

Exhibit 3.3 and 3.4: Trends in the Reading Purposes

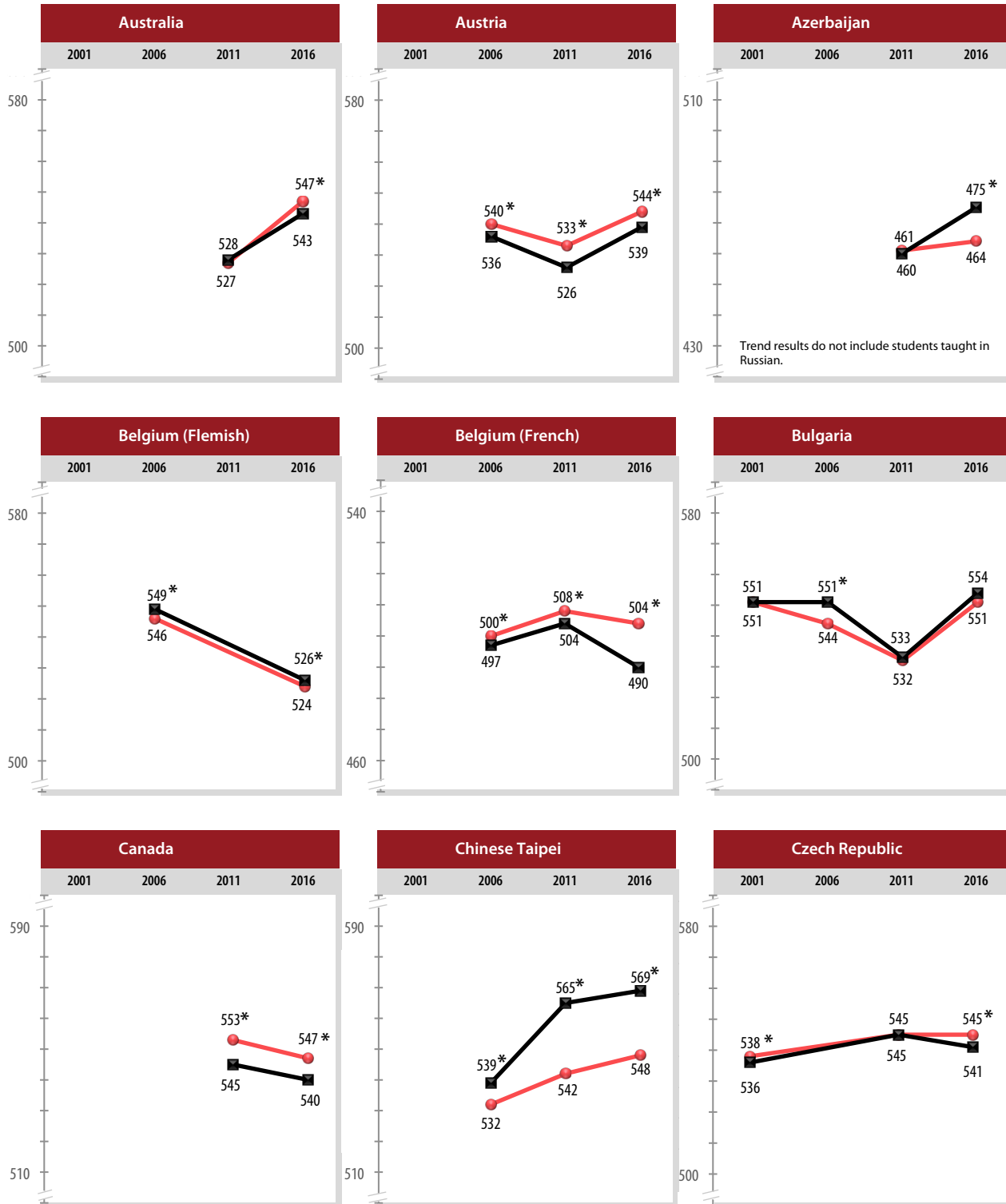
Differences in average reading achievement in the literary and informational purposes are presented for the countries that have comparable data from one or more of the previous assessments in 2001, 2006, and 2011. Exhibit 3.3 depicts the results graphically for the countries in alphabetical order, while Exhibit 3.4 provides the detailed results from assessment to assessment. Mirroring the overall results, the trends in reading achievement in both purposes are more up than down. Twenty countries have data for the 15 year period between 2001 and 2016, with 8 showing increases in literary reading and only 1 a decrease. Similarly, 12 showed increases in informational reading and only 2 had decreases. Interestingly, while 13 countries had the same pattern for both purposes (both increasing, staying the about the same, or decreasing), the other 7 countries had different results for one purpose than for the other.

Forty of the countries participated in both 2011 and 2016, with 19 showing improvements in literary reading and 7 showing decreases. Compared to five years earlier, 17 countries had higher achievement in 2016 in informational reading and 9 had lower achievement. The trends within countries were not necessarily the same for literary and informational reading.

