

Exhibit 10.2: Students' Views on Engaging Teaching in Mathematics Lessons

Reported by Students

Students were scored according to their degree of agreement with ten statements on the *Students' Views on Engaging Teaching in Mathematics Lessons* scale. Students who experienced **Very Engaging Teaching** in mathematics lessons had a score on the scale of at least 10.4, which corresponds to their "agreeing a lot" with five of the ten statements and "agreeing a little" with the other five, on average. Students who experienced teaching that was **Less than Engaging** had a score no higher than 8.2, which corresponds to their "disagreeing a little" with five of the ten statements and "agreeing a little" with the other five, on average. All other students experienced **Engaging Teaching** in mathematics lessons.

Country	Very Engaging Teaching		Engaging Teaching		Less than Engaging Teaching		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Jordan	68 (1.2)	394 (3.3)	25 (0.9)	377 (4.3)	7 (0.5)	361 (6.1)	11.1 (0.05)
Egypt	65 (1.4)	404 (4.1)	27 (1.0)	378 (5.9)	8 (0.6)	369 (8.0)	11.0 (0.07)
Lebanon	64 (1.6)	450 (3.7)	25 (1.2)	436 (5.3)	11 (0.9)	426 (6.1)	11.0 (0.08)
Morocco	62 (1.3)	390 (2.3)	29 (0.8)	376 (3.0)	10 (0.7)	384 (4.4)	10.7 (0.05)
South Africa (9)	61 (1.2)	378 (4.7)	31 (0.9)	367 (5.3)	8 (0.6)	376 (7.1)	10.7 (0.05)
Turkey	60 (1.4)	470 (5.1)	31 (1.0)	438 (5.4)	10 (0.8)	445 (8.1)	10.6 (0.06)
Botswana (9)	60 (1.4)	408 (1.8)	31 (0.9)	374 (3.5)	10 (0.9)	378 (6.3)	10.7 (0.06)
Oman	59 (1.2)	416 (2.7)	34 (1.0)	391 (3.1)	8 (0.5)	370 (5.5)	10.6 (0.04)
Iran, Islamic Rep. of	55 (1.6)	442 (4.8)	33 (1.0)	435 (5.3)	12 (0.9)	418 (7.1)	10.5 (0.07)
Georgia	52 (1.2)	467 (3.6)	40 (0.9)	444 (4.3)	8 (0.7)	425 (9.2)	10.6 (0.05)
Saudi Arabia	50 (1.7)	376 (4.8)	35 (1.1)	366 (5.5)	15 (1.0)	349 (6.4)	10.2 (0.07)
Kazakhstan	49 (1.7)	542 (5.6)	47 (1.6)	516 (6.2)	4 (0.4)	499 (8.4)	10.6 (0.06)
Kuwait	49 (1.6)	398 (5.3)	37 (1.1)	391 (5.5)	15 (1.0)	384 (9.3)	10.2 (0.06)
Chile	48 (1.8)	435 (3.9)	33 (1.0)	425 (3.7)	19 (1.5)	415 (5.6)	10.1 (0.09)
Canada	46 (1.2)	534 (2.2)	40 (0.7)	530 (2.5)	14 (1.0)	509 (3.9)	10.2 (0.05)
Israel	45 (1.3)	513 (5.3)	36 (0.8)	515 (4.2)	20 (0.9)	504 (4.9)	10.0 (0.06)
United Arab Emirates	45 (0.9)	484 (2.6)	41 (0.7)	455 (2.4)	14 (0.6)	438 (3.7)	10.2 (0.04)
Russian Federation	44 (1.2)	548 (5.5)	46 (1.1)	533 (4.7)	11 (0.8)	519 (5.6)	10.2 (0.05)
Qatar	43 (1.3)	459 (3.7)	37 (0.8)	432 (3.5)	19 (1.0)	406 (4.4)	10.0 (0.06)
Thailand	43 (1.1)	431 (4.8)	48 (0.9)	432 (5.1)	9 (0.6)	430 (9.4)	10.1 (0.04)
United States	43 (1.2)	530 (3.5)	36 (0.7)	515 (3.3)	21 (1.0)	504 (4.0)	10.0 (0.06)
Bahrain	42 (1.5)	466 (2.3)	37 (1.0)	452 (2.2)	21 (1.2)	438 (2.9)	9.9 (0.07)
Malta	41 (0.7)	505 (2.1)	37 (0.8)	496 (2.2)	22 (0.6)	478 (2.8)	9.8 (0.03)
Malaysia	40 (1.2)	472 (4.1)	50 (0.9)	466 (3.9)	11 (0.8)	438 (5.9)	10.0 (0.05)
Lithuania	39 (1.7)	523 (3.7)	45 (1.1)	505 (3.1)	17 (1.5)	502 (4.3)	9.9 (0.07)
England	38 (1.7)	532 (5.4)	42 (1.0)	518 (4.8)	20 (1.4)	501 (6.0)	9.8 (0.08)
Ireland	37 (1.4)	528 (3.3)	41 (1.0)	523 (3.4)	22 (1.1)	517 (3.8)	9.7 (0.06)
Hungary	34 (1.6)	530 (6.5)	46 (1.1)	507 (3.9)	20 (1.3)	505 (5.3)	9.6 (0.07)
Australia	34 (1.3)	521 (3.7)	42 (0.7)	506 (3.2)	24 (1.3)	485 (4.6)	9.5 (0.07)
Singapore	33 (1.0)	633 (3.6)	52 (0.8)	620 (3.4)	16 (0.8)	596 (6.3)	9.7 (0.04)
Norway (9)	33 (1.3)	526 (3.0)	44 (1.0)	510 (2.8)	23 (1.4)	496 (3.1)	9.5 (0.06)
New Zealand	32 (1.5)	506 (4.9)	44 (0.9)	495 (3.9)	24 (1.3)	475 (3.5)	9.5 (0.07)
Italy	31 (1.3)	500 (3.5)	50 (1.0)	495 (3.0)	19 (1.2)	482 (4.6)	9.6 (0.05)
Sweden	31 (1.6)	517 (3.5)	49 (1.2)	500 (3.0)	20 (1.5)	481 (4.1)	9.5 (0.07)
Hong Kong SAR	26 (1.3)	606 (4.9)	49 (0.9)	595 (4.3)	24 (1.5)	581 (8.1)	9.3 (0.08)
Chinese Taipei	23 (1.2)	629 (3.3)	52 (1.0)	602 (2.6)	25 (1.6)	565 (5.2)	9.2 (0.07)
Slovenia	20 (1.0)	538 (4.8)	59 (1.3)	515 (2.3)	21 (1.2)	500 (3.1)	9.2 (0.05)
Japan	10 (0.7)	610 (5.0)	50 (1.2)	594 (2.7)	40 (1.6)	572 (3.0)	8.5 (0.05)
Korea, Rep. of	8 (0.5)	642 (5.0)	52 (1.2)	614 (3.2)	40 (1.4)	589 (2.7)	8.4 (0.04)
International Avg.	43 (0.2)	494 (0.7)	41 (0.2)	478 (0.6)	17 (0.2)	464 (0.9)	

