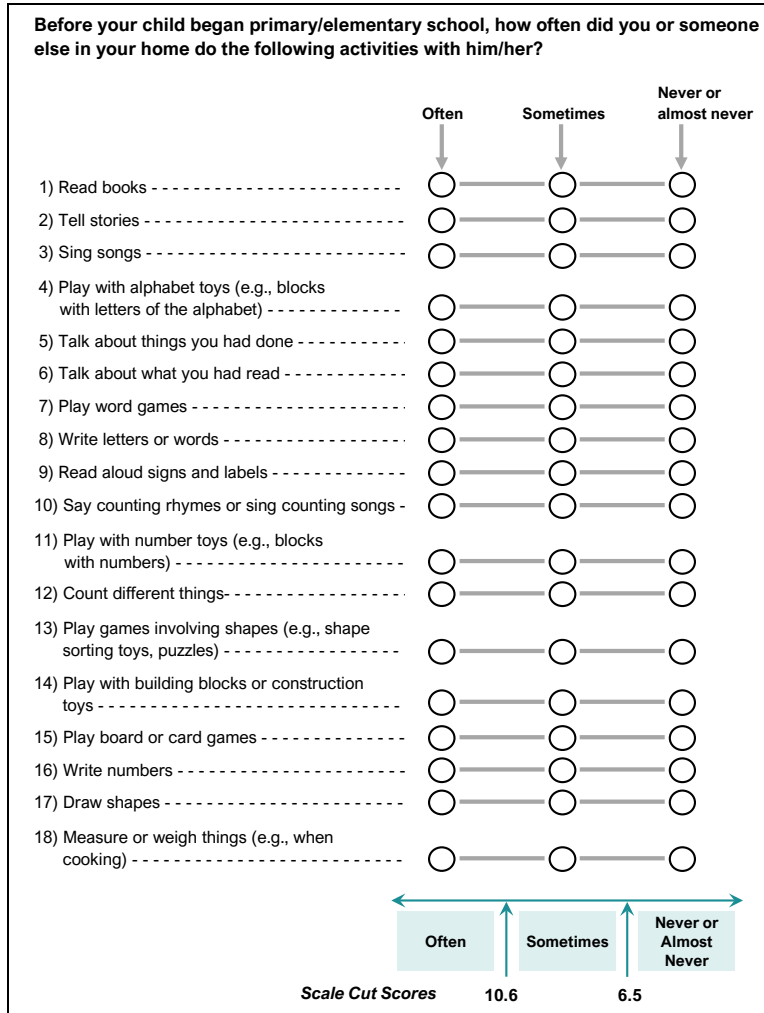


Exhibit 5.11: Home Early Literacy and Numeracy Activities Before Primary School

Students' Results based on Parents' Reports

About the Scale

Students were scored according to their parents' reports regarding the frequency they or someone in the home engaged their children in the eighteen activities on the *Early Literacy and Numeracy Activities* scale. Cut scores divide the scale into three categories. Students **Often** engaged in early literacy and numeracy activities before primary school had a score at or above the cut score corresponding to their parents reporting they "often" did nine of the eighteen activities and "sometimes" did the other nine, on average. Students **Never or Almost Never** engaged in early literacy and numeracy activities before primary school had a score at or below the cut score corresponding to their parents reporting they "never or almost never" did nine of the eighteen activities and "sometimes" did the other nine, on average. All other students **Sometimes** engaged in early literacy and numeracy activities.



SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS 2019
Downloaded from <http://timss2019.org/download>

