

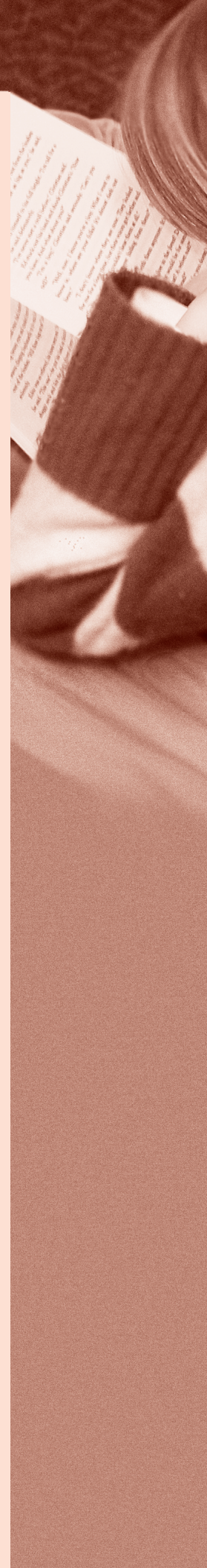
# Chapter 3

## *Literacy-related Activities in the Home*

Abundant research evidence has established that early exposure to literacy activities is a key element of later reading achievement. To expand on the information available from PIRLS 2001 and to measure changes during the intervening 5-year period, PIRLS 2006 collected information from parents about their child's experiences in learning to read, literacy resources in the home, their own reading, and the language(s) spoken in the home. PIRLS 2006 also asked the fourth-grade students themselves about their reading activities at home and at school. Chapter 3 presents parents' and students' responses to a subset of these questions.

The parents' data were collected using the *Learning to Read Survey*, in which PIRLS 2006 asked the parents or primary caregivers of each child participating in the study to provide information about their child's experiences in learning to read. When information from the parents' questionnaires is being reported, it is always presented as an attribute of the student, so that the student is the unit of analysis. That is, the data are shown as the percentages of students whose parents reported on various activities or events. Using the student as the unit of analysis makes it possible to describe students' early literacy experiences and is consistent with the PIRLS goal of providing information about the educational contexts and performances of students.

Although, for reporting purposes, the information provided by parents was linked directly to students, parents sometimes did not complete the questionnaire given to them. When more than 15 percent of the students



were missing parents' questionnaire data, the exhibits in this chapter have special notations. For a country where parent responses were available for 70 to 84 percent of students, an "r" is displayed next to its data. Where parent responses were available for 50 to 69 percent of students, an "s" is displayed. Where parent responses were available for less than 50 percent, an "x" replaces the data.<sup>1</sup>

To summarize questionnaire data concisely and focus attention on educationally relevant support and practice, PIRLS sometimes has combined information from individual questions to form an index that is more valid and reliable than the component questions (e.g., early home literacy activities). According to their responses, students were placed in a "high," "medium," or "low" category. Cutoff points were established so that the high level of an index corresponds to conditions or activities generally associated with good educational practice and high reading achievement. For each index, the percentages of students in each category are presented in relation to their average reading achievement. Wherever possible, the change since 2001 in percentage of students in each category also is presented.

### **What Activities Fostering Literacy Did Parents Engage in with Their Child?**

To examine early literacy experiences, PIRLS 2006 asked if parents (or someone else in the home) engaged in a range of activities with their child before the child began primary school. The Index of Early Home Literacy Activities summarizes parents' responses to six of these activities:

- ▶ Read books
- ▶ Tell stories
- ▶ Sing songs
- ▶ Play with alphabet toys (e.g., blocks with letters of the alphabet)
- ▶ Play word games
- ▶ Read aloud signs and labels.

<sup>1</sup> All countries except the United States administered the parents' questionnaire. In exhibits presenting data from this questionnaire, the United States has dashes (-).

Responses about each activity were on a 3-point scale—*often*, *sometimes*, and *never or almost never*. To construct the index, parents' responses were averaged across the six activities and then students were assigned to 1 of 3 categories (high, medium, or low) on the basis of their parents' average responses. Students in the high category had parents who reported often engaging in the six activities, on average, whereas parents of those in the low category never or almost never did so. Students in the medium category had parents reporting between these two extremes.

Exhibit 3.1 presents the percentage of students in 2006 at each level of the index for each country, together with average reading achievement for those students. Standard errors also are shown. The international average across all countries (not including the Canadian provinces) is shown at the bottom of the columns for the 2006 results. Countries are ordered by the percentage of students at the high level of the index in 2006. In addition, for countries that participated in PIRLS 2001, the exhibit presents the difference in the percent of students from 2001 at each level, with an indication of whether or not that difference was statistically significant.

As was the case in 2001, in most countries, parents of the PIRLS 2006 students reported a fairly high level of engagement with their children in preschool literacy activities, with more than half (54%) of students in the high category of the index, on average, across all countries. The highest level of engagement was reported in Scotland, where 85% of students had parents reporting often reading books, telling stories, singing songs, playing with alphabet toys, playing word games, and reading aloud signs and labels with their child before the child began school. High levels of engagement also were reported in the Russian Federation, New Zealand, Israel, and the Canadian provinces of Nova Scotia, Ontario, British Columbia, and Alberta, where 70 percent or more of students were in the high category. Among the countries where parents reported lower levels of engagement were Iran and Morocco, with 37 and 56 percent of students, respectively, in the low category, where parents reported never or almost never engaging in the activities with their children before they began school.

Of the participants shown in Exhibit 3.1 with data from 2006, 24 had comparable data from 2001. More than half of these (14 of the 24), had an increase in the percentage of students in the high category, accompanied in 12 of the 14 by a decrease in the percentage of students in the medium or low category (or both). Among the countries with the greatest increase in the high category were the Russian Federation (9%), the Netherlands (9%), Germany (13%), and Hong Kong SAR (10%). Interestingly, three of these countries, the Russian Federation, Hong Kong SAR, and Germany, showed an increase in average student achievement in 2006 (see Exhibit 1.3). However, the Netherlands had a decrease in average achievement.

Although the countries with the highest average reading achievement were not necessarily those with the highest percentage of students in the high category of the Index of Early Home Literacy Activities (the Russian Federation, the highest performing country, did have 75%, but Hong Kong SAR, the next highest, had just 26%), there was a positive relationship between engaging in early literacy activities and performance on the PIRLS 2006 reading assessment in every country. On average internationally, students in the high category of the index had about a 20-point advantage in reading achievement over students in the medium category, who in turn scored 20 points above students in the low category. Countries where the students in the high category had the greatest advantage over those in the medium category (30 points or more) included New Zealand, Trinidad and Tobago, Romania, and South Africa.