Exhibit 3.3: Trends in Achievement by Reading Purpose

Scale interval is 10 points for each country, but the part of the scale shown differs according to each country's average achievement.

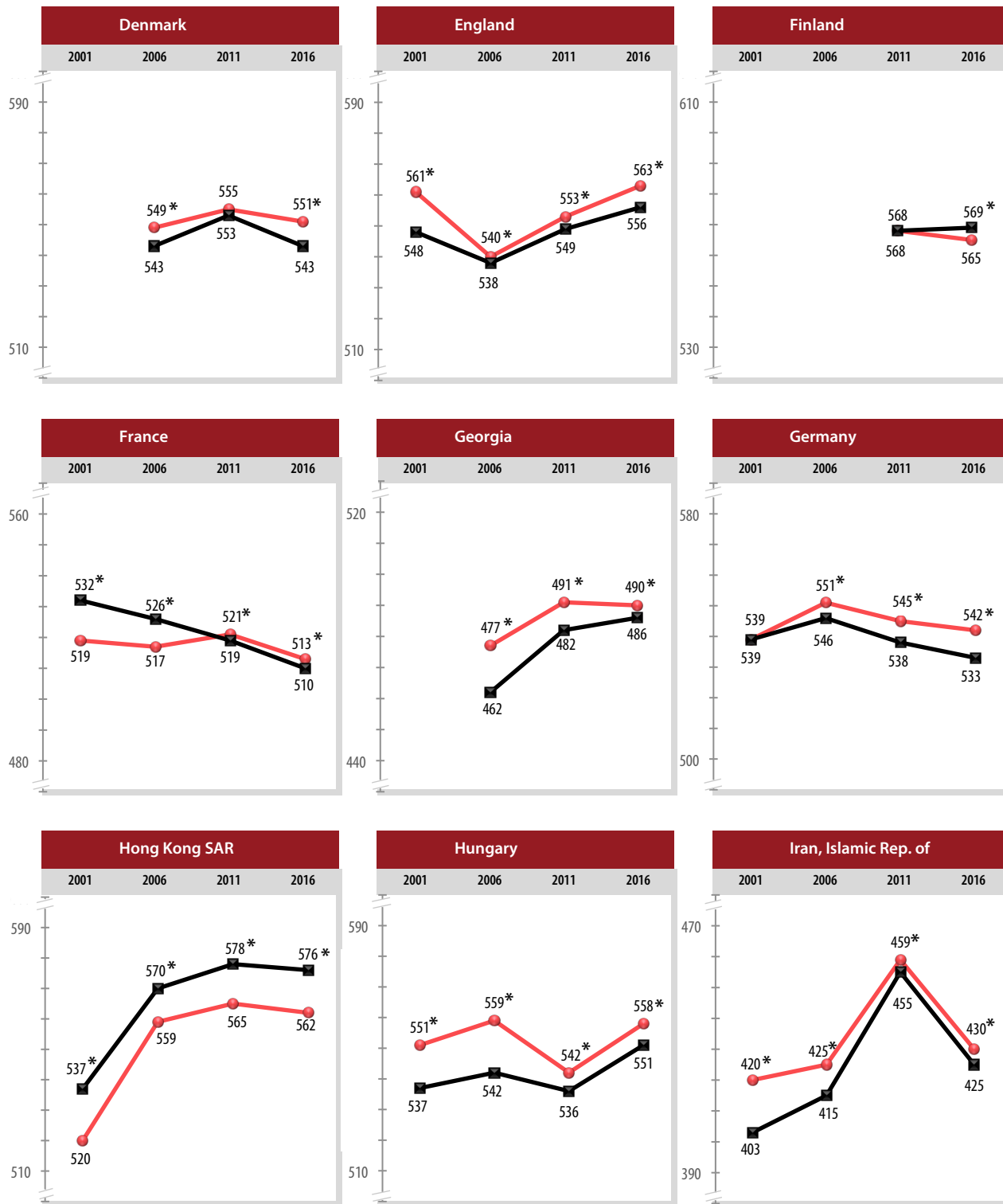
Literary  Informational  * Achievement significantly higher than other reading purpose



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

Exhibit 3.3: Trends in Achievement by Reading Purpose (Continued)

Literary —●— Informational —■— * Achievement significantly higher than other reading purpose



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

Exhibit 3.3: Trends in Achievement by Reading Purpose (Continued)