Exhibit 5.12: Home Early Literacy and Numeracy Activities Before Primary School

Students' Results based on Parents' Reports

Country	Often		Sometimes		Never or Almost Never		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Russian Federation	67 (1.0)	571 (3.1)	32 (1.0)	561 (4.4)	1 (0.2)	--	11.4 (0.05)
Northern Ireland	s 65 (1.4)	592 (4.0)	34 (1.4)	572 (5.3)	1 (0.2)	--	11.6 (0.07)
Serbia	60 (1.2)	523 (3.0)	39 (1.2)	491 (4.3)	1 (0.2)	--	11.1 (0.05)
Malta	r 59 (0.9)	525 (1.9)	40 (0.9)	502 (2.3)	1 (0.2)	--	11.2 (0.04)
Montenegro	59 (0.9)	464 (2.3)	41 (0.9)	444 (2.8)	1 (0.1)	--	11.1 (0.04)
Poland	58 (0.9)	525 (3.1)	42 (0.9)	517 (3.0)	0 (0.1)	--	11.0 (0.03)
Albania	58 (1.8)	508 (3.8)	40 (1.7)	481 (4.0)	2 (0.5)	--	10.9 (0.09)
Ireland	57 (0.9)	563 (2.6)	42 (0.9)	537 (3.1)	1 (0.1)	--	11.2 (0.04)
Kazakhstan	56 (1.7)	519 (3.1)	44 (1.7)	504 (2.8)	0 (0.1)	--	11.0 (0.07)
Canada	s 56 (0.8)	530 (2.1)	43 (0.8)	515 (2.6)	1 (0.2)	--	11.1 (0.04)
Croatia	56 (1.1)	519 (2.3)	44 (1.1)	499 (2.9)	1 (0.2)	--	11.0 (0.05)
Hungary	55 (0.9)	530 (2.9)	44 (0.8)	522 (3.0)	1 (0.5)	--	10.8 (0.05)
Slovak Republic	55 (1.3)	519 (3.2)	44 (1.1)	504 (3.8)	2 (0.6)	--	10.9 (0.07)
North Macedonia	53 (1.4)	488 (5.8)	45 (1.3)	461 (6.1)	1 (0.4)	--	10.9 (0.07)
Bosnia and Herzegovina	53 (0.8)	460 (2.6)	46 (0.8)	443 (2.9)	1 (0.1)	--	10.8 (0.04)
Czech Republic	r 51 (1.1)	546 (3.0)	48 (1.1)	536 (2.8)	0 (0.1)	--	10.7 (0.04)
Cyprus	50 (0.9)	547 (2.6)	49 (0.9)	523 (3.7)	1 (0.2)	--	10.8 (0.05)
Kosovo	49 (1.2)	454 (3.2)	50 (1.2)	439 (3.7)	1 (0.2)	--	10.6 (0.05)
United Arab Emirates	s 48 (0.6)	512 (2.2)	50 (0.6)	490 (2.5)	1 (0.1)	--	10.6 (0.03)
Latvia	48 (1.1)	553 (2.8)	51 (1.0)	541 (2.9)	1 (0.2)	--	10.6 (0.04)
Korea, Rep. of	48 (1.1)	613 (2.6)	50 (1.0)	589 (2.6)	2 (0.2)	--	10.7 (0.05)
Lithuania	r 46 (1.0)	550 (3.2)	53 (1.0)	537 (3.3)	1 (0.2)	--	10.5 (0.04)
Armenia	46 (1.1)	504 (2.6)	52 (1.1)	495 (2.9)	2 (0.4)	--	10.5 (0.05)
Georgia	46 (1.1)	483 (4.2)	53 (1.0)	484 (3.8)	2 (0.4)	--	10.5 (0.05)
Italy	45 (1.1)	524 (3.1)	54 (1.1)	510 (2.6)	1 (0.2)	--	10.5 (0.04)
France	44 (1.0)	503 (3.5)	55 (1.0)	477 (3.4)	1 (0.2)	--	10.4 (0.03)
Spain	43 (0.8)	518 (2.7)	56 (0.8)	498 (3.0)	1 (0.1)	--	10.4 (0.03)
Bahrain	42 (1.0)	492 (3.5)	57 (1.0)	473 (2.8)	1 (0.1)	--	10.3 (0.03)
Germany	s 40 (1.4)	541 (3.1)	59 (1.3)	526 (2.9)	1 (0.2)	--	10.4 (0.05)
Portugal	40 (0.9)	541 (3.0)	59 (0.9)	519 (2.9)	1 (0.4)	--	10.3 (0.04)
Austria	39 (0.9)	550 (2.7)	60 (0.9)	536 (2.3)	1 (0.2)	--	10.2 (0.03)