Exhibit 3.1 Index of Early Home Literacy Activities (EHLA) with Trends

PIRLS 2006  
4th Grade

Countries	High EHLA			Medium EHLA			Low EHLA			
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	
Scotland	s	85 (1.1)	547 (3.5)	3 (1.6)	14 (1.1)	522 (8.2)	-2 (1.4)	2 (0.4)	~ ~	0 (0.5)
Canada, Nova Scotia		77 (0.8)	553 (2.3)	0 0	20 (0.8)	523 (3.4)	0 0	3 (0.3)	510 (7.8)	0 0
Russian Federation		75 (1.0)	573 (3.2)	9 (1.6) ▲	20 (0.8)	548 (4.3)	-6 (1.3) ▼	4 (0.4)	520 (6.7)	-3 (0.8) ▼
New Zealand	s	74 (1.0)	560 (2.0)	5 (1.5) ▲	22 (0.9)	519 (3.8)	-4 (1.4) ▼	4 (0.4)	501 (8.0)	-1 (0.7)
Israel		73 (1.2)	526 (4.3)	x x	22 (1.0)	531 (5.8)	x x	5 (0.4)	531 (7.8)	x x
Canada, Ontario	r	71 (1.3)	563 (3.0)	1 (1.6)	23 (1.0)	541 (4.2)	-2 (1.3)	6 (0.6)	539 (8.4)	1 (0.8)
Canada, British Columbia	r	71 (1.2)	570 (2.9)	0 0	23 (1.0)	547 (4.3)	0 0	6 (0.5)	539 (6.7)	0 0
Canada, Alberta	r	70 (1.2)	573 (2.5)	0 0	25 (1.1)	554 (3.9)	0 0	5 (0.6)	516 (6.4)	0 0
Hungary		69 (0.9)	560 (3.1)	7 (1.4) ▲	26 (0.8)	541 (3.7)	-6 (1.3) ▼	5 (0.5)	525 (7.8)	-1 (0.7)
Spain	s	68 (1.1)	530 (2.5)	0 0	26 (1.0)	506 (4.0)	0 0	6 (0.6)	487 (6.4)	0 0
Macedonia, Rep. of	r	67 (1.0)	460 (4.3)	6 (1.7) ▲	27 (0.8)	431 (5.0)	-4 (1.3) ▼	6 (0.5)	414 (9.3)	-2 (1.1)
Trinidad and Tobago		67 (1.2)	457 (5.1)	0 0	27 (0.9)	416 (5.3)	0 0	6 (0.6)	363 (10.4)	0 0
Georgia		66 (1.5)	481 (3.6)	0 0	26 (1.2)	461 (4.3)	0 0	8 (1.0)	458 (11.5)	0 0
Italy		65 (1.0)	561 (2.7)	3 (1.4) ▲	28 (0.9)	545 (3.9)	-2 (1.3)	7 (0.6)	531 (6.1)	-1 (0.7)
Slovak Republic		65 (1.1)	542 (2.2)	2 (1.5)	30 (0.8)	524 (3.3)	-2 (1.3)	5 (0.6)	475 (15.6)	0 (0.8)
Netherlands	s	64 (1.2)	561 (1.8)	9 (1.6) ▲	30 (1.0)	547 (2.8)	-7 (1.4) ▼	6 (0.6)	544 (5.1)	-2 (0.9) ▼
Canada, Quebec	r	64 (1.1)	544 (3.0)	3 (1.7)	30 (1.0)	523 (3.6)	-2 (1.6)	6 (0.6)	517 (6.1)	-1 (0.9)
Slovenia		64 (0.9)	532 (2.3)	6 (1.4) ▲	31 (0.8)	510 (3.2)	-6 (1.3) ▼	5 (0.3)	503 (5.2)	-1 (0.6)
Poland		62 (1.1)	532 (2.5)	0 0	32 (1.0)	506 (3.4)	0 0	6 (0.5)	491 (6.7)	0 0
Latvia		60 (1.1)	550 (2.4)	2 (1.8)	33 (1.0)	532 (3.4)	-1 (1.7)	7 (0.5)	526 (5.4)	-1 (0.7)
France		59 (1.0)	533 (2.4)	3 (1.5)	33 (0.9)	516 (2.6)	-2 (1.4)	8 (0.6)	500 (4.5)	-1 (0.9)
Bulgaria		57 (1.9)	562 (4.2)	-5 (2.6)	26 (1.1)	540 (5.4)	1 (1.5)	17 (1.8)	524 (9.7)	4 (2.4)
Germany		57 (0.8)	558 (2.5)	13 (1.1) ▲	34 (0.9)	551 (2.5)	-9 (1.2) ▼	9 (0.5)	531 (4.8)	-5 (0.8) ▼
Iceland	r	56 (0.9)	527 (1.9)	3 (1.2) ▲	35 (0.9)	506 (2.4)	-4 (1.2) ▼	9 (0.5)	492 (5.4)	1 (0.8)
Lithuania		55 (1.1)	545 (1.9)	7 (1.7) ▲	36 (1.0)	531 (1.9)	-3 (1.5) ▼	9 (0.5)	523 (3.8)	-3 (1.0) ▼
Belgium (French)		52 (0.9)	513 (2.9)	0 0	36 (0.7)	493 (3.3)	0 0	11 (0.7)	475 (5.5)	0 0
Denmark		52 (1.1)	558 (2.5)	0 0	36 (1.0)	541 (3.1)	0 0	11 (0.6)	529 (4.6)	0 0
Austria		52 (1.0)	552 (2.3)	0 0	37 (0.9)	532 (2.4)	0 0	11 (0.6)	510 (3.7)	0 0
Romania		51 (1.9)	518 (3.8)	-3 (2.4)	30 (1.3)	483 (5.2)	0 (1.7)	19 (1.8)	427 (10.0)	4 (2.1)
Norway		49 (1.2)	509 (3.1)	2 (1.7)	41 (1.2)	495 (3.5)	0 (1.7)	11 (0.7)	485 (6.4)	-2 (1.2)
South Africa	r	49 (0.9)	325 (8.0)	0 0	40 (0.7)	285 (4.7)	0 0	11 (0.4)	277 (5.3)	0 0
Kuwait	r	48 (1.1)	355 (4.5)	0 0	39 (0.9)	327 (5.3)	0 0	13 (0.7)	311 (9.6)	0 0
Luxembourg		47 (0.7)	574 (1.4)	0 0	36 (0.7)	553 (2.0)	0 0	17 (0.4)	535 (2.0)	0 0
Sweden		46 (1.1)	561 (2.6)	5 (1.3) ▲	40 (1.0)	547 (2.7)	-5 (1.2) ▼	14 (0.7)	532 (3.6)	0 (0.8)
Moldova, Rep. of		46 (1.3)	513 (3.7)	5 (1.8) ▲	36 (1.2)	494 (3.2)	-3 (1.6)	17 (1.1)	480 (6.0)	-2 (1.6)
Indonesia		44 (1.6)	418 (4.2)	0 0	37 (1.4)	404 (4.8)	0 0	19 (1.8)	383 (5.4)	0 0
Belgium (Flemish)		41 (0.9)	560 (2.4)	0 0	41 (0.8)	544 (2.1)	0 0	18 (0.7)	530 (2.6)	0 0
Singapore		38 (0.8)	581 (2.8)	1 (1.3)	42 (0.6)	553 (2.9)	0 (0.9)	20 (0.6)	534 (4.2)	-1 (1.0)
Qatar	s	36 (0.8)	372 (2.4)	0 0	45 (0.8)	357 (2.2)	0 0	18 (0.6)	340 (3.2)	0 0
Chinese Taipei		31 (0.8)	557 (2.4)	0 0	46 (0.6)	535 (2.1)	0 0	23 (0.8)	515 (3.3)	0 0
Hong Kong SAR	r	26 (0.9)	578 (2.6)	10 (1.2) ▲	45 (0.8)	563 (2.4)	-9 (1.2) ▼	29 (1.1)	558 (3.2)	-1 (1.6)
Iran, Islamic Rep. of		25 (1.1)	454 (4.0)	7 (1.6) ▲	38 (1.2)	432 (3.7)	2 (1.6)	37 (1.7)	390 (4.5)	-9 (2.4) ▼
Morocco		13 (0.8)	357 (9.2)	--	31 (1.4)	340 (6.4)	--	56 (1.7)	306 (8.1)	--
England		x x	x x	x x	x x	x x	x x	x x	x x	x x
United States		--	--	--	--	--	--	--	--	--
International Avg.		54 (0.2)	515 (0.6)		33 (0.2)	494 (0.6)		13 (0.1)	475 (1.1)	

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

▲ Percent in 2006 significantly higher      ▼ Percent in 2006 significantly lower

Based on parents' responses to the frequency of the following activities they engage in with their child prior to entry into primary school: read books, tell stories, sing songs, play with alphabet toys (e.g., blocks with letters of the alphabet), play word games, and read aloud signs and labels. Average is computed across the 6 items based on a 3-point scale: Never or almost never = 1, Sometimes = 2, and Often = 3. High level indicates an average score of greater than 2.33 through 3. Medium level indicates an average score of 1.67 through 2.33. Low level indicates an average score of 1 to less than 1.67.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

A diamond (0) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

## What Literacy Resources Do Students Have in Their Homes?

IEA studies have shown that students from homes with extensive literacy resources have higher achievement in reading and other subjects than those from less-advantaged backgrounds. For example, IEA's 1991 study of reading literacy in 32 countries found a clear-cut relationship between the number of books students reported in their homes and their reading achievement levels.<sup>2</sup> TIMSS, IEA's international study of trends in student achievement in mathematics and science, has consistently shown that students with large numbers of books in the home have higher achievement in mathematics and science at both fourth and eighth grades.<sup>3</sup> Building on this work, PIRLS in 2001 developed an Index of Home Educational Resources based on parents' and students' reports of the number of books, the number of children's books, and the presence of four educational aids (computer, study desk for own use, books of their own, and access to a daily newspaper) in the home and on parents' education.