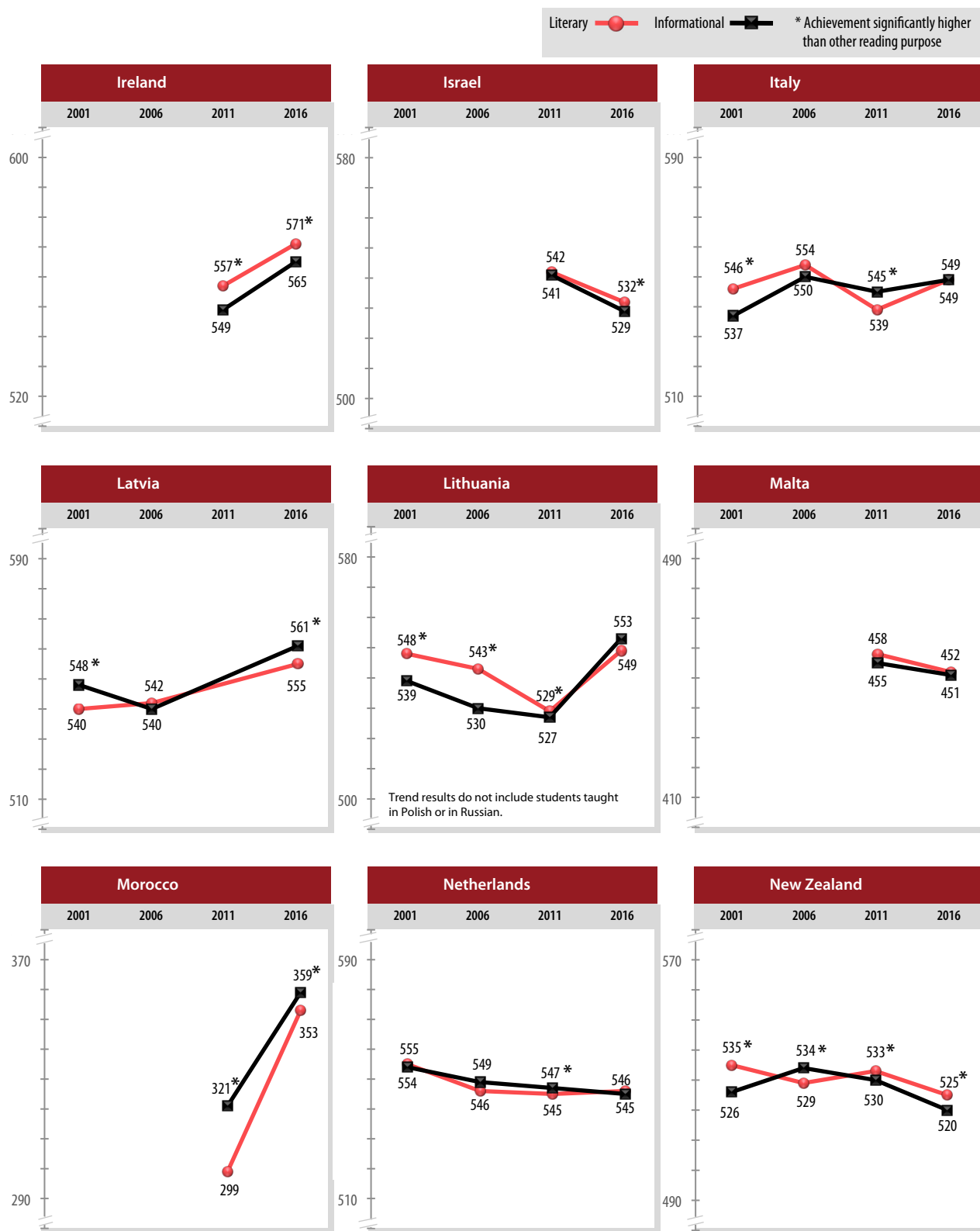
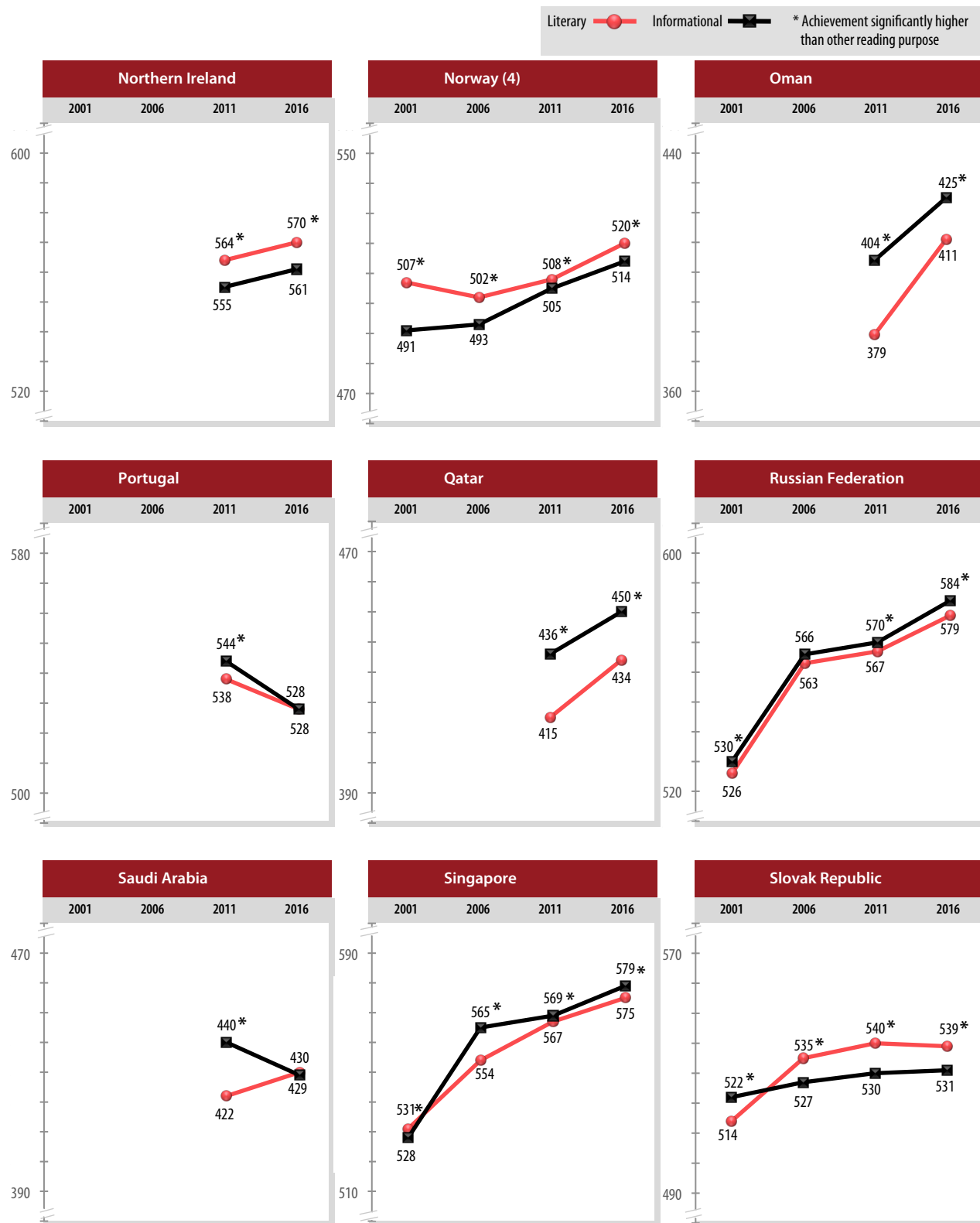
