 (0.03)	-0.1 (0.05)	
Lithuania	44 (1.2)	552 (2.7)	42 (1.0)	519 (3.0)	14 (0.6)	483 (5.4)	10.0 (0.04)	0.0 (0.06)	
Georgia	44 (1.3)	478 (3.7)	42 (1.3)	450 (4.3)	14 (1.0)	396 (5.7)	10.1 (0.05)	-0.4 (0.08)	▼
United Arab Emirates	43 (0.7)	503 (2.6)	40 (0.6)	435 (3.2)	17 (0.5)	379 (3.9)	10.1 (0.03)	-0.3 (0.04)	▼
Spain	42 (1.1)	544 (2.5)	36 (0.8)	513 (2.9)	22 (0.9)	480 (3.7)	10.0 (0.05)	0.2 (0.07)	
Saudi Arabia	41 (1.3)	440 (5.3)	36 (1.1)	384 (5.2)	23 (1.1)	342 (7.8)	10.0 (0.06)	-0.7 (0.09)	▼
Russian Federation	40 (1.1)	582 (3.3)	41 (0.7)	566 (3.8)	19 (1.0)	543 (6.5)	9.9 (0.05)	-0.3 (0.07)	▼
Sweden	40 (1.1)	560 (3.3)	50 (1.0)	532 (4.3)	10 (0.6)	508 (5.8)	10.0 (0.04)	-0.3 (0.06)	▼
Poland	39 (1.1)	565 (2.6)	47 (1.0)	544 (2.6)	14 (0.8)	510 (4.8)	9.9 (0.05)	◊ ◊	
Italy	39 (1.1)	531 (3.3)	46 (1.0)	517 (3.4)	14 (0.7)	485 (4.6)	9.9 (0.04)	0.1 (0.06)	
Canada	39 (0.9)	547 (2.3)	43 (0.7)	523 (2.5)	18 (0.6)	495 (3.3)	9.8 (0.04)	◊ ◊	
Belgium (Flemish)	39 (1.2)	527 (2.4)	45 (0.9)	512 (3.0)	16 (0.8)	475 (3.7)	9.8 (0.05)	0.2 (0.06)	
Ireland	38 (1.4)	546 (2.9)	45 (1.2)	530 (2.9)	16 (0.7)	492 (4.0)	9.8 (0.05)	-0.3 (0.07)	▼
Chinese Taipei	38 (1.1)	578 (2.2)	46 (0.9)	551 (2.5)	16 (0.8)	514 (3.4)	9.8 (0.04)	-0.2 (0.07)	▼
Morocco	38 (1.3)	406 (5.4)	41 (1.2)	346 (5.7)	20 (1.0)	290 (8.8)	10.0 (0.05)	0.6 (0.08)	▲
Slovak Republic	38 (1.0)	547 (3.4)	40 (0.9)	518 (3.4)	22 (0.9)	481 (4.1)	9.8 (0.04)	-0.3 (0.06)	▼
Netherlands	38 (1.1)	535 (3.2)	45 (1.1)	517 (2.6)	18 (0.9)	482 (3.4)	9.8 (0.04)	0.0 (0.07)	
Denmark	37 (1.2)	542 (2.9)	46 (1.0)	525 (2.5)	17 (1.0)	503 (4.1)	9.8 (0.05)	0.1 (0.06)	
Cyprus	37 (1.3)	502 (2.6)	37 (1.0)	480 (3.2)	26 (1.2)	461 (4.0)	9.7 (0.07)	◊ ◊	
Northern Ireland	36 (1.2)	534 (3.1)	45 (1.1)	521 (2.7)	19 (0.8)	492 (4.5)	9.7 (0.04)	0.0 (0.07)	
Slovenia	35 (1.0)	566 (2.9)	47 (0.8)	543 (2.6)	18 (0.8)	497 (4.5)	9.7 (0.04)	-0.4 (0.06)	▼
Australia	35 (0.9)	542 (3.5)	45 (0.8)	525 (2.7)	20 (0.8)	494 (4.2)	9.7 (0.04)	-0.2 (0.06)	▼
Indonesia	35 (1.4)	436 (4.8)	46 (1.2)	394 (5.2)	19 (1.2)	345 (6.9)	9.8 (0.06)	◊ ◊	
Finland	34 (1.0)	573 (2.9)	52 (0.9)	552 (2.5)	14 (0.7)	519 (3.9)	9.7 (0.03)	0.0 (0.05)	
Czech Republic	33 (1.0)	550 (3.0)	45 (0.9)	537 (2.6)	22 (1.0)	505 (3.5)	9.6 (0.05)	-0.2 (0.07)	
England	33 (1.0)	556 (3.0)	42 (0.8)	537 (2.6)	25 (0.9)	510 (3.7)	9.5 (0.05)	0.0 (0.07)	
France	30 (1.0)	509 (2.8)	46 (0.9)	490 (3.1)	24 (0.9)	459 (4.0)	9.4 (0.05)	◊ ◊	
Chile	29 (1.2)	512 (3.7)	40 (0.9)	477 (3.2)	31 (1.0)	455 (3.3)	9.3 (0.05)	0.0 (0.06)	
Singapore	26 (0.6)	621 (3.7)	43 (0.7)	596 (3.9)	31 (0.7)	559 (4.6)	9.2 (0.03)	0.1 (0.04)	
Hong Kong SAR	25 (1.2)	588 (3.9)	48 (1.0)	558 (3.2)	27 (0.9)	526 (3.3)	9.3 (0.04)	0.2 (0.06)	▲
New Zealand	24 (0.9)	537 (3.3)	51 (1.0)	510 (3.0)	25 (0.8)	470 (3.7)	9.3 (0.03)	0.0 (0.06)	
Japan	24 (0.8)	589 (2.5)	59 (0.8)	568 (2.0)	17 (0.7)	545 (3.6)	9.3 (0.03)	0.4 (0.04)	▲
Korea, Rep. of	20 (0.7)	622 (2.6)	57 (1.0)	592 (2.2)	24 (1.1)	556 (2.9)	9.1 (0.03)	0.3 (0.05)	▲
International Avg.	40 (0.2)	532 (0.5)	42 (0.1)	501 (0.5)	18 (0.1)	464 (0.8)			

