

Exhibit 4.5: Early Literacy Activities Before Beginning Primary School

PIRLS has included an *Early Literacy Activities* scale in each assessment, and the results consistently show a strong relationship with achievement. Exhibit 4.5 shows that 39 percent of the students had parents who **Often** engaged them in early literacy activities and an additional 58 percent had parents who **Sometimes** engaged them in early literacy activities, with the students in the **Often** category having higher average achievement (529 vs. 505, respectively). In several countries, a small percentage of students (3% on average) had parents who **Never or Almost Never** engaged them in early literacy activities and these students typically had low average reading achievement (419).

As some good news, PIRLS shows a trend toward more parental involvement in their children's literacy development. In 16 countries, there was an increase between PIRLS 2011 and 2016 in the time spent on early literacy activities and only 1 country had a decrease.

Exhibit 4.5: Early Literacy Activities Before Beginning Primary School

Students Categorized by Parents' Reports

Students were scored according to their parents' frequency of doing the nine activities on the *Early Literacy Activities* scale. Students **Often** engaged in early literacy activities had a score on the scale of at least 10.7, which corresponds to their parents "often" doing five of the nine activities with them and "sometimes" doing the other four, on average. Students **Never or Almost Never** engaged in such activities had a score no higher than 6.2, which corresponds to parents "never or almost never" doing five of the nine activities with them and "sometimes" doing the other four, on average. All other students had parents who **Sometimes** engaged them in early literacy activities.