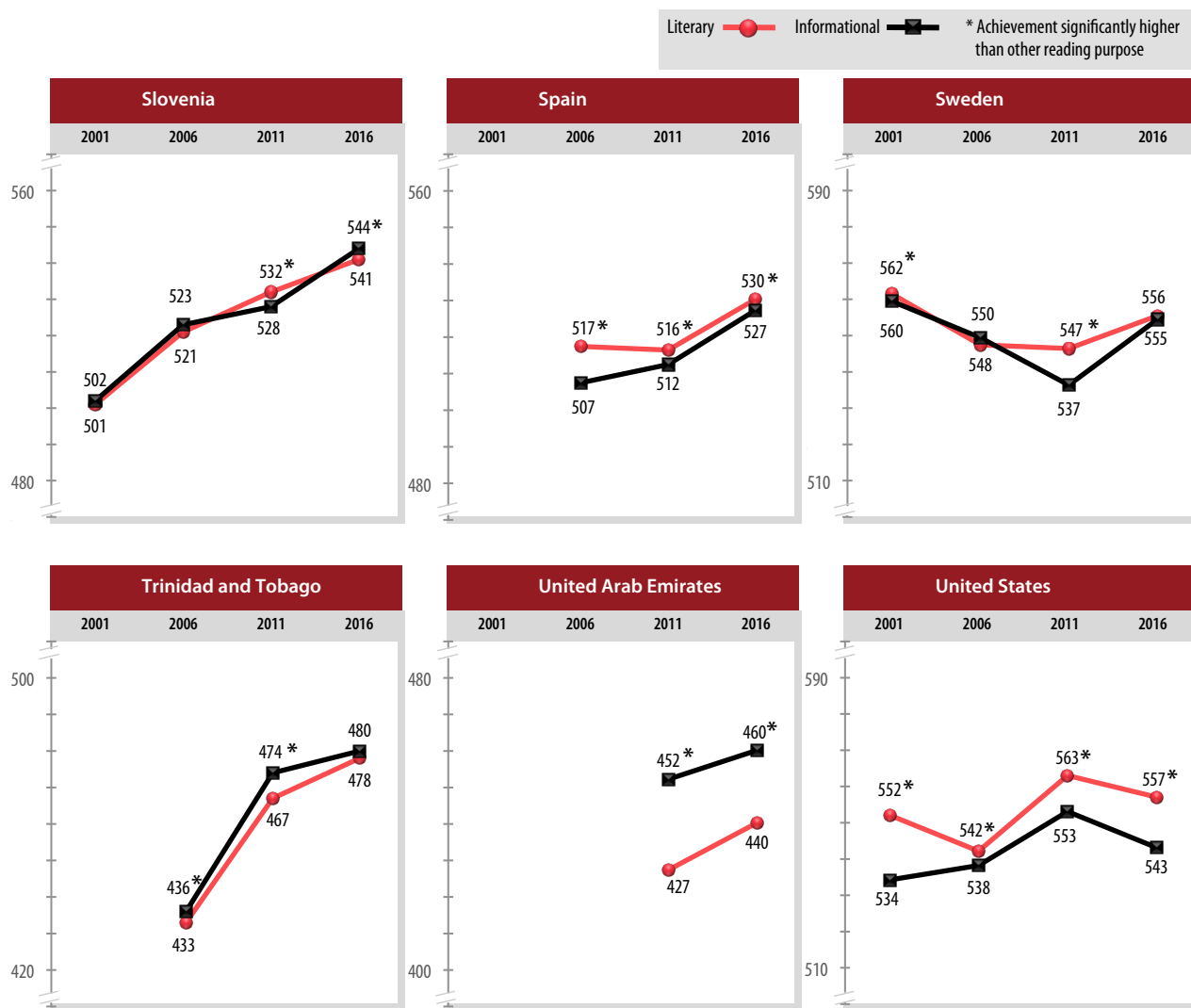