Bulgaria	39 (1.4)	545 (2.9)	52 (1.3)	512 (5.2)	10 (1.5)	432 (12.7)	9.8 (0.11)
Chile	38 (1.0)	459 (3.1)	60 (1.1)	433 (3.0)	2 (0.3)	--	10.2 (0.04)
Denmark	s 37 (1.3)	548 (3.0)	62 (1.3)	533 (3.0)	1 (0.2)	--	10.2 (0.05)
Norway (5)	s 37 (1.0)	563 (3.6)	62 (1.1)	546 (2.8)	1 (0.3)	--	10.2 (0.04)
Singapore	34 (0.8)	641 (4.0)	62 (0.8)	620 (4.0)	4 (0.2)	605 (8.0)	9.9 (0.04)
Qatar	r 34 (1.0)	473 (4.0)	64 (1.0)	445 (4.0)	2 (0.3)	--	10.0 (0.04)
Kuwait	r 33 (1.2)	405 (6.0)	64 (1.2)	379 (4.7)	2 (0.2)	--	9.9 (0.04)
Finland	32 (0.8)	547 (3.0)	68 (0.9)	530 (2.7)	1 (0.1)	--	10.0 (0.03)
Azerbaijan	29 (1.4)	535 (3.6)	66 (1.4)	519 (2.8)	4 (0.5)	483 (7.5)	9.7 (0.06)
Sweden	r 29 (0.9)	533 (3.7)	69 (0.9)	526 (3.1)	2 (0.3)	--	9.8 (0.04)
Saudi Arabia	28 (0.9)	416 (4.7)	68 (0.9)	394 (4.0)	3 (0.5)	388 (11.2)	9.7 (0.05)
Philippines	28 (1.0)	327 (7.4)	70 (1.0)	287 (6.4)	2 (0.2)	--	9.8 (0.05)
South Africa (5)	r 28 (0.9)	405 (5.1)	68 (0.9)	366 (3.2)	4 (0.5)	344 (8.5)	9.7 (0.05)
Turkey (5)	28 (1.4)	565 (4.5)	56 (1.6)	525 (4.8)	16 (1.8)	443 (9.9)	9.0 (0.14)
Belgium (Flemish)	27 (0.8)	545 (2.5)	71 (0.8)	530 (2.1)	2 (0.3)	--	9.7 (0.04)
Oman	26 (0.8)	460 (6.0)	71 (0.8)	424 (3.8)	2 (0.3)	--	9.8 (0.05)
Chinese Taipei	25 (0.7)	619 (3.3)	71 (0.8)	595 (1.9)	5 (0.4)	572 (5.4)	9.4 (0.03)
Iran, Islamic Rep. of	23 (0.9)	459 (5.1)	71 (1.0)	443 (3.7)	6 (1.1)	396 (18.9)	9.3 (0.08)
Hong Kong SAR	20 (1.2)	622 (4.5)	75 (1.2)	601 (3.7)	4 (0.4)	569 (7.2)	9.3 (0.05)
Japan	20 (0.7)	616 (3.1)	74 (0.7)	590 (1.9)	6 (0.4)	577 (4.5)	9.2 (0.03)
Morocco	13 (0.7)	424 (8.3)	61 (1.7)	387 (5.1)	27 (1.8)	359 (7.1)	7.9 (0.12)
Pakistan	r 12 (1.5)	351 (15.9)	73 (3.2)	333 (14.1)	16 (3.1)	298 (14.1)	8.6 (0.16)
Australia	--	--	--	--	--	--	--
England	--	--	--	--	--	--	--
Netherlands	--	--	--	--	--	--	--
United States	--	--	--	--	--	--	--
New Zealand	x 60 (1.6)	520 (4.1)	40 (1.6)	499 (3.9)	0 (0.1)	--	11.4 (0.07)
International Average	42 (0.1)	516 (0.6)	55 (0.2)	495 (0.5)	3 (0.1)	456 (3.0)	
Benchmarking Participants							
Moscow City, Russian Fed.	70 (1.1)	596 (2.2)	29 (1.1)	587 (3.2)	1 (0.1)	--	11.7 (0.04)
Ontario, Canada	s 60 (1.4)	530 (3.8)	39 (1.3)	514 (5.0)	1 (0.3)	--	11.3 (0.08)
Dubai, UAE	s 51 (0.9)	564 (2.4)	48 (0.9)	548 (2.7)	1 (0.2)	--	10.8 (0.04)
Madrid, Spain	48 (1.1)	528 (2.9)	51 (1.1)	514 (2.6)	1 (0.2)	--	10.6 (0.05)
Quebec, Canada	r 48 (1.2)	547 (2.9)	51 (1.2)	531 (3.3)	1 (0.3)	--	10.6 (0.05)
Abu Dhabi, UAE	x 46 (1.2)	474 (3.7)	53 (1.1)	449 (3.2)	2 (0.2)	--	10.5 (0.05)