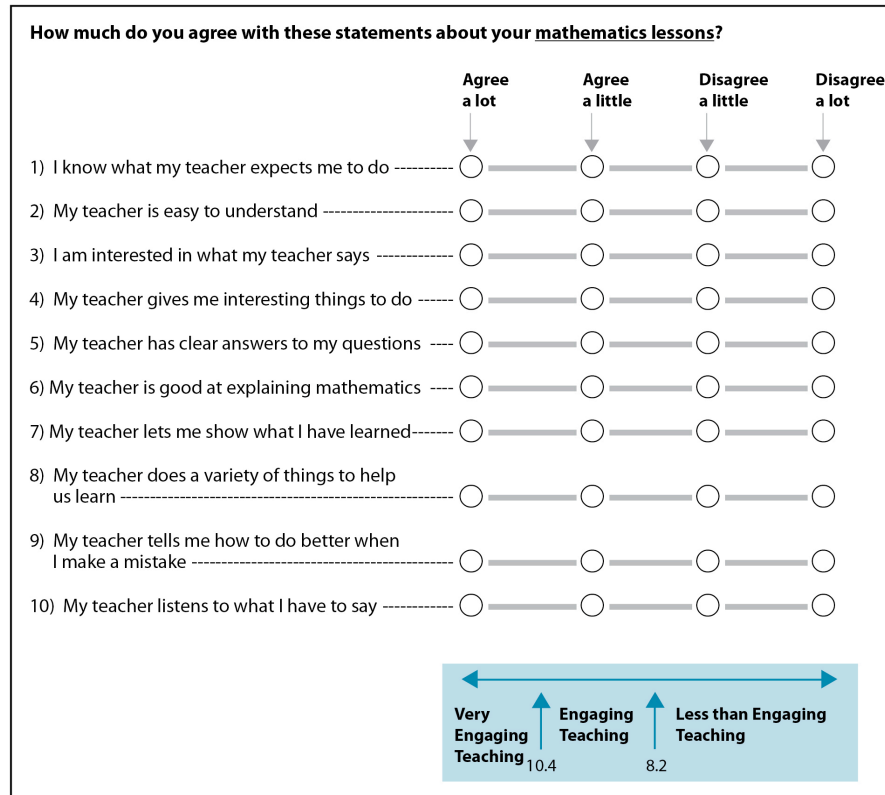
This TIMSS questionnaire scale was established in 2015 based on the combined response distribution of all countries that participated in TIMSS 2015. To provide a point of reference for country comparisons, the scale centerpoint of 10 was located at the mean of the combined distribution. The units of 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.

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

Exhibit 10.2: Students' Views on Engaging Teaching in Mathematics Lessons (Continued)

Country	Very Engaging Teaching		Engaging Teaching		Less than Engaging Teaching		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Benchmarking Participants							
Ontario, Canada	53 (1.7)	529 (2.6)	35 (1.1)	522 (3.5)	12 (1.1)	501 (4.9)	10.5 (0.07)
Dubai, UAE	53 (1.3)	524 (2.9)	35 (1.2)	504 (3.0)	12 (0.8)	486 (5.5)	10.4 (0.05)
Buenos Aires, Argentina	51 (1.7)	398 (5.4)	32 (1.2)	398 (4.9)	18 (1.4)	394 (7.9)	10.2 (0.09)
Norway (8)	40 (1.3)	495 (2.6)	44 (0.9)	487 (2.4)	16 (0.9)	470 (3.6)	9.9 (0.05)
Florida, US	40 (2.5)	504 (8.5)	38 (1.4)	491 (6.6)	23 (2.1)	486 (6.9)	9.9 (0.13)
Abu Dhabi, UAE	40 (2.0)	459 (7.2)	44 (1.3)	438 (4.9)	16 (1.2)	419 (7.2)	10.0 (0.08)
Quebec, Canada	33 (1.6)	554 (3.9)	51 (1.3)	547 (3.6)	16 (1.7)	524 (8.0)	9.7 (0.07)



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