

Exhibit 10.5: Students Confident in Mathematics

Reported by Students

Students were scored according to their degree of agreement with nine statements on the *Students Confident in Mathematics* scale. Students **Very Confident in Mathematics** had a score on the scale of at least 10.6, 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 were **Not Confident in Mathematics** had a score no higher than 8.5, 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 were **Confident in Mathematics**.

Country	Very Confident in Mathematics		Confident in Mathematics		Not Confident in Mathematics		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		
Serbia	45 (1.2)	556 (5.2)	36 (1.0)	507 (4.1)	19 (0.8)	458 (4.7)	10.5 (0.05)	0.4 (0.07) ▲
Cyprus	44 (1.1)	560 (2.9)	38 (0.9)	511 (2.8)	17 (0.8)	469 (3.9)	10.5 (0.05)	◊ ◊
Norway (5)	44 (1.0)	578 (3.0)	44 (0.9)	536 (2.6)	12 (0.6)	493 (4.5)	10.5 (0.05)	◊ ◊
Bulgaria	42 (1.2)	561 (4.0)	37 (0.9)	513 (5.0)	20 (1.1)	478 (8.3)	10.5 (0.06)	◊ ◊
Jordan	42 (1.2)	434 (3.6)	39 (0.9)	376 (3.6)	19 (1.0)	328 (7.5)	10.5 (0.06)	◊ ◊
Turkey	41 (1.0)	532 (3.0)	40 (0.9)	464 (3.6)	19 (0.8)	423 (4.4)	10.4 (0.05)	0.1 (0.06)
Netherlands	40 (1.0)	562 (1.8)	39 (1.0)	522 (2.1)	21 (0.8)	484 (2.1)	10.3 (0.04)	0.2 (0.06) ▲
Kazakhstan	40 (1.5)	566 (4.9)	48 (1.2)	535 (5.3)	12 (0.9)	515 (6.3)	10.6 (0.06)	0.1 (0.09)
England	37 (1.1)	578 (4.7)	43 (1.0)	541 (3.4)	20 (0.9)	499 (3.3)	10.1 (0.05)	0.1 (0.06)
Kuwait	37 (1.1)	387 (5.2)	45 (0.9)	342 (4.9)	18 (0.7)	317 (6.5)	10.3 (0.05)	◊ ◊
Georgia	37 (1.6)	501 (4.2)	50 (1.3)	458 (3.6)	13 (0.8)	400 (6.2)	10.3 (0.06)	-0.2 (0.07) ▼
Ireland	37 (0.9)	583 (2.6)	45 (0.8)	539 (2.4)	18 (0.8)	498 (3.7)	10.2 (0.04)	-0.2 (0.07) ▼
Sweden	36 (1.3)	548 (3.0)	49 (1.2)	511 (3.2)	15 (0.6)	475 (4.0)	10.2 (0.05)	-0.2 (0.07)
Italy	36 (1.0)	532 (3.1)	46 (0.9)	505 (2.8)	18 (0.7)	466 (4.0)	10.1 (0.04)	0.2 (0.06) ▲
Germany	36 (1.2)	557 (2.4)	42 (1.0)	523 (2.2)	22 (0.8)	483 (3.4)	10.1 (0.05)	-0.2 (0.06) ▼
Hungary	35 (0.9)	581 (3.0)	42 (0.8)	522 (3.6)	23 (0.9)	464 (5.0)	10.1 (0.04)	-0.2 (0.06) ▼
United States	35 (0.7)	583 (2.4)	41 (0.6)	534 (2.5)	24 (0.6)	492 (2.2)	10.0 (0.03)	-0.2 (0.04) ▼
Iran, Islamic Rep. of	35 (1.0)	471 (4.3)	47 (0.8)	424 (3.9)	18 (0.9)	383 (6.1)	10.2 (0.05)	-0.3 (0.08) ▼
Bahrain	35 (0.8)	492 (1.6)	44 (0.7)	444 (1.9)	21 (0.6)	407 (2.8)	10.2 (0.05)	-0.1 (0.06)
Qatar	34 (1.2)	475 (4.2)	43 (0.9)	439 (3.4)	23 (0.9)	395 (4.4)	10.1 (0.05)	-0.1 (0.07)
Oman	34 (1.1)	465 (3.4)	49 (0.9)	418 (2.8)	17 (0.6)	377 (3.3)	10.1 (0.04)	-0.3 (0.06) ▼
Denmark	34 (1.1)	578 (3.0)	49 (0.9)	529 (3.0)	17 (0.8)	490 (3.7)	10.1 (0.04)	0.2 (0.06) ▲
France	33 (0.9)	521 (3.0)	46 (1.1)	487 (3.3)	21 (0.8)	439 (4.2)	10.0 (0.03)	◊ ◊
Saudi Arabia	33 (1.3)	420 (4.2)	43 (1.1)	382 (4.7)	23 (1.1)	350 (6.3)	10.1 (0.06)	-0.3 (0.09) ▼
Spain	33 (1.0)	543 (2.6)	41 (0.8)	503 (2.8)	26 (0.9)	461 (2.9)	10.0 (0.04)	0.0 (0.07)
Canada	33 (0.7)	552 (2.3)	44 (0.6)	506 (2.3)	23 (0.7)	467 (2.5)	9.9 (0.04)	◊ ◊
Croatia	33 (1.1)	538 (2.4)	49 (1.1)	497 (2.1)	18 (0.8)	455 (3.7)	10.1 (0.04)	-0.1 (0.06)
Slovak Republic	32 (0.9)	538 (2.9)	45 (0.8)	494 (2.9)	23 (0.6)	453 (3.6)	9.9 (0.04)	0.0 (0.06)
Slovenia	32 (0.9)	559 (2.6)	46 (1.0)	517 (2.3)	22 (0.8)	471 (3.0)	9.9 (0.04)	-0.5 (0.06) ▼
Northern Ireland	31 (1.1)	614 (3.8)	46 (1.0)	568 (3.8)	23 (1.1)	518 (3.7)	9.9 (0.04)	-0.1 (0.07)
United Arab Emirates	31 (0.7)	499 (2.7)	49 (0.6)	444 (2.6)	20 (0.5)	403 (3.3)	10.0 (0.03)	-0.4 (0.04) ▼
Lithuania	30 (1.0)	578 (3.2)	50 (1.0)	530 (2.9)	20 (0.9)	486 (3.7)	9.9 (0.04)	0.1 (0.05)
Belgium (Flemish)	30 (0.9)	576 (2.7)	45 (0.8)	543 (2.5)	25 (0.9)	515 (2.7)	9.7 (0.04)	0.0 (0.06)
Morocco	29 (1.2)	421 (4.2)	49 (1.0)	375 (4.0)	22 (0.8)	337 (5.2)	10.0 (0.05)	0.3 (0.07) ▲
Poland	29 (0.9)	578 (2.9)	46 (1.1)	534 (2.3)	25 (1.0)	488 (2.7)	9.8 (0.04)	◊ ◊
Finland	28 (0.9)	572 (2.8)	51 (1.0)	532 (2.1)	20 (0.7)	493 (2.7)	9.8 (0.03)	-0.1 (0.05) ▼
Russian Federation	28 (0.8)	599 (4.7)	45 (0.9)	569 (3.6)	28 (0.8)	522 (3.4)	9.7 (0.04)	-0.1 (0.06) ▼
Australia	27 (0.8)	569 (3.9)	46 (1.0)	514 (2.9)	27 (1.0)	473 (4.1)	9.7 (0.03)	-0.4 (0.05) ▼
Chile	26 (0.9)	504 (3.1)	42 (0.9)	461 (2.6)	32 (1.1)	425 (3.0)	9.6 (0.04)	0.1 (0.06)
Portugal	25 (1.0)	592 (2.7)	42 (1.0)	546 (2.6)	33 (1.1)	497 (2.5)	9.6 (0.05)	-0.1 (0.07) ▼
Czech Republic	24 (0.8)	570 (3.4)	48 (0.9)	530 (2.5)	28 (0.7)	489 (3.2)	9.6 (0.03)	-0.2 (0.05) ▼
Indonesia	23 (1.0)	440 (3.7)	53 (1.0)	397 (3.5)	24 (1.1)	365 (6.2)	9.7 (0.04)	◊ ◊
New Zealand	22 (0.7)	543 (3.4)	48 (0.8)	492 (2.6)	30 (0.7)	452 (3.3)	9.5 (0.03)	-0.1 (0.04) ▼
Hong Kong SAR	19 (0.8)	660 (3.7)	45 (1.0)	622 (3.0)	36 (1.1)	583 (3.4)	9.3 (0.05)	-0.1 (0.06)
Singapore	19 (0.8)	681 (3.6)	42 (0.6)	633 (3.6)	39 (1.1)	572 (4.0)	9.2 (0.05)	0.0 (0.06)
South Africa (5)	16 (0.7)	460 (6.0)	51 (0.7)	376 (3.2)	33 (0.9)	341 (3.5)	9.3 (0.03)	◊ ◊
Japan	15 (0.6)	648 (3.5)	48 (0.9)	602 (2.4)	37 (1.0)	559 (2.2)	9.1 (0.03)	0.4 (0.04) ▲
Chinese Taipei	15 (0.6)	653 (2.9)	39 (0.8)	612 (2.4)	46 (0.9)	566 (2.2)	8.9 (0.03)	-0.3 (0.05) ▼
Korea, Rep. of	13 (0.6)	668 (3.2)	51 (0.9)	623 (2.2)	36 (1.0)	566 (2.3)	9.1 (0.03)	0.1 (0.04) ▲
International Avg.	32 (0.1)	546 (0.5)	45 (0.1)	502 (0.5)	23 (0.1)	460 (0.6)		