Students assigned to the high level of this index came from homes with more than 100 books, more than 25 children's books, at least 3 of the 4 educational aids, and where at least one parent completed university. Students assigned to the low level had 25 or fewer books in the home, 25 or fewer children's books, no more than two of the four educational aids, and parents that had not completed secondary education. The remaining students were assigned to the medium level. Exhibit 3.2 presents the percentage of students in 2006 at each level of the index for each country, together with the average reading achievement for these students. The international average across all countries is shown at the bottom of these columns. The exhibit also presents the difference from 2001 in the percentage of students at each level of the index, together with an indication of the statistical significance of this difference. Participants are ordered by the percentage of students at the high level of the index in 2006.

On average across countries, there were 11 percent of students at the high level of the index, 80 percent at the medium level, and 9 percent at the low level, although the distribution varied considerably from country to country.

2 Elley, W.B. (1992). *How in the world do students read?* The Hague: International Association for the Evaluation of Educational Achievement (IEA).

3 See, for example, Mullis, I.V.S., Martin, M.O., Gonzalez, E.G., & Chrostowski, S. J. (2004). *TIMSS 2003 international mathematics report: Findings from IEA's Trends in International Mathematics and Science Study at the fourth and eighth grades*. Chestnut Hill, MA: Boston College.

Exhibit 3.2 Index of Home Educational Resources (HER) with Trends

PIRLS 2006  
4th Grade

Countries	High HER			Medium HER			Low HER		
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001
Norway	26 (1.2)	531 (2.5)	-7 (1.8) ▼	74 (1.2)	493 (2.9)	7 (1.8) ▲	0 (0.1)	~ ~	0 (0.1)
Denmark	24 (1.3)	576 (3.4)	◊ ◊	75 (1.3)	540 (2.3)	◊ ◊	1 (0.2)	~ ~	◊ ◊
Iceland	r 24 (0.8)	550 (2.9)	4 (1.1) ▲	76 (0.8)	507 (1.6)	-4 (1.1) ▼	0 (0.1)	~ ~	0 (0.1)
Sweden	22 (1.4)	578 (3.5)	-3 (1.9)	78 (1.4)	546 (2.1)	3 (1.9)	0 (0.1)	~ ~	0 (0.1)
Scotland	s 21 (1.6)	589 (6.7)	4 (2.1) ▲	77 (1.6)	531 (3.1)	-4 (2.1) ▼	1 (0.4)	~ ~	0 (0.5)
Canada, British Columbia	r 20 (1.2)	597 (3.6)	◊ ◊	79 (1.3)	556 (2.9)	◊ ◊	0 (0.2)	~ ~	◊ ◊
Netherlands	s 20 (1.1)	584 (2.9)	13 (1.3) ▲	79 (1.1)	550 (1.4)	-12 (1.3) ▼	1 (0.3)	~ ~	0 (0.4)
Canada, Alberta	r 19 (1.2)	598 (3.9)	◊ ◊	80 (1.2)	559 (2.6)	◊ ◊	0 (0.1)	~ ~	◊ ◊
Canada, Nova Scotia	19 (1.1)	590 (3.5)	◊ ◊	81 (1.1)	539 (1.8)	◊ ◊	0 (0.1)	~ ~	◊ ◊
Canada, Ontario	r 18 (1.5)	591 (4.2)	0 (2.1)	81 (1.4)	550 (2.6)	0 (2.0)	1 (0.2)	~ ~	0 (0.3)
New Zealand	s 18 (1.0)	591 (3.6)	-1 (1.5)	81 (1.0)	541 (2.0)	2 (1.6)	1 (0.1)	~ ~	-1 (0.3)
Israel	16 (1.3)	587 (4.9)	x x	82 (1.4)	526 (3.8)	x x	2 (0.4)	~ ~	x x
Hungary	15 (1.1)	607 (2.9)	-5 (1.7) ▼	80 (1.3)	548 (2.8)	4 (1.7) ▲	5 (0.9)	467 (8.8)	2 (1.0)
France	15 (1.1)	570 (3.1)	1 (1.5)	82 (1.1)	520 (1.9)	1 (1.5)	4 (0.4)	463 (5.7)	-3 (0.6) ▼
Luxembourg	14 (0.5)	601 (2.6)	◊ ◊	82 (0.5)	555 (1.1)	◊ ◊	3 (0.3)	499 (5.2)	◊ ◊
Canada, Quebec	r 14 (0.9)	571 (4.8)	0 (1.5)	84 (0.9)	534 (2.6)	-1 (1.5)	2 (0.3)	~ ~	0 (0.4)
Belgium (Flemish)	14 (1.0)	580 (2.5)	◊ ◊	84 (1.0)	545 (1.8)	◊ ◊	2 (0.3)	~ ~	◊ ◊
Spain	s 13 (1.3)	560 (4.4)	◊ ◊	82 (1.2)	520 (2.4)	◊ ◊	5 (0.7)	458 (9.0)	◊ ◊
Germany	r 12 (0.9)	592 (2.9)	-4 (1.2) ▼	85 (0.9)	553 (2.1)	3 (1.2) ▲	3 (0.3)	483 (6.0)	0 (0.5)
Russian Federation	12 (1.0)	610 (4.8)	4 (1.2) ▲	86 (1.0)	560 (3.4)	-4 (1.2) ▼	2 (0.3)	~ ~	0 (0.4)
Singapore	11 (0.5)	613 (4.0)	0 (1.0)	86 (0.5)	556 (2.8)	0 (1.0)	2 (0.3)	~ ~	0 (0.4)
Bulgaria	11 (1.1)	608 (5.8)	0 (1.4)	74 (1.8)	549 (4.0)	-2 (2.4)	15 (1.9)	514 (11.1)	2 (2.5)
Lithuania	11 (0.7)	577 (2.9)	0 (1.3)	88 (0.8)	533 (1.6)	-1 (1.3)	1 (0.2)	~ ~	0 (0.4)
Slovak Republic	10 (0.7)	585 (3.1)	1 (1.3)	86 (1.0)	533 (2.2)	-1 (1.6)	4 (0.8)	407 (14.5)	0 (1.2)
Chinese Taipei	10 (0.8)	585 (3.9)	◊ ◊	86 (0.8)	534 (1.9)	◊ ◊	3 (0.3)	473 (6.5)	◊ ◊
Latvia	9 (0.8)	571 (3.9)	-5 (1.2) ▼	90 (0.8)	540 (2.4)	6 (1.2) ▲	1 (0.2)	~ ~	-1 (0.4)
Hong Kong SAR	9 (0.9)	589 (2.9)	5 (1.0) ▲	85 (0.7)	565 (2.2)	3 (1.1) ▲	6 (0.5)	531 (7.2)	-8 (1.1) ▼
Georgia	9 (0.8)	510 (4.9)	◊ ◊	87 (1.1)	470 (3.1)	◊ ◊	4 (0.9)	453 (23.7)	◊ ◊
Slovenia	9 (0.5)	578 (3.4)	-2 (0.9) ▼	90 (0.6)	519 (2.0)	3 (0.9) ▲	2 (0.2)	~ ~	-1 (0.4)
Poland	9 (0.7)	583 (4.5)	◊ ◊	82 (0.8)	522 (2.2)	◊ ◊	9 (0.7)	458 (5.9)	◊ ◊
Italy	8 (0.7)	598 (4.4)	1 (0.9)	84 (1.0)	553 (2.9)	-2 (1.3) ▼	8 (0.9)	517 (7.7)	2 (1.0)
Qatar	s 7 (0.3)	402 (5.4)	◊ ◊	85 (0.4)	363 (1.7)	◊ ◊	8 (0.3)	321 (6.3)	◊ ◊
Austria	7 (0.7)	592 (4.2)	◊ ◊	92 (0.7)	538 (1.8)	◊ ◊	1 (0.2)	~ ~	◊ ◊
Trinidad and Tobago	r 5 (0.5)	510 (8.3)	◊ ◊	89 (0.9)	443 (4.8)	◊ ◊	7 (0.8)	375 (9.2)	◊ ◊
Belgium (French)	r 5 (0.5)	553 (5.8)	◊ ◊	91 (0.6)	502 (2.5)	◊ ◊	4 (0.5)	440 (5.9)	◊ ◊
Macedonia, Rep. of	s 5 (0.5)	523 (9.0)	3 (0.6) ▲	85 (1.1)	457 (3.7)	3 (1.7)	11 (1.1)	373 (6.3)	-6 (1.7) ▼
Kuwait	s 4 (0.4)	401 (12.4)	◊ ◊	90 (0.6)	348 (4.4)	◊ ◊	6 (0.5)	308 (13.3)	◊ ◊
Romania	4 (0.6)	578 (5.7)	-1 (1.1)	77 (1.6)	504 (4.1)	-2 (2.0)	19 (1.7)	429 (10.0)	3 (2.1)
Moldova, Rep. of	4 (0.6)	554 (9.8)	0 (0.9)	74 (1.1)	506 (2.9)	-16 (1.6) ▼	22 (1.1)	477 (5.2)	16 (1.4) ▲
South Africa	r 3 (0.5)	528 (15.0)	◊ ◊	70 (1.0)	324 (6.2)	◊ ◊	26 (1.1)	264 (4.6)	◊ ◊
Iran, Islamic Rep. of	3 (0.4)	537 (7.7)	1 (0.4)	47 (1.7)	457 (2.8)	-5 (2.7)	51 (1.9)	387 (3.9)	4 (2.9)
Morocco	1 (0.3)	~ ~	--	38 (1.8)	348 (5.7)	--	61 (1.9)	313 (8.8)	--
Indonesia	0 (0.2)	~ ~	◊ ◊	62 (1.7)	418 (4.1)	◊ ◊	37 (1.7)	386 (4.4)	◊ ◊
England	x x	x x	x x	x x	x x	x x	x x	x x	x x
United States	--	--	--	--	--	--	--	--	--
International Avg.	11 (0.1)	563 (1.0)		80 (0.2)	503 (0.5)		9 (0.1)	426 (1.9)	