Exhibit 3.3: Trends in Achievement by Reading Purpose (Continued)



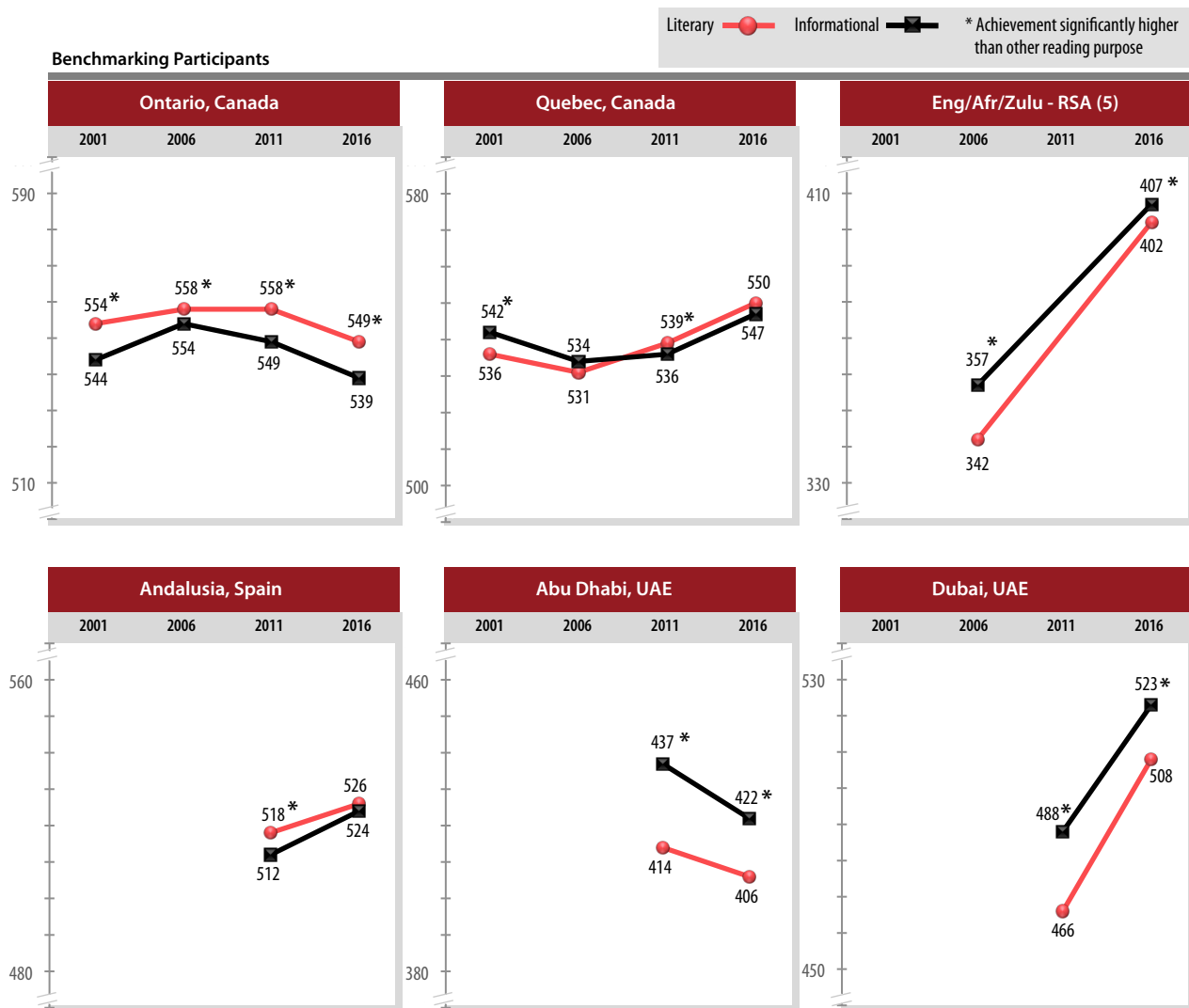
SOURCE: IEA's Progress in International Reading Literacy Study – PIRLS 2016