This TIMSS context 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 dash (-) indicates comparable data not available. 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.

An "x" indicates data are available for at least 40% but less than 50% of the students—interpret with caution.

Exhibit 5.13: Home Early Literacy and Numeracy Activities Before Primary School

Students' Results based on Parents' Reports

Country	Often		Sometimes		Never or Almost Never		Average Scale Score
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Russian Federation	67 (1.0)	571 (2.9)	32 (1.0)	560 (4.0)	1 (0.2)	--	11.4 (0.05)
Northern Ireland	s 65 (1.4)	538 (2.9)	34 (1.4)	519 (4.3)	1 (0.2)	--	11.6 (0.07)
Serbia	60 (1.2)	533 (3.2)	39 (1.2)	498 (4.6)	1 (0.2)	--	11.1 (0.05)
Malta	r 59 (0.9)	511 (1.9)	40 (0.9)	490 (2.6)	1 (0.2)	--	11.2 (0.04)
Montenegro	59 (0.9)	466 (2.7)	41 (0.9)	443 (3.5)	1 (0.1)	--	11.1 (0.04)
Poland	58 (0.9)	535 (3.1)	42 (0.9)	527 (2.7)	0 (0.1)	--	11.0 (0.03)
Albania	58 (1.8)	503 (4.1)	40 (1.7)	477 (4.1)	2 (0.5)	--	10.9 (0.09)
Ireland	57 (0.9)	542 (3.3)	42 (0.9)	516 (3.6)	1 (0.1)	--	11.2 (0.04)
Kazakhstan	56 (1.7)	506 (3.8)	44 (1.7)	481 (3.5)	0 (0.1)	--	11.0 (0.07)
Canada	s 56 (0.8)	541 (2.2)	43 (0.8)	522 (2.6)	1 (0.2)	--	11.1 (0.04)
Croatia	56 (1.1)	533 (2.5)	44 (1.1)	514 (2.7)	1 (0.2)	--	11.0 (0.05)
Hungary	55 (0.9)	536 (2.8)	44 (0.8)	528 (3.1)	1 (0.5)	--	10.8 (0.05)
Slovak Republic	55 (1.3)	531 (3.4)	44 (1.1)	514 (4.0)	2 (0.6)	--	10.9 (0.07)
North Macedonia	53 (1.4)	444 (6.3)	45 (1.3)	412 (7.2)	1 (0.4)	--	10.9 (0.07)
Bosnia and Herzegovina	53 (0.8)	468 (3.3)	46 (0.8)	448 (3.2)	1 (0.1)	--	10.8 (0.04)
Czech Republic	r 51 (1.1)	544 (3.0)	48 (1.1)	537 (2.8)	0 (0.1)	--	10.7 (0.04)
Cyprus	50 (0.9)	527 (2.8)	49 (0.9)	502 (3.7)	1 (0.2)	--	10.8 (0.05)
Kosovo	49 (1.2)	427 (4.1)	50 (1.2)	403 (4.4)	1 (0.2)	--	10.6 (0.05)
United Arab Emirates	s 48 (0.6)	512 (2.7)	50 (0.6)	484 (3.0)	1 (0.1)	--	10.6 (0.03)
Latvia	48 (1.1)	550 (2.5)	51 (1.0)	536 (2.7)	1 (0.2)	--	10.6 (0.04)
Korea, Rep. of	48 (1.1)	599 (2.7)	50 (1.0)	579 (2.6)	2 (0.2)	--	10.7 (0.05)
Lithuania	r 46 (1.0)	546 (2.8)	53 (1.0)	532 (3.2)	1 (0.2)	--	10.5 (0.04)
Armenia	46 (1.1)	474 (3.5)	52 (1.1)	461 (3.9)	2 (0.4)	--	10.5 (0.05)
Georgia	46 (1.1)	454 (4.1)	53 (1.0)	457 (4.5)	2 (0.4)	--	10.5 (0.05)
Italy	45 (1.1)	519 (3.4)	54 (1.1)	505 (2.9)	1 (0.2)	--	10.5 (0.04)
France	44 (1.0)	506 (3.1)	55 (1.0)	479 (3.6)	1 (0.2)	--	10.4 (0.03)
Spain	43 (0.8)	525 (2.4)	56 (0.8)	508 (2.6)	1 (0.1)	--	10.4 (0.03)
Bahrain	42 (1.0)	514 (3.9)	57 (1.0)	483 (3.5)	1 (0.1)	--	10.3 (0.03)
Germany	s 40 (1.4)	538 (3.2)	59 (1.3)	526 (2.8)	1 (0.2)	--	10.4 (0.05)
Portugal	40 (0.9)	518 (2.9)	59 (0.9)	498 (2.9)	1 (0.4)	--	10.3 (0.04)
Austria	39 (0.9)	535 (3.3)	60 (0.9)	520 (3.1)	1 (0.2)	--	10.2 (0.03)