▲ Percent in 2006 significantly higher ▼ Percent in 2006 significantly lower

Based on students' responses to two questions about home educational resources: number of books in the home, and educational aids in the home (computer, study desk/table for own use, books of their own, access to a daily newspaper); and parents' responses to two questions: number of children's books in the home, and parents' education. High level indicates more than 100 books in the home; more than 25 children's books; at least 3 of 4 educational aids; and at least one parent finished university. Low level indicates 25 or fewer books in the home; 25 or fewer children's books; no more than 2 educational aids; and parents that have not completed secondary education. Medium level includes all other combinations of responses.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

While most countries had from 70 to 90 percent of students at the middle level, the most striking differences were at the high and low levels. Participants with relatively high proportions of students from well-resourced homes (20% or more of students at the high level of the index) included Norway, Denmark, Iceland, Sweden, Scotland, the Netherlands, and the Canadian province of British Columbia. All except Norway had average reading achievement above the average on the PIRLS international reading scale (as shown in Exhibit 1.1). At the other extreme, Moldova, South Africa, Iran, Morocco, and Indonesia had 20 percent or more of their students at the low level of the index and very few at the high level. Except for Moldova, these countries had average achievement below the PIRLS international scale average.

Although there was some correspondence between the percentage of students at the high level of the index of home educational resources and a country's average reading achievement, more significant were the differences within each country between students at the three levels of the index for every country. The difference between the international average for those at the high level (563) and those at the low level (426) amounted to 137 score points, about twice the difference between the highest performing country (the Russian Federation) and the PIRLS scale average.

Of the countries that also participated in PIRLS 2001, Iceland, Scotland, the Netherlands, the Russian Federation, Hong Kong SAR, and Macedonia had increased percentages of students in the high category of the index, while Norway, Hungary, Germany, Latvia, and Slovenia had decreased percentages.

Because books, and children's books, in particular, are probably the most important literacy resource, Exhibits 3.3 and 3.4 provide more detail about the number of children's books in the home. Parents' reports on the number of children's books in the home (Exhibit 3.3) indicated a fairly high level of book ownership. On average across countries, the majority of students (57%) were from homes with more than 25 children's books. According to parents, the highest percentages of students with many children's books were in the Scandinavian countries (Denmark, Iceland, Norway, and Sweden),



New Zealand, Scotland, and the Canadian provinces of Alberta, British Columbia, Nova Scotia, and Ontario, where 25 percent or more of students had parents reporting more than 100 children's books in the home. However, there were also countries with relatively few children's books in the home. In Bulgaria, Georgia, Hong Kong SAR, Macedonia, Moldova, Qatar, and Romania, more than 25 percent of students were from homes with no more than 10 children's books, and in Indonesia, Iran, Kuwait, Morocco, and South Africa, the situation was even worse, with the majority of students in homes with 10 or fewer children's books.

The average reading achievement difference between students from homes with many children's books and those from homes with few children's books was very large. Students from homes with more than 100 children's books had an average achievement score of 553 score points, whereas those from homes with 10 books or fewer had an average of just 462 points—a difference of 91 score points (almost 1 standard deviation on the PIRLS reading scale). There were large average achievement differences between students from homes with many children's books and those from homes with few books in every country.

Because of the association between number of children's books in the home and average reading achievement at fourth grade, Exhibit 3.4 presents information on trends in parents' reports on children's book ownership from 2001. More specifically, for those countries that also participated in PIRLS 2001, the exhibit shows the percentage of students in each category of book ownership in 2006 and the change in the percentage since 2001. The average across all countries is shown at the foot of each column.

On average across the countries, there was a slight decrease in parents' reports of the number of children's books in the home, perhaps reflecting increased access to other literacy media, primarily Internet based. For the countries shown in Exhibit 3.4 (a subset of the entire group of PIRLS 2006 participants), 14 percent of students, on average, had parents reporting more than 100 children's books in the home in 2006, a decrease of 2 percentage points from 2001. There also was a slight decrease in the percentage of

Exhibit 3.3 Parents' Reports of Children's Books in the Home

PIRLS 2006  
4th Grade

Countries	More than 100 Books		51–100 Books		26–50 Books	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	14 (0.8)	579 (2.8)	24 (0.8)	561 (2.9)	34 (0.7)	537 (2.2)
Belgium (Flemish)	15 (0.8)	571 (2.8)	24 (0.9)	559 (2.5)	32 (0.7)	550 (2.6)
Belgium (French)	20 (1.3)	536 (3.1)	26 (1.0)	518 (2.7)	27 (0.9)	498 (2.9)
Bulgaria	5 (0.5)	606 (5.6)	11 (0.8)	590 (6.0)	24 (1.3)	571 (3.9)
Canada, Alberta	r 39 (1.4)	578 (3.0)	29 (1.1)	566 (2.8)	21 (1.0)	556 (3.3)
Canada, British Columbia	r 36 (1.5)	582 (3.2)	29 (1.0)	562 (3.5)	22 (1.0)	549 (4.1)
Canada, Nova Scotia	42 (1.0)	561 (2.6)	32 (0.8)	546 (2.8)	19 (0.8)	524 (3.1)
Canada, Ontario	30 (1.5)	577 (3.7)	29 (0.9)	559 (3.5)	25 (1.2)	549 (3.0)
Canada, Quebec	17 (1.0)	561 (3.9)	28 (1.1)	544 (3.5)	31 (0.9)	529 (3.9)
Chinese Taipei	21 (0.9)	566 (2.7)	18 (0.7)	550 (2.9)	23 (0.7)	537 (2.6)
Denmark	25 (0.9)	568 (3.7)	32 (1.1)	552 (2.6)	26 (0.8)	540 (3.3)
England	x x	x x	x x	x x	x x	x x
France	19 (1.0)	560 (2.6)	28 (0.9)	538 (2.7)	28 (0.8)	518 (2.4)
Georgia	4 (0.4)	510 (6.6)	8 (0.6)	500 (4.9)	21 (1.1)	489 (3.9)
Germany	19 (1.1)	587 (2.5)	28 (1.0)	567 (3.3)	31 (1.0)	547 (2.1)
Hong Kong SAR	9 (0.8)	582 (3.3)	13 (0.8)	579 (3.3)	25 (0.9)	570 (2.4)
Hungary	15 (0.8)	596 (3.6)	24 (1.1)	578 (3.3)	31 (1.2)	550 (3.0)
Iceland	r 28 (0.7)	537 (2.3)	41 (0.8)	517 (2.1)	26 (0.8)	501 (2.9)
Indonesia	1 (0.2)	~ ~	1 (0.2)	~ ~	6 (0.6)	430 (7.6)
Iran, Islamic Rep. of	2 (0.2)	~ ~	4 (0.4)	507 (6.8)	11 (0.7)	476 (5.0)
Israel	s 13 (1.0)	571 (6.5)	22 (1.1)	559 (4.3)	29 (1.2)	536 (4.0)
Italy	5 (0.4)	593 (4.9)	15 (0.7)	574 (4.1)	29 (0.8)	562 (3.1)
Kuwait	r 2 (0.3)	~ ~	3 (0.4)	369 (12.6)	15 (0.8)	370 (6.8)
Latvia	13 (0.8)	571 (3.5)	21 (0.8)	559 (3.4)	31 (0.9)	544 (2.9)
Lithuania	5 (0.4)	570 (3.8)	14 (0.7)	564 (3.4)	28 (0.8)	546 (2.1)
Luxembourg	20 (0.5)	601 (2.0)	24 (0.6)	576 (1.9)	25 (0.6)	556 (2.3)
Macedonia, Rep. of	4 (0.4)	464 (10.9)	9 (0.6)	472 (7.7)	27 (1.0)	478 (5.1)
Moldova, Rep. of	2 (0.3)	~ ~	5 (0.6)	529 (8.4)	16 (1.0)	523 (4.4)
Morocco	1 (0.2)	~ ~	1 (0.2)	~ ~	6 (0.6)	368 (13.3)
Netherlands	s 17 (1.1)	577 (3.7)	29 (1.2)	563 (2.2)	31 (1.1)	552 (2.0)
New Zealand	s 36 (1.0)	575 (3.1)	29 (1.0)	550 (3.1)	23 (0.8)	527 (3.8)
Norway	29 (1.0)	518 (3.4)	36 (1.0)	505 (3.0)	24 (0.9)	491 (3.1)
Poland	6 (0.5)	570 (6.3)	16 (0.6)	546 (3.5)	35 (0.8)	526 (3.2)
Qatar	r 5 (0.3)	387 (6.5)	8 (0.4)	376 (5.9)	18 (0.5)	372 (3.9)
Romania	3 (0.3)	559 (9.0)	9 (0.7)	548 (5.9)	20 (1.2)	531 (4.4)
Russian Federation	11 (0.8)	596 (4.1)	19 (0.8)	584 (4.1)	32 (1.1)	572 (3.3)
Scotland	s 32 (1.4)	573 (5.2)	29 (1.2)	548 (5.5)	26 (1.0)	520 (4.5)
Singapore	19 (0.6)	597 (3.5)	23 (0.5)	574 (3.2)	32 (0.6)	555 (3.0)
Slovak Republic	5 (0.3)	581 (4.0)	18 (0.8)	567 (3.5)	37 (1.0)	543 (2.3)
Slovenia	9 (0.6)	567 (3.7)	19 (0.8)	548 (2.4)	35 (0.8)	525 (2.5)
South Africa	r 4 (0.3)	367 (19.2)	6 (0.5)	360 (16.4)	13 (0.6)	344 (12.3)
Spain	s 12 (1.1)	557 (4.4)	23 (1.0)	540 (3.8)	32 (1.1)	521 (3.2)
Sweden	28 (1.1)	572 (3.0)	32 (0.9)	553 (2.3)	25 (0.8)	544 (3.2)
Trinidad and Tobago	9 (0.7)	489 (10.5)	18 (0.8)	466 (6.7)	29 (0.9)	448 (5.6)
United States	--	--	--	--	--	--
International Avg.	13 (0.1)	553 (1.0)	19 (0.1)	532 (0.9)	25 (0.1)	510 (0.8)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Background data provided by parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