Exhibit 3.3: Trends in Achievement by Reading Purpose (Continued)



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

Exhibit 3.3: Trends in Achievement by Reading Purpose (Continued)



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

Exhibit 3.4: Differences in Achievement for Reading Purposes Across Assessment Years

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Literary				Informational			
	Average Scale Score	Differences Between Years			Average Scale Score	Differences Between Years		
		2011	2006	2001		2011	2006	2001
Australia								
2016	547 (2.4)	20 ▲			543 (2.6)	15 ▲		
2011	527 (2.4)				528 (2.3)			
Austria								
² 2016	544 (2.3)	12 ▲	5		539 (2.4)	13 ▲	3	
2011	533 (2.2)		-7 ▼		526 (2.1)		-10 ▼	
2006	540 (2.2)				536 (2.3)			
Azerbaijan								
2016	464 (4.1)	3			475 (4.9)	15 ▲		
² 2011	461 (3.1)				460 (3.9)			
Belgium (Flemish)								
2016	524 (1.9)		-22 ▼		526 (1.9)		-23 ▼	
² † 2006	546 (1.9)				549 (2.0)			
Belgium (French)								
² 2016	504 (2.2)	-4	4		490 (2.4)	-13 ▼	-7	
² † 2011	508 (2.8)		8 ▲		504 (3.1)		7	
2006	500 (2.5)				497 (2.8)			
Bulgaria								
2016	551 (4.5)	20 ▲	7	0	554 (4.2)	21 ▲	3	3
2011	532 (4.4)		-12	-19 ▼	533 (4.0)		-18 ▼	-18 ▼
² 2006	544 (4.6)			-7	551 (4.5)			0
2001	551 (4.0)				551 (3.7)			
Canada								
¹ ² 2016	547 (1.9)	-6 ▼			540 (1.9)	-5 ▼		
² 2011	553 (1.7)				545 (1.6)			
Chinese Taipei								
2016	548 (2.0)	7 ▲	16 ▲		569 (2.2)	4	31 ▲	
2011	542 (1.9)		9 ▲		565 (1.8)		27 ▲	
2006	532 (2.1)				539 (1.9)			
Czech Republic								
2016	545 (2.1)	0		7 ▲	541 (2.3)	-4		6
2011	545 (2.1)			7 ▲	545 (2.1)			9 ▲
² 2001	538 (2.3)				536 (2.6)			
Denmark								
² 2016	551 (2.2)	-4	2		543 (2.5)	-10 ▼	0	
² 2011	555 (1.8)		6		553 (1.9)		10 ▲	
² 2006	549 (2.5)				543 (2.6)			
England								
2016	563 (2.2)	10 ▲	22 ▲	1	556 (2.1)	7 ▲	18 ▲	8 ▲
† 2011	553 (2.7)		12 ▲	-9	549 (2.6)		11 ▲	1
2006	540 (2.6)			-21 ▼	538 (2.6)			-10 ▼
² † 2001	561 (3.7)				548 (3.6)			
Finland								
2016	565 (1.9)	-4			569 (2.0)	1		
2011	568 (1.9)				568 (1.9)			
France								
2016	513 (2.4)	-9 ▼	-5	-6	510 (2.4)	-9 ▼	-16 ▼	-22 ▼
2011	521 (2.6)		4	2	519 (2.7)		-7 ▼	-13 ▼
2006	517 (2.4)			-2	526 (2.2)			-6
2001	519 (2.5)				532 (2.5)			

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

▲ More recent year significantly higher

▼ More recent year significantly lower

Trend results for Azerbaijan do not include students taught in Russian. Trend results for Lithuania do not include students taught in Polish or in Russian. See Appendix C.1 for target population coverage notes 1, 2, and 3. See Appendix C.4 for sampling guidelines and sampling participation notes †, ‡, and ≡. () Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

Exhibit 3.4: Differences in Achievement for Reading Purposes Across Assessment Years (Continued)