Country	Often		Sometimes		Never or Almost Never		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			
Russian Federation	65 (1.0)	587 (2.3)	34 (1.0)	569 (3.1)	1 (0.1)	~ ~	11.3 (0.04)	0.2 (0.07)	▲
Kazakhstan	65 (1.3)	539 (2.7)	35 (1.3)	531 (3.0)	0 (0.1)	~ ~	11.2 (0.06)	--	
Georgia	56 (1.5)	496 (3.0)	42 (1.4)	482 (3.5)	2 (0.4)	~ ~	10.8 (0.06)	0.1 (0.09)	
Ireland	55 (0.8)	586 (2.4)	45 (0.8)	554 (2.9)	1 (0.2)	~ ~	10.9 (0.04)	0.1 (0.06)	
Trinidad and Tobago	53 (1.3)	504 (3.5)	46 (1.2)	467 (4.0)	1 (0.2)	~ ~	10.8 (0.05)	0.2 (0.07)	▲
Slovak Republic	51 (0.9)	548 (3.1)	48 (0.8)	529 (3.7)	1 (0.5)	~ ~	10.6 (0.05)	0.1 (0.07)	
Poland	51 (0.9)	572 (2.5)	49 (1.0)	558 (2.5)	0 (0.2)	~ ~	10.7 (0.03)	--	
Malta	51 (0.9)	473 (2.4)	48 (0.9)	445 (2.3)	1 (0.1)	~ ~	10.7 (0.03)	0.3 (0.05)	▲
Israel	50 (1.1)	546 (2.9)	49 (1.0)	525 (3.2)	1 (0.2)	~ ~	10.7 (0.05)	r 0.0 (0.06)	
Spain	50 (0.7)	542 (2.0)	49 (0.7)	519 (2.0)	1 (0.1)	~ ~	10.6 (0.03)	0.3 (0.05)	▲
Canada	r 50 (0.8)	561 (1.9)	49 (0.8)	539 (2.3)	1 (0.2)	~ ~	10.7 (0.04)	r 0.0 (0.05)	
Latvia	50 (0.9)	566 (2.2)	50 (0.9)	552 (2.1)	0 (0.1)	~ ~	10.7 (0.03)	--	
Italy	49 (1.0)	558 (2.1)	50 (1.0)	544 (2.9)	1 (0.2)	~ ~	10.6 (0.04)	0.1 (0.05)	
Slovenia	48 (1.1)	557 (2.3)	51 (1.1)	532 (2.6)	1 (0.2)	~ ~	10.6 (0.04)	0.0 (0.06)	
Czech Republic	46 (0.8)	552 (2.4)	54 (0.8)	539 (2.3)	1 (0.1)	~ ~	10.5 (0.03)	0.2 (0.04)	▲
Chile	45 (0.9)	513 (3.0)	54 (0.9)	483 (2.9)	1 (0.2)	~ ~	10.4 (0.04)	--	
Bulgaria	43 (1.3)	580 (3.2)	49 (1.3)	545 (4.6)	8 (1.3)	453 (14.6)	10.0 (0.10)	0.3 (0.16)	
Hungary	42 (1.0)	562 (3.7)	57 (1.0)	553 (2.8)	2 (0.6)	~ ~	10.3 (0.05)	0.0 (0.07)	
Netherlands	s 41 (1.3)	560 (2.7)	58 (1.3)	547 (2.6)	1 (0.2)	~ ~	10.3 (0.04)	s 0.1 (0.05)	
Lithuania	41 (1.0)	560 (3.0)	58 (1.0)	544 (3.0)	1 (0.3)	~ ~	10.3 (0.04)	0.2 (0.05)	▲
Germany	r 39 (0.9)	561 (2.8)	60 (0.9)	539 (4.0)	1 (0.2)	~ ~	10.2 (0.04)	r 0.0 (0.05)	
Norway (5)	38 (0.7)	573 (2.5)	61 (0.7)	552 (2.6)	1 (0.2)	~ ~	10.1 (0.03)	--	
Austria	38 (0.9)	557 (2.9)	61 (0.8)	534 (2.4)	1 (0.2)	~ ~	10.1 (0.03)	0.1 (0.05)	▲
France	38 (1.0)	523 (3.3)	61 (1.0)	510 (2.4)	2 (0.2)	~ ~	10.1 (0.04)	0.1 (0.05)	
Portugal	38 (1.0)	542 (2.8)	61 (0.9)	521 (2.5)	1 (0.2)	~ ~	10.1 (0.04)	0.2 (0.06)	▲
Denmark	36 (1.0)	564 (2.8)	63 (1.0)	542 (2.3)	1 (0.2)	~ ~	10.0 (0.04)	0.1 (0.05)	
Sweden	35 (0.9)	575 (2.9)	63 (0.9)	552 (2.7)	2 (0.3)	~ ~	10.0 (0.03)	0.0 (0.05)	
South Africa	s 34 (1.6)	341 (7.8)	62 (1.4)	327 (5.0)	4 (0.7)	269 (13.0)	9.9 (0.08)	s 0.1 (0.10)	
Finland	32 (0.8)	583 (2.5)	67 (0.8)	562 (1.9)	1 (0.2)	~ ~	9.9 (0.03)	0.2 (0.04)	▲
United Arab Emirates	31 (0.7)	488 (3.7)	67 (0.6)	442 (3.3)	2 (0.2)	~ ~	9.8 (0.03)	0.2 (0.04)	▲
Bahrain	31 (0.6)	476 (3.2)	68 (0.6)	436 (2.5)	1 (0.2)	~ ~	9.9 (0.02)	--	
Singapore	30 (0.7)	601 (2.9)	66 (0.7)	569 (3.3)	4 (0.2)	542 (7.1)	9.7 (0.03)	0.2 (0.05)	▲
Belgium (French)	29 (0.8)	515 (3.0)	69 (0.8)	493 (3.0)	2 (0.3)	~ ~	9.7 (0.04)	0.0 (0.05)	
Qatar	29 (0.6)	483 (2.7)	68 (0.6)	439 (2.1)	3 (0.2)	410 (9.8)	9.7 (0.02)	0.1 (0.05)	
Azerbaijan	28 (1.2)	490 (4.8)	67 (1.3)	468 (4.6)	5 (0.9)	447 (8.9)	9.5 (0.07)	0.0 (0.10)	
Kuwait	27 (0.9)	424 (5.7)	70 (0.8)	391 (4.6)	3 (0.3)	357 (13.7)	9.6 (0.03)	--	
Belgium (Flemish)	25 (0.6)	543 (2.8)	72 (0.7)	524 (1.9)	3 (0.3)	499 (7.3)	9.5 (0.03)	--	
Saudi Arabia	24 (0.8)	454 (4.4)	73 (0.8)	426 (4.5)	3 (0.5)	396 (13.6)	9.5 (0.04)	-0.1 (0.07)	
Oman	23 (0.7)	453 (4.3)	74 (0.7)	413 (3.5)	3 (0.2)	341 (6.5)	9.5 (0.03)	0.3 (0.04)	▲
Egypt	21 (1.6)	384 (6.2)	63 (1.5)	331 (5.3)	16 (1.6)	260 (11.2)	8.7 (0.13)	--	
Iran, Islamic Rep. of	20 (1.0)	451 (5.7)	73 (1.2)	430 (3.5)	7 (1.1)	348 (13.8)	9.1 (0.08)	0.3 (0.10)	▲
Chinese Taipei	17 (0.7)	586 (2.8)	75 (0.7)	556 (2.1)	7 (0.6)	536 (5.2)	9.0 (0.04)	0.3 (0.06)	▲
Hong Kong SAR	13 (0.6)	580 (3.6)	81 (0.7)	568 (3.0)	6 (0.4)	568 (6.0)	8.9 (0.04)	0.2 (0.05)	▲
Morocco	12 (0.6)	385 (7.0)	60 (1.3)	371 (3.9)	29 (1.5)	327 (6.3)	7.7 (0.09)	-0.7 (0.16)	▼
Macao SAR	10 (0.4)	560 (3.7)	82 (0.6)	545 (1.2)	9 (0.4)	535 (3.3)	8.5 (0.03)	--	
England	--	--	--	--	--	--	--	--	
United States	--	--	--	--	--	--	--	--	
Northern Ireland	x 65 (1.5)	597 (3.9)	34 (1.4)	571 (4.0)	0 (0.2)	~ ~	11.5 (0.06)	x 0.3 (0.08)	▲
New Zealand	x 57 (1.0)	560 (3.1)	42 (1.0)	521 (3.3)	1 (0.2)	~ ~	11.1 (0.05)	x 0.1 (0.07)	
Australia	x 57 (1.4)	572 (3.9)	43 (1.4)	553 (3.3)	1 (0.2)	~ ~	11.0 (0.07)	x 0.2 (0.09)	
International Avg.	39 (0.1)	529 (0.5)	58 (0.1)	505 (0.5)	3 (0.1)	419 (2.6)			