NOTE: The International Average does not include the results from the Canadian provinces.



## Exhibit 3.3 Parents' Reports of Children's Books in the Home (Continued)

PIRLS 2006  
4th Grade

Countries	11–25 Books		0–10 Books	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	19 (0.9)	516 (2.6)	9 (0.6)	489 (4.4)
Belgium (Flemish)	21 (0.8)	534 (3.0)	9 (0.6)	513 (4.0)
Belgium (French)	17 (0.9)	469 (3.7)	10 (1.0)	453 (6.0)
Bulgaria	25 (1.0)	549 (4.5)	34 (2.3)	514 (7.2)
Canada, Alberta	r 8 (0.8)	534 (6.1)	3 (0.5)	525 (9.4)
Canada, British Columbia	r 9 (0.9)	543 (5.5)	4 (0.6)	524 (7.4)
Canada, Nova Scotia	5 (0.4)	511 (6.5)	1 (0.2)	~ ~
Canada, Ontario	11 (1.0)	538 (5.4)	5 (0.7)	519 (8.7)
Canada, Quebec	18 (1.1)	522 (3.7)	7 (0.7)	504 (4.3)
Chinese Taipei	20 (0.7)	521 (2.6)	17 (0.7)	503 (3.5)
Denmark	11 (0.7)	531 (4.7)	6 (0.6)	514 (6.3)
England	x x	x x	x x	x x
France	17 (0.8)	497 (3.4)	8 (0.7)	468 (4.1)
Georgia	35 (1.1)	474 (4.0)	33 (1.6)	448 (4.8)
Germany	16 (0.7)	519 (3.6)	6 (0.5)	487 (4.7)
Hong Kong SAR	26 (0.8)	561 (2.7)	26 (1.2)	551 (3.7)
Hungary	19 (0.9)	529 (3.2)	11 (1.3)	488 (5.5)
Iceland	r 5 (0.4)	481 (5.9)	1 (0.1)	~ ~
Indonesia	23 (1.4)	410 (7.1)	69 (1.6)	401 (4.0)
Iran, Islamic Rep. of	21 (0.9)	444 (3.6)	62 (1.6)	398 (3.4)
Israel	s 20 (1.0)	502 (5.7)	16 (1.3)	467 (8.3)
Italy	29 (1.0)	541 (3.6)	22 (0.9)	534 (5.7)
Kuwait	r 27 (0.8)	353 (5.5)	53 (1.2)	318 (5.8)
Latvia	24 (0.9)	527 (3.1)	11 (0.8)	501 (5.0)
Lithuania	33 (0.8)	532 (1.6)	21 (1.0)	510 (2.8)
Luxembourg	19 (0.5)	531 (2.3)	11 (0.4)	506 (2.7)
Macedonia, Rep. of	31 (0.9)	444 (4.4)	28 (1.3)	406 (5.1)
Moldova, Rep. of	29 (1.1)	505 (3.4)	47 (1.6)	486 (4.0)
Morocco	16 (1.0)	349 (9.5)	76 (1.2)	315 (6.7)
Netherlands	s 17 (1.0)	542 (2.9)	6 (0.7)	517 (7.2)
New Zealand	s 8 (0.6)	517 (4.9)	4 (0.4)	489 (7.3)
Norway	8 (0.5)	465 (6.8)	2 (0.3)	~ ~
Poland	30 (0.8)	506 (3.0)	12 (0.8)	481 (5.3)
Qatar	r 26 (0.7)	365 (2.9)	43 (0.7)	340 (2.2)
Romania	27 (1.1)	504 (3.4)	41 (2.1)	445 (7.8)
Russian Federation	26 (0.9)	549 (4.2)	12 (0.8)	522 (5.6)
Scotland	s 10 (0.8)	510 (5.7)	3 (0.5)	468 (13.7)
Singapore	17 (0.5)	537 (4.0)	9 (0.5)	499 (5.5)
Slovak Republic	26 (1.0)	522 (3.1)	14 (1.1)	460 (7.1)
Slovenia	26 (0.8)	505 (2.7)	11 (0.7)	480 (4.3)
South Africa	r 23 (0.5)	305 (6.0)	54 (1.1)	286 (4.2)
Spain	s 22 (1.0)	501 (3.8)	11 (1.1)	476 (5.9)
Sweden	11 (0.8)	529 (3.8)	4 (0.6)	506 (7.1)
Trinidad and Tobago	27 (1.0)	425 (5.9)	17 (1.0)	392 (7.7)
United States	--	--	--	--
International Avg.	21 (0.1)	489 (0.7)	22 (0.2)	462 (1.0)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Exhibit 3.4 Trends in Parents' Reports of Children's Books in the Home