Bulgaria	39 (1.4)	560 (3.6)	52 (1.3)	518 (5.9)	10 (1.5)	407 (12.6)	9.8 (0.11)
Chile	38 (1.0)	488 (3.1)	60 (1.1)	460 (2.8)	2 (0.3)	--	10.2 (0.04)
Denmark	s 37 (1.3)	548 (3.2)	62 (1.3)	525 (2.9)	1 (0.2)	--	10.2 (0.05)
Norway (5)	s 37 (1.0)	559 (3.3)	62 (1.1)	541 (3.2)	1 (0.3)	--	10.2 (0.04)
Singapore	34 (0.8)	613 (3.4)	62 (0.8)	587 (3.6)	4 (0.2)	577 (7.0)	9.9 (0.04)
Qatar	r 34 (1.0)	480 (4.8)	64 (1.0)	444 (4.6)	2 (0.3)	--	10.0 (0.04)
Kuwait	r 33 (1.2)	422 (7.1)	64 (1.2)	389 (6.0)	2 (0.2)	--	9.9 (0.04)
Finland	32 (0.8)	566 (2.9)	68 (0.9)	554 (2.9)	1 (0.1)	--	10.0 (0.03)
Azerbaijan	29 (1.4)	451 (4.1)	66 (1.4)	430 (3.3)	4 (0.5)	386 (9.5)	9.7 (0.06)
Sweden	r 29 (0.9)	545 (4.4)	69 (0.9)	542 (3.2)	2 (0.3)	--	9.8 (0.04)
Saudi Arabia	28 (0.9)	426 (5.8)	68 (0.9)	397 (4.6)	3 (0.5)	382 (13.2)	9.7 (0.05)
Philippines	28 (1.0)	286 (9.0)	70 (1.0)	236 (7.5)	2 (0.2)	--	9.8 (0.05)
South Africa (5)	r 28 (0.9)	366 (6.9)	68 (0.9)	312 (4.4)	4 (0.5)	282 (12.1)	9.7 (0.05)
Turkey (5)	28 (1.4)	568 (3.9)	56 (1.6)	529 (4.5)	16 (1.8)	442 (10.4)	9.0 (0.14)
Belgium (Flemish)	27 (0.8)	513 (2.6)	71 (0.8)	499 (2.4)	2 (0.3)	--	9.7 (0.04)
Oman	26 (0.8)	471 (6.3)	71 (0.8)	426 (4.2)	2 (0.3)	--	9.8 (0.05)
Chinese Taipei	25 (0.7)	577 (2.5)	71 (0.8)	553 (2.2)	5 (0.4)	532 (5.2)	9.4 (0.03)
Iran, Islamic Rep. of	23 (0.9)	462 (5.0)	71 (1.0)	442 (4.0)	6 (1.1)	374 (14.1)	9.3 (0.08)
Hong Kong SAR	20 (1.2)	553 (5.1)	75 (1.2)	529 (3.6)	4 (0.4)	503 (8.1)	9.3 (0.05)
Japan	20 (0.7)	583 (2.8)	74 (0.7)	559 (2.0)	6 (0.4)	545 (5.3)	9.2 (0.03)
Morocco	13 (0.7)	421 (9.4)	61 (1.7)	379 (6.4)	27 (1.8)	344 (8.8)	7.9 (0.12)
Pakistan	r 12 (1.5)	329 (20.3)	73 (3.2)	289 (15.2)	16 (3.1)	274 (17.7)	8.6 (0.16)
Australia	--	--	--	--	--	--	--
England	--	--	--	--	--	--	--
Netherlands	--	--	--	--	--	--	--
United States	--	--	--	--	--	--	--
New Zealand	x 60 (1.6)	535 (3.6)	40 (1.6)	512 (3.7)	0 (0.1)	--	11.4 (0.07)
International Average	42 (0.1)	507 (0.7)	55 (0.2)	484 (0.6)	3 (0.1)	421 (3.2)	
Benchmarking Participants							
Moscow City, Russian Fed.	70 (1.1)	598 (2.3)	29 (1.1)	590 (3.2)	1 (0.1)	--	11.7 (0.04)
Ontario, Canada	s 60 (1.4)	541 (3.7)	39 (1.3)	525 (4.7)	1 (0.3)	--	11.3 (0.08)
Dubai, UAE	s 51 (0.9)	569 (2.7)	48 (0.9)	549 (2.9)	1 (0.2)	--	10.8 (0.04)
Madrid, Spain	48 (1.1)	531 (2.8)	51 (1.1)	519 (2.4)	1 (0.2)	--	10.6 (0.05)
Quebec, Canada	r 48 (1.2)	538 (3.4)	51 (1.2)	519 (3.0)	1 (0.3)	--	10.6 (0.05)
Abu Dhabi, UAE	x 46 (1.2)	461 (4.7)	53 (1.1)	431 (4.1)	2 (0.2)	--	10.5 (0.05)

This TIMSS context 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 dash (-) indicates comparable data not available. 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.

An "x" indicates data are available for at least 40% but less than 50% of the students—interpret with caution.