This PIRLS questionnaire scale was established in 2011 based on the combined response distribution of all countries that participated in PIRLS 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 less than 50% of the students—interpret with caution.

Significantly higher than 2011 ▲
Significantly lower than 2011 ▼

Exhibit 4.5: Early Literacy Activities Before Beginning Primary School (Continued)

Country	Often		Sometimes		Never or Almost Never		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								
Moscow City, Russian Fed.	71 (0.8)	617 (2.1)	28 (0.8)	600 (2.8)	0 (0.1)	~ ~	11.6 (0.04)	- -
Madrid, Spain	57 (0.9)	559 (2.0)	43 (0.9)	541 (2.7)	0 (0.1)	~ ~	10.9 (0.03)	- -
Ontario, Canada	55 (1.4)	561 (3.4)	44 (1.3)	538 (3.7)	1 (0.3)	~ ~	10.9 (0.06)	0.0 (0.08)
Andalusia, Spain	52 (1.2)	539 (2.1)	47 (1.1)	517 (2.4)	1 (0.2)	~ ~	10.7 (0.05)	0.4 (0.06) ▲
Buenos Aires, Argentina	50 (1.2)	506 (3.5)	49 (1.2)	471 (3.9)	1 (0.2)	~ ~	10.7 (0.05)	- -
Quebec, Canada	41 (1.2)	563 (3.3)	58 (1.3)	543 (3.0)	1 (0.4)	~ ~	10.2 (0.04)	0.0 (0.06)
Dubai, UAE	36 (1.0)	548 (2.7)	62 (0.9)	504 (2.2)	1 (0.1)	~ ~	10.1 (0.03)	0.1 (0.04) ▲
Norway (4)	36 (0.8)	535 (2.3)	63 (0.9)	509 (2.2)	1 (0.2)	~ ~	10.1 (0.03)	0.1 (0.06)
Denmark (3)	35 (0.9)	518 (3.5)	64 (0.9)	495 (2.9)	1 (0.2)	~ ~	10.0 (0.04)	- -
Eng/Afr/Zulu - RSA (5)	34 (1.3)	440 (8.1)	63 (1.3)	407 (7.3)	3 (0.3)	405 (21.2)	9.9 (0.06)	- -
Abu Dhabi, UAE	29 (0.9)	452 (5.5)	69 (0.9)	411 (4.7)	2 (0.3)	~ ~	9.7 (0.04)	0.2 (0.06) ▲

Significantly higher than 2011 ▲
Significantly lower than 2011 ▼

SOURCE: IEA's Progress in International Reading Literacy Study - PIRLS 2016