PIRLS 2006  
4th Grade

Countries	More than 100 Books		51–100 Books		26–50 Books	
	2006 Percent of Students	Difference in Percent from 2001	2006 Percent of Students	Difference in Percent from 2001	2006 Percent of Students	Difference in Percent from 2001
Bulgaria	5 (0.5)	–3 (0.9) ▼	11 (0.8)	–4 (1.2) ▼	24 (1.3)	–4 (1.7) ▼
Canada, Ontario	r 30 (1.6)	–7 (2.3) ▼	29 (0.9)	–2 (1.4)	25 (1.2)	3 (1.7)
Canada, Quebec	r 17 (1.0)	–2 (1.5)	28 (1.1)	0 (1.4)	31 (0.9)	–1 (1.5)
England	x x	x x	x x	x x	x x	x x
France	19 (1.0)	0 (1.5)	28 (0.9)	2 (1.3)	28 (0.8)	–2 (1.3)
Germany	19 (1.1)	3 (1.4) ▲	28 (1.0)	2 (1.3)	31 (1.0)	–2 (1.3) ▼
Hong Kong SAR	9 (0.8)	6 (0.9) ▲	13 (0.8)	6 (0.9) ▲	25 (0.9)	7 (1.2) ▲
Hungary	15 (0.8)	–3 (1.3) ▼	24 (1.1)	–3 (1.4)	31 (1.2)	2 (1.4)
Iceland	r 28 (0.7)	–5 (1.1) ▼	41 (0.8)	1 (1.2)	26 (0.8)	3 (1.2) ▲
Iran, Islamic Rep. of	2 (0.2)	0 (0.4)	4 (0.4)	1 (0.6)	11 (0.7)	0 (1.0)
Israel	13 (1.0)	x x	22 (1.1)	x x	29 (1.2)	x x
Italy	5 (0.4)	0 (0.6)	15 (0.7)	2 (1.0) ▲	29 (0.8)	2 (1.2)
Latvia	13 (0.8)	–2 (1.2)	21 (0.8)	–2 (1.2)	31 (0.9)	–1 (1.5)
Lithuania	5 (0.4)	–1 (0.7)	14 (0.7)	0 (1.2)	28 (0.8)	0 (1.2)
Macedonia, Rep. of	r 4 (0.4)	0 (0.6)	9 (0.6)	1 (0.9)	27 (1.0)	1 (1.6)
Moldova, Rep. of	2 (0.3)	0 (0.5)	5 (0.6)	0 (0.9)	16 (1.0)	1 (1.7)
Morocco	1 (0.2)	–	1 (0.2)	–	6 (0.6)	–
Netherlands	s 17 (1.1)	–1 (1.4)	29 (1.2)	–2 (1.6)	31 (1.1)	1 (1.6)
New Zealand	s 36 (1.0)	2 (1.7)	29 (1.0)	–1 (1.6)	23 (0.8)	0 (1.4)
Norway	29 (1.0)	–1 (1.6)	36 (1.0)	0 (1.4)	24 (0.9)	0 (1.2)
Romania	3 (0.3)	0 (0.5)	9 (0.7)	–1 (1.0)	20 (1.2)	–1 (1.6)
Russian Federation	11 (0.8)	–1 (1.2)	19 (0.8)	0 (1.1)	32 (1.1)	3 (1.5)
Scotland	s 32 (1.4)	4 (2.0) ▲	29 (1.2)	–3 (1.9)	26 (1.0)	–1 (2.0)
Singapore	19 (0.6)	–1 (1.2)	23 (0.5)	–1 (0.9)	32 (0.6)	1 (0.9)
Slovak Republic	5 (0.3)	–2 (0.7) ▼	18 (0.8)	–1 (1.2)	37 (1.0)	–1 (1.3)
Slovenia	9 (0.6)	3 (0.8) ▲	19 (0.8)	4 (1.2) ▲	35 (0.8)	3 (1.2) ▲
Sweden	28 (1.1)	–4 (1.6) ▼	32 (0.9)	–2 (1.2) ▼	25 (0.8)	3 (1.1) ▲
United States	–	–	–	–	–	–
International Avg.	14 (0.2)	–2 (0.2) ▼	20 (0.2)	–1 (0.3)	26 (0.2)	0 (0.3)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

▲ Percent in 2006 significantly higher

▼ Percent in 2006 significantly lower

Based on data provided by parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.



Exhibit 3.4 Trends in Parents' Reports of Children's Books in the Home (Continued)

PIRLS 2006  
4th Grade

Countries	11–25 Books		0–10 Books		
	2006 Percent of Students	Difference in Percent from 2001	2006 Percent of Students	Difference in Percent from 2001	
Bulgaria	25 (1.0)	2 (1.6)	34 (2.3)	8 (3.0)	▲
Canada, Ontario	r 11 (1.1)	3 (1.4)	▲ 5 (0.7)	3 (0.8)	▲
Canada, Quebec	r 18 (1.1)	2 (1.5)	7 (0.7)	1 (0.9)	
England	x x	x x	x x	x x	
France	17 (0.8)	–1 (1.1)	8 (0.7)	1 (0.9)	
Germany	16 (0.7)	–2 (1.1)	6 (0.5)	0 (0.7)	
Hong Kong SAR	26 (0.8)	–2 (1.0)	26 (1.2)	–17 (1.9)	▼
Hungary	19 (0.9)	2 (1.2)	11 (1.3)	2 (1.5)	
Iceland	r 5 (0.4)	1 (0.6)	1 (0.1)	0 (0.2)	
Iran, Islamic Rep. of	21 (0.9)	1 (1.4)	62 (1.6)	–2 (2.5)	
Israel	20 (1.0)	x x	16 (1.3)	x x	
Italy	29 (1.0)	–3 (1.3)	▼ 22 (0.9)	–2 (1.3)	
Latvia	24 (0.9)	3 (1.3)	11 (0.8)	2 (1.2)	
Lithuania	33 (0.8)	1 (1.6)	21 (1.0)	0 (1.5)	
Macedonia, Rep. of	r 31 (0.9)	1 (1.3)	28 (1.3)	–2 (2.2)	
Moldova, Rep. of	29 (1.1)	2 (1.5)	47 (1.6)	–3 (2.4)	
Morocco	16 (1.0)	–	76 (1.2)	–	
Netherlands	s 17 (1.0)	1 (1.4)	6 (0.7)	1 (1.0)	
New Zealand	s 8 (0.6)	–1 (1.0)	4 (0.4)	0 (0.7)	
Norway	8 (0.5)	1 (0.8)	2 (0.3)	0 (0.5)	
Romania	27 (1.1)	1 (1.5)	41 (2.1)	2 (2.9)	
Russian Federation	26 (0.9)	3 (1.3)	▲ 12 (0.8)	–4 (1.6)	▼
Scotland	s 10 (0.8)	0 (1.1)	3 (0.5)	0 (0.7)	
Singapore	17 (0.5)	0 (0.9)	9 (0.5)	0 (0.8)	
Slovak Republic	26 (1.0)	1 (1.5)	14 (1.1)	3 (1.5)	
Slovenia	26 (0.8)	–4 (1.2)	▼ 11 (0.7)	–6 (1.0)	▼
Sweden	11 (0.8)	3 (0.9)	▲ 4 (0.6)	0 (1.0)	
United States	–	–	–	–	
International Avg.	20 (0.2)	1 (0.3)	20 (0.2)	2 (0.3)	▲

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

▲ Percent in 2006 significantly higher

▼ Percent in 2006 significantly lower

students in the next highest category, 51–100 children’s books. The percentage of students in homes with more than 100 children’s books decreased in Bulgaria, Hungary, Iceland, the Slovak Republic, Sweden, and the Canadian province of Ontario. However, there also were countries where the percentage of students in this category increased—Germany, Hong Kong SAR, Scotland, and Slovenia.

Accompanying the decrease in percentages of students in homes with many children’s books was an increase in the percentages in homes with few books. For example, according to parents, 20 percent of students in 2006 were from homes with no more than 10 children’s books, an increase of 2 percentage points from 2001. However, three countries showed a decrease in the percentage of students in homes with very few books—Hong Kong SAR, the Russian Federation, and Slovenia. These are three of the four countries with the greatest increase in average reading achievement from 2001, as shown in Exhibit 1.3.

Another important component of the Index of Home Educational Resources was the parents’ highest level of education. As shown in Exhibit 3.5, parental education varied greatly, both within and across the PIRLS countries. On average across countries, 25 percent of students came from homes where parents reported that one or both of them had finished university, 21 percent where one or both had finished post-secondary school but not university, 31 percent where one or both had finished upper-secondary education, 15 percent where one or both had finished lower-secondary school, and 8 percent where neither parent had finished lower-secondary education.

Participants with the highest percentages (40% or more) of university-educated parents included Denmark, Georgia, Iceland, Israel, the Netherlands, Norway, Qatar, and the Canadian provinces of British Columbia, Ontario, and Quebec. In contrast, countries with relatively low levels of parental education (more than 25% of students whose parents did not complete lower-secondary education) included Indonesia (46%), Iran (35%), Morocco (59%), and South Africa (26%).

The PIRLS data highlight the powerful association between parental education and children's reading achievement. Higher levels of parental education were associated with higher average fourth-grade reading achievement in almost every country. At 543 score points, the average reading achievement of students with at least one university-educated parent was 120 points (more than 1 standard deviation) greater than the average of those whose parents did not complete lower-secondary education (423 points).