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Literary				Informational			
	Average Scale Score	Differences Between Years			Average Scale Score	Differences Between Years		
		2011	2006	2001		2011	2006	2001
Georgia								
¹ 2016	490 (2.6)	-1	13 ▲		486 (3.1)	4	24 ▲	
¹ 2011	491 (3.1)		15 ▲		482 (3.2)		20 ▲	
^{1 2} 2006	477 (3.4)				462 (3.8)			
Germany								
2016	542 (3.3)	-2	-8 ▼	3	533 (3.3)	-5	-13 ▼	-6
2011	545 (2.2)		-6	5	538 (2.5)		-8 ▼	-2
2006	551 (2.1)			11 ▲	546 (2.4)			6 ▲
2001	539 (1.8)				539 (1.9)			
Hong Kong SAR								
^{2 †} 2016	562 (3.0)	-2	3	42 ▲	576 (2.8)	-1	6	40 ▲
³ 2011	565 (2.5)		5	45 ▲	578 (2.2)		7 ▲	41 ▲
2006	559 (2.6)			39 ▲	570 (2.4)			33 ▲
2001	520 (3.5)				537 (3.1)			
Hungary								
2016	558 (2.8)	16 ▲	-1	6	551 (3.3)	15 ▲	8	14 ▲
2011	542 (2.8)		-17 ▼	-10 ▼	536 (3.0)		-6	-1
2006	559 (3.0)			8 ▲	542 (3.1)			6
2001	551 (2.2)				537 (2.3)			
Iran, Islamic Rep. of								
2016	430 (3.8)	-29 ▼	6	10	425 (3.8)	-30 ▼	10	22 ▲
2011	459 (2.9)		34 ▲	39 ▲	455 (3.0)		40 ▲	52 ▲
2006	425 (3.3)			4	415 (3.2)			12 ▲
2001	420 (4.5)				403 (4.7)			
Ireland								
2016	571 (2.7)	14 ▲			565 (2.7)	16 ▲		
2011	557 (2.7)				549 (2.3)			
Israel								
³ 2016	532 (2.6)	-9 ▼			529 (2.5)	-12 ▼		
³ 2011	542 (2.8)				541 (2.7)			
Italy								
2016	549 (2.1)	10 ▲	-5	3	549 (2.2)	4	-1	12 ▲
2011	539 (2.0)		-15 ▼	-7 ▼	545 (2.0)		-5	8 ▲
2006	554 (3.3)			8	550 (3.0)			13 ▲
2001	546 (2.6)				537 (2.6)			
Latvia								
² 2016	555 (1.9)		13 ▲	15 ▲	561 (1.8)		21 ▲	14 ▲
2006	542 (2.5)			2	540 (2.5)			-8 ▼
2001	540 (2.3)				548 (2.4)			
Lithuania								
2016	549 (2.9)	20 ▲	6	1	553 (2.8)	25 ▲	22 ▲	13 ▲
^{1 2} 2011	529 (1.8)		-15 ▼	-19 ▼	527 (2.1)		-3	-12 ▼
¹ 2006	543 (1.9)			-5	530 (1.7)			-9 ▼
¹ 2001	548 (2.9)				539 (2.8)			
Malta								
² 2016	452 (2.0)	-6 ▼			451 (2.0)	-4		
2011	458 (1.7)				455 (2.0)			
Morocco								
2016	353 (4.0)	54 ▲			359 (4.0)	38 ▲		
✱ 2011	299 (3.7)				321 (3.7)			

▲ More recent year significantly higher

▼ More recent year significantly lower

✱ Reservations about reliability of average achievement because the percentage of students with achievement too low for estimation exceeds 25%.

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

Exhibit 3.4: Differences in Achievement for Reading Purposes Across Assessment Years (Continued)

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Literary				Informational			
	Average Scale Score	Differences Between Years			Average Scale Score	Differences Between Years		
		2011	2006	2001		2011	2006	2001
Netherlands								
† 2016	546 (1.7)	2	0	-8 ▼	545 (1.9)	-3	-4	-10 ▼
† 2011	545 (2.4)		-2	-10 ▼	547 (1.9)		-2	-7 ▼
† 2006	546 (1.8)			-9 ▼	549 (1.6)			-5
† 2001	555 (2.6)				554 (2.8)			
New Zealand								
2016	525 (2.3)	-8 ▼	-4	-9	520 (2.4)	-9 ▼	-14 ▼	-5
2011	533 (2.2)		4	-1	530 (2.0)		-5	4
2006	529 (2.2)			-6	534 (2.4)			8
2001	535 (4.3)				526 (4.0)			
Northern Ireland								
2016	570 (2.5)	7			561 (2.3)	6		
† 2011	564 (2.7)				555 (2.5)			
Norway (4)								
2016	520 (2.1)	13 ▲	19 ▲	13 ▲	514 (2.2)	9 ▲	21 ▲	22 ▲
‡ 2011	508 (2.0)		6	0	505 (2.3)		12 ▲	14 ▲
‡ 2006	502 (2.5)			-5	493 (2.7)			2
2001	507 (3.2)				491 (3.1)			
Oman								
2016	411 (3.3)	31 ▲			425 (3.3)	22 ▲		
ψ 2011	379 (2.8)				404 (3.0)			
Portugal								
² 2016	528 (2.5)	-10 ▼			528 (2.3)	-15 ▼		
2011	538 (2.7)				544 (2.7)			
Qatar								
2016	434 (2.3)	19 ▲			450 (1.9)	14 ▲		
² 2011	415 (3.8)				436 (3.5)			
Russian Federation								
2016	579 (2.2)	12 ▲	16 ▲	53 ▲	584 (2.3)	15 ▲	19 ▲	54 ▲
2011	567 (2.7)		4	42 ▲	570 (2.8)		4	40 ▲
² 2006	563 (3.4)			38 ▲	566 (3.4)			35 ▲
² 2001	526 (4.2)				530 (4.6)			
Saudi Arabia								
2016	430 (4.0)	8			429 (4.5)	-11		
2011	422 (4.7)				440 (4.5)			
Singapore								
³ 2016	575 (3.3)	8	21 ▲	44 ▲	579 (3.3)	9 ▲	14 ▲	51 ▲
² 2011	567 (3.5)		13 ▲	36 ▲	569 (3.2)		4	42 ▲
2006	554 (3.1)			23 ▲	565 (3.0)			37 ▲
2001	531 (5.6)				528 (5.1)			
Slovak Republic								
2016	539 (3.0)	-1	4	24 ▲	531 (3.1)	1	4	9 ▲
2011	540 (2.9)		5	25 ▲	530 (3.0)		3	9 ▲
2006	535 (3.0)			21 ▲	527 (2.9)			5
2001	514 (2.8)				522 (3.0)			
Slovenia								
2016	541 (2.4)	9 ▲	21 ▲	40 ▲	544 (2.1)	17 ▲	21 ▲	42 ▲
2011	532 (2.3)		12 ▲	32 ▲	528 (1.9)		5	26 ▲
2006	521 (2.0)			20 ▲	523 (2.4)			21 ▲
2001	501 (2.0)				502 (2.1)			