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.

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 10.5: Students Confident in Science (Continued)

Country	Very Confident in Science		Confident in Science		Not Confident in 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	51 (0.8)	547 (2.2)	36 (0.7)	505 (2.3)	13 (0.4)	453 (4.7)	10.4 (0.03)	-0.1 (0.05)
Norway (4)	50 (1.5)	509 (2.4)	38 (0.9)	484 (2.5)	11 (0.7)	458 (5.6)	10.3 (0.06)	-0.2 (0.08)
Florida, US	45 (1.8)	571 (5.5)	37 (1.1)	544 (4.6)	18 (1.4)	512 (5.7)	10.0 (0.08)	0.0 (0.11)
Ontario, Canada	38 (1.3)	551 (3.1)	42 (0.8)	528 (3.1)	20 (1.0)	501 (3.2)	9.7 (0.05)	-0.1 (0.07)
Quebec, Canada	38 (1.5)	542 (4.2)	47 (1.4)	522 (4.8)	16 (1.2)	496 (5.2)	9.9 (0.06)	-0.3 (0.08) ▼
Abu Dhabi, UAE	35 (1.5)	481 (6.0)	44 (1.3)	403 (5.7)	21 (1.1)	344 (6.8)	9.7 (0.06)	-0.6 (0.10) ▼
Buenos Aires, Argentina	29 (1.3)	454 (5.0)	46 (1.1)	423 (4.9)	25 (1.2)	400 (6.8)	9.5 (0.06)	◊ ◊

Significantly higher than 2011 ▲
Significantly lower than 2011 ▼
◊ ◊

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