Exhibit 3.5 Highest Level of Education of Either Parent

PIRLS 2006  
4th Grade

Countries	Finished University or Higher		Finished Post-Secondary Education but Not University		Finished Upper- Secondary School	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	14 (1.1)	575 (3.3)	22 (0.8)	548 (2.7)	59 (1.2)	535 (2.0)
Belgium (Flemish)	31 (1.2)	572 (2.3)	27 (0.9)	559 (1.9)	30 (1.1)	535 (2.3)
Belgium (French)	r 10 (0.7)	539 (4.8)	48 (1.3)	518 (2.6)	23 (0.9)	491 (3.2)
Bulgaria	25 (1.7)	594 (5.2)	6 (0.4)	564 (7.0)	49 (1.6)	541 (4.1)
Canada, Alberta	r 39 (1.6)	582 (3.7)	39 (1.2)	560 (2.6)	16 (0.9)	550 (3.4)
Canada, British Columbia	r 41 (1.8)	580 (3.8)	39 (1.3)	557 (3.0)	16 (1.0)	552 (4.0)
Canada, Nova Scotia	35 (1.4)	571 (2.9)	43 (1.2)	541 (2.6)	16 (0.7)	525 (3.3)
Canada, Ontario	41 (2.0)	575 (3.3)	37 (1.3)	555 (2.9)	18 (1.3)	536 (4.5)
Canada, Quebec	r 42 (2.0)	556 (3.6)	38 (1.4)	529 (3.2)	13 (0.9)	518 (3.9)
Chinese Taipei	21 (1.2)	573 (2.6)	22 (0.8)	550 (2.2)	44 (1.2)	524 (2.0)
Denmark	r 49 (1.7)	565 (2.8)	30 (1.3)	547 (3.5)	10 (0.5)	539 (5.2)
England	x x	x x	x x	x x	x x	x x
France	26 (1.6)	561 (2.5)	16 (0.7)	542 (3.9)	46 (1.3)	514 (2.2)
Georgia	48 (1.8)	498 (3.0)	24 (1.2)	459 (4.6)	25 (1.6)	441 (4.9)
Germany	r 17 (1.3)	589 (2.6)	10 (0.5)	580 (2.6)	37 (0.9)	558 (2.9)
Hong Kong SAR	19 (1.4)	580 (2.3)	12 (0.6)	575 (3.1)	35 (1.0)	564 (2.6)
Hungary	25 (1.5)	598 (2.7)	20 (1.0)	572 (3.4)	42 (1.4)	541 (3.1)
Iceland	r 45 (0.9)	536 (2.3)	22 (0.7)	508 (2.8)	23 (0.7)	502 (2.9)
Indonesia	6 (0.7)	476 (6.8)	4 (0.5)	444 (6.8)	24 (1.3)	428 (3.8)
Iran, Islamic Rep. of	9 (0.9)	508 (5.4)	4 (0.5)	480 (5.7)	19 (1.0)	461 (3.5)
Israel	s 40 (1.8)	570 (3.5)	19 (0.9)	541 (5.0)	29 (1.4)	504 (4.6)
Italy	16 (1.1)	586 (4.0)	8 (0.5)	554 (5.6)	42 (1.1)	558 (2.5)
Kuwait	r 37 (1.3)	372 (5.6)	18 (0.9)	348 (5.5)	26 (1.1)	309 (5.9)
Latvia	18 (1.1)	568 (3.1)	63 (1.2)	543 (2.4)	14 (0.9)	527 (4.9)
Lithuania	27 (1.3)	568 (2.2)	39 (0.9)	536 (1.8)	30 (1.1)	516 (2.4)
Luxembourg	r 19 (0.6)	594 (2.2)	16 (0.6)	583 (2.2)	22 (0.7)	574 (2.4)
Macedonia, Rep. of	12 (0.9)	519 (6.1)	11 (0.7)	500 (6.7)	54 (1.5)	463 (3.7)
Moldova, Rep. of	20 (1.3)	529 (5.3)	35 (1.0)	505 (3.3)	2 (0.3)	~ ~
Morocco	6 (0.9)	418 (13.7)	8 (0.6)	364 (10.0)	8 (0.6)	361 (8.6)
Netherlands	s 47 (1.7)	574 (2.0)	3 (0.4)	558 (6.6)	34 (1.3)	546 (2.3)
New Zealand	s 32 (1.4)	577 (3.0)	38 (1.3)	550 (2.9)	20 (0.8)	532 (3.9)
Norway	49 (1.5)	519 (2.7)	29 (1.0)	493 (3.0)	18 (1.0)	477 (4.7)
Poland	19 (1.1)	564 (3.7)	9 (0.6)	541 (3.4)	33 (0.8)	527 (2.6)
Qatar	s 45 (0.7)	385 (2.0)	10 (0.4)	375 (5.7)	21 (0.6)	342 (3.7)
Romania	9 (1.1)	568 (3.7)	13 (0.9)	508 (6.1)	49 (1.6)	507 (3.3)
Russian Federation	38 (1.2)	590 (3.5)	49 (1.1)	556 (3.7)	9 (0.5)	546 (5.6)
Scotland	x x	x x	x x	x x	x x	x x
Singapore	23 (0.7)	603 (3.4)	26 (0.8)	574 (2.8)	32 (0.6)	547 (3.4)
Slovak Republic	19 (1.0)	577 (2.5)	11 (0.5)	544 (3.3)	64 (1.1)	529 (2.5)
Slovenia	24 (1.2)	563 (2.4)	15 (0.6)	533 (3.8)	55 (1.1)	510 (2.0)
South Africa	s 17 (1.4)	450 (14.3)	7 (0.4)	366 (10.6)	35 (0.9)	315 (5.4)
Spain	s 30 (1.8)	551 (2.9)	12 (0.8)	529 (5.6)	27 (1.2)	523 (3.6)
Sweden	r 34 (2.0)	576 (3.1)	37 (1.1)	552 (2.3)	22 (1.2)	538 (3.8)
Trinidad and Tobago	r 9 (0.9)	519 (7.6)	28 (1.4)	471 (6.1)	37 (1.3)	434 (5.4)
United States	--	--	--	--	--	--
International Avg.	25 (0.2)	543 (0.8)	21 (0.1)	515 (0.8)	31 (0.2)	496 (0.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Background data provided by parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

NOTE: The International Average does not include the results from the Canadian provinces.