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 Mathematics (Continued)

Country	Very Confident in Mathematics		Confident in Mathematics		Not Confident in Mathematics		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								
Norway (4)	47 (1.3)	520 (2.6)	42 (1.0)	478 (3.1)	11 (0.7)	442 (5.2)	10.7 (0.05)	0.1 (0.07)
Florida, US	39 (1.7)	585 (4.9)	39 (1.3)	541 (5.2)	22 (1.2)	493 (5.5)	10.3 (0.07)	0.0 (0.09)
Quebec, Canada	38 (1.4)	567 (4.7)	44 (1.4)	528 (4.0)	17 (1.2)	491 (5.9)	10.2 (0.06)	0.1 (0.08)
Dubai, UAE	36 (0.9)	545 (2.8)	46 (0.8)	503 (1.7)	17 (0.5)	463 (3.1)	10.2 (0.04)	-0.1 (0.06)
Ontario, Canada	31 (1.0)	556 (2.7)	44 (0.7)	508 (2.4)	25 (0.8)	470 (3.4)	9.9 (0.05)	-0.1 (0.07)
Buenos Aires, Argentina	27 (0.8)	477 (3.3)	45 (0.8)	438 (3.4)	28 (0.8)	403 (3.7)	9.7 (0.04)	∅ ∅
Abu Dhabi, UAE	27 (1.0)	480 (5.7)	49 (1.2)	414 (5.4)	24 (1.1)	368 (5.6)	9.8 (0.04)	-0.6 (0.08) ▼

Significantly higher than 2011 ▲
Significantly lower than 2011 ▼

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