▲ More recent year significantly higher

▼ More recent year significantly lower

ψ Reservations about reliability of average achievement because the percentage of students with achievement too low for estimation does not exceed 25% but exceeds 15%.

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

Exhibit 3.4: Differences in Achievement for Reading Purposes Across Assessment Years (Continued)

Instructions: Read across the row to determine if the performance in the row year is significantly higher (▲) or significantly lower (▼) than the performance in the column year.

Country	Literary				Informational			
	Average Scale Score	Differences Between Years			Average Scale Score	Differences Between Years		
		2011	2006	2001		2011	2006	2001
Spain								
2016	530 (1.9)	14 ▲	13 ▲		527 (1.6)	15 ▲	19 ▲	
2011	516 (2.2)		-2		512 (2.2)		5	
2006	517 (2.7)				507 (2.8)			
Sweden								
2016	556 (2.4)	9 ▲	8 ▲	-6	555 (2.6)	18 ▲	5	-5
2011	547 (2.4)		-1	-15 ▼	537 (2.4)		-13 ▼	-23 ▼
2006	548 (2.1)			-14 ▼	550 (2.4)			-10 ▼
2001	562 (2.4)				560 (2.3)			
Trinidad and Tobago								
2016	478 (3.3)	11 ▲	45 ▲		480 (3.5)	6	44 ▲	
2011	467 (4.1)		35 ▲		474 (3.8)		37 ▲	
2006	433 (4.9)				436 (5.0)			
United Arab Emirates								
2016	440 (3.4)	13 ▲			460 (3.2)	7		
2011	427 (2.3)				452 (2.2)			
United States								
[†] 2016	557 (3.0)	-5	15 ▲	5	543 (3.1)	-10 ▼	5	9
² 2011	563 (1.9)		20 ▲	10 ▲	553 (1.6)		15 ▲	19 ▲
^{2†} 2006	542 (3.7)			-10	538 (3.7)			4
[†] 2001	552 (4.2)				534 (3.9)			

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

Benchmarking Participants

Ontario, Canada								
2016	549 (3.2)	-10 ▼	-9 ▼	-5	539 (3.4)	-9 ▼	-14 ▼	-4
² 2011	558 (2.6)		1	4	549 (2.7)		-5	5
² 2006	558 (3.2)			4	554 (3.1)			10 ▲
2001	554 (3.4)				544 (3.4)			
Quebec, Canada								
[≡] 2016	550 (2.9)	10 ▲	19 ▲	14 ▲	547 (3.0)	11 ▲	13 ▲	4
2011	539 (2.1)		8 ▲	3	536 (2.4)		2	-6
2006	531 (2.7)			-5	534 (3.1)			-8
2001	536 (3.2)				542 (3.1)			
Eng/Afr/Zulu - RSA (5)								
2016	402 (6.3)		60 ▲		407 (6.0)		50 ▲	
2006	342 (8.8)				357 (8.3)			
Andalusia, Spain								
2016	526 (2.1)	8 ▲			524 (2.2)	11 ▲		
2011	518 (2.4)				512 (2.3)			
Abu Dhabi, UAE								
2016	406 (4.8)	-8			422 (5.0)	-15 ▼		
2011	414 (4.9)				437 (4.4)			
Dubai, UAE								
2016	508 (2.1)	42 ▲			523 (2.1)	35 ▲		
2011	466 (2.5)				488 (2.4)			

- ▲ More recent year significantly higher
- ▼ More recent year significantly lower