## Exhibit 3.5 Highest Level of Education of Either Parent (Continued)

PIRLS 2006  
4th Grade

Countries	Finished Lower-Secondary School		Less than Lower-Secondary School	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	4 (0.4)	488 (5.9)	0 (0.1)	~ ~
Belgium (Flemish)	10 (0.7)	512 (3.4)	2 (0.3)	~ ~
Belgium (French)	r 14 (0.9)	467 (3.8)	5 (0.6)	456 (6.7)
Bulgaria	14 (1.4)	517 (10.8)	7 (1.1)	513 (14.4)
Canada, Alberta	r 4 (0.5)	538 (7.1)	2 (0.3)	~ ~
Canada, British Columbia	r 2 (0.3)	~ ~	2 (0.3)	~ ~
Canada, Nova Scotia	4 (0.4)	508 (6.9)	2 (0.3)	~ ~
Canada, Ontario	2 (0.4)	~ ~	2 (0.5)	~ ~
Canada, Quebec	r 4 (0.6)	500 (8.2)	2 (0.4)	~ ~
Chinese Taipei	11 (0.7)	504 (3.8)	2 (0.3)	~ ~
Denmark	r 7 (0.7)	516 (6.1)	4 (0.4)	496 (10.6)
England	x x	x x	x x	x x
France	9 (0.7)	490 (4.5)	4 (0.4)	481 (5.4)
Georgia	3 (0.5)	431 (11.8)	1 (0.7)	~ ~
Germany	r 33 (1.3)	530 (2.3)	2 (0.3)	~ ~
Hong Kong SAR	22 (1.1)	560 (3.4)	12 (0.8)	544 (5.5)
Hungary	12 (1.4)	487 (5.4)	1 (0.3)	~ ~
Iceland	r 10 (0.5)	483 (3.6)	0 (0.1)	~ ~
Indonesia	20 (0.9)	405 (5.2)	46 (2.2)	382 (4.7)
Iran, Islamic Rep. of	32 (1.1)	420 (3.6)	35 (1.7)	375 (4.2)
Israel	s 7 (1.0)	431 (10.5)	4 (0.5)	457 (11.2)
Italy	32 (1.2)	536 (4.5)	2 (0.5)	~ ~
Kuwait	r 15 (0.9)	305 (7.1)	5 (0.4)	289 (13.0)
Latvia	4 (0.6)	506 (8.5)	0 (0.1)	~ ~
Lithuania	3 (0.3)	509 (5.6)	0 (0.1)	~ ~
Luxembourg	r 35 (0.7)	539 (2.2)	8 (0.4)	522 (3.2)
Macedonia, Rep. of	19 (1.1)	388 (5.5)	5 (0.5)	352 (11.0)
Moldova, Rep. of	33 (1.1)	487 (3.9)	11 (1.0)	478 (8.0)
Morocco	20 (1.2)	329 (7.6)	59 (1.8)	307 (9.4)
Netherlands	s 15 (1.0)	537 (3.3)	1 (0.2)	~ ~
New Zealand	s 8 (0.6)	497 (5.9)	2 (0.2)	~ ~
Norway	4 (0.4)	456 (8.2)	0 (0.1)	~ ~
Poland	35 (1.2)	490 (3.3)	4 (0.4)	467 (7.1)
Qatar	s 11 (0.5)	318 (5.3)	12 (0.3)	322 (3.7)
Romania	22 (1.8)	451 (7.6)	7 (1.3)	388 (16.7)
Russian Federation	4 (0.5)	502 (8.7)	0 (0.1)	~ ~
Scotland	x x	x x	x x	x x
Singapore	12 (0.5)	524 (3.9)	7 (0.4)	497 (5.3)
Slovak Republic	5 (0.7)	440 (10.6)	1 (0.2)	~ ~
Slovenia	5 (0.4)	467 (5.5)	1 (0.1)	~ ~
South Africa	s 15 (0.7)	277 (4.8)	26 (1.2)	260 (5.2)
Spain	s 26 (1.3)	496 (3.9)	5 (0.6)	478 (8.5)
Sweden	r 7 (0.7)	513 (5.7)	0 (0.1)	~ ~
Trinidad and Tobago	r 11 (0.6)	399 (9.3)	15 (1.0)	391 (8.8)
United States	--	--	--	--
International Avg.	15 (0.1)	465 (1.1)	8 (0.1)	423 (2.0)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Because literacy resources are dependent to a large extent on economic considerations, Exhibits 3.6 and 3.7 present information on parents' employment situations and occupational level. As shown in Exhibit 3.6, about one third of students (36%), on average across countries, were from homes where both parents were working full time for pay, about half (47%) from homes where one (but not both) was working full time, and just 7 percent from homes where both parents were working less than full time. Almost one tenth (9%) were from homes with other situations. Internationally on average, reading achievement was highest among students from homes where both parents were working full time for pay and lowest where both were working less than full time. However, for a number of participants, average achievement was similar between both or either parent working full time for pay, or even higher for only one parent working (Luxembourg, the Netherlands, Germany, and the Canadian province of Alberta).

As shown in Exhibit 3.7, parents' responses to a question about the kinds of work they did for their main job were grouped into seven categories: professional, small business owner, clerical, skilled worker, general laborer, never worked outside the home for pay, and not applicable. Students were assigned to the highest occupational category of either parent, taking professional as the highest category and never worked outside the home for pay as the lowest. On average across countries, 35 percent of students had at least one parent in a professional occupation, although the percentage varied widely from country to country. Highest percentages (50% or more) were reported in Denmark, Iceland, Kuwait, New Zealand, Norway, Scotland, Sweden, and the Canadian provinces (Alberta, British Columbia, Nova Scotia, Ontario, and Quebec). Average student reading achievement was highest for students with a parent in a professional occupation (533 points) and lowest for students whose parents reported never working outside the home for pay (409 points).

## Exhibit 3.6 Parents' Employment Situations

PIRLS 2006  
4th Grade

Countries	Both Working Full Time For Pay		Either Working Full Time For Pay		Both Less than Full Time For Pay		Other Situations	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	23 (0.8)	543 (2.8)	71 (1.0)	543 (2.2)	2 (0.3)	~ ~	4 (0.4)	517 (6.2)
Belgium (Flemish)	36 (1.2)	551 (2.1)	54 (1.2)	553 (2.2)	1 (0.2)	~ ~	8 (0.5)	527 (4.4)
Belgium (French)	r 34 (1.1)	518 (2.7)	54 (1.1)	504 (2.8)	5 (0.4)	472 (6.9)	7 (0.5)	474 (6.0)
Bulgaria	50 (1.6)	569 (3.6)	30 (1.1)	541 (5.1)	15 (1.4)	514 (8.3)	5 (0.7)	542 (10.4)
Canada, Alberta	r 40 (1.3)	560 (2.8)	55 (1.3)	571 (2.9)	1 (0.2)	~ ~	4 (0.4)	550 (9.4)
Canada, British Columbia	r 39 (1.0)	560 (3.4)	54 (0.9)	568 (3.0)	2 (0.3)	~ ~	5 (0.5)	550 (8.9)
Canada, Nova Scotia	48 (0.9)	550 (2.6)	46 (0.9)	547 (2.8)	2 (0.2)	~ ~	4 (0.5)	511 (6.7)
Canada, Ontario	51 (1.3)	560 (3.0)	44 (1.3)	561 (3.6)	1 (0.2)	~ ~	4 (0.5)	521 (9.6)
Canada, Quebec	54 (1.4)	539 (3.4)	40 (1.2)	537 (3.2)	2 (0.3)	~ ~	4 (0.5)	500 (7.2)
Chinese Taipei	49 (0.8)	546 (2.2)	34 (0.8)	539 (2.9)	5 (0.3)	519 (6.2)	12 (0.6)	516 (3.0)
Denmark	60 (1.2)	552 (2.6)	33 (1.1)	549 (2.9)	1 (0.1)	~ ~	6 (0.5)	524 (6.3)
England	x x	x x	x x	x x	x x	x x	x x	x x
France	r 40 (1.2)	537 (2.1)	51 (1.0)	525 (2.4)	3 (0.3)	498 (8.5)	6 (0.5)	499 (6.4)
Georgia	r 13 (0.9)	494 (5.3)	37 (1.5)	484 (4.0)	36 (1.7)	463 (5.3)	14 (1.4)	469 (6.9)
Germany	r 12 (0.6)	547 (3.6)	77 (1.0)	559 (2.6)	4 (0.4)	535 (6.4)	6 (0.5)	540 (5.3)
Hong Kong SAR	38 (1.1)	570 (2.4)	50 (1.0)	565 (2.6)	4 (0.4)	550 (5.6)	8 (0.6)	557 (4.5)
Hungary	r 52 (1.3)	567 (3.0)	38 (1.1)	555 (3.3)	4 (0.6)	493 (10.7)	7 (0.6)	525 (7.6)
Iceland	r 53 (0.9)	521 (1.9)	44 (0.9)	513 (2.0)	1 (0.2)	~ ~	2 (0.2)	~ ~
Indonesia	s 19 (1.5)	413 (6.0)	50 (1.8)	409 (5.2)	20 (1.8)	404 (6.6)	12 (1.5)	393 (9.5)
Iran, Islamic Rep. of	s 8 (0.8)	460 (9.0)	53 (1.9)	436 (4.1)	9 (1.0)	415 (13.1)	29 (1.5)	406 (5.3)
Israel	s 44 (1.6)	562 (3.4)	42 (1.4)	527 (4.5)	5 (0.6)	466 (9.7)	9 (0.7)	482 (9.4)
Italy	31 (0.9)	564 (3.6)	56 (1.0)	553 (3.1)	4 (0.5)	549 (7.2)	10 (0.7)	552 (4.8)
Kuwait	s 27 (1.1)	362 (4.8)	49 (1.2)	331 (5.3)	7 (0.6)	352 (12.4)	17 (0.8)	323 (7.0)
Latvia	51 (1.0)	549 (2.6)	39 (0.9)	541 (3.1)	3 (0.5)	522 (15.1)	8 (0.5)	534 (5.5)
Lithuania	49 (1.1)	548 (2.0)	35 (0.8)	537 (2.3)	4 (0.3)	515 (5.4)	13 (0.7)	523 (4.2)
Luxembourg	r 21 (0.6)	548 (2.4)	70 (0.7)	568 (1.6)	2 (0.2)	~ ~	6 (0.3)	551 (3.9)
Macedonia, Rep. of	r 24 (1.1)	496 (5.6)	38 (1.0)	451 (5.0)	29 (1.2)	445 (5.3)	9 (0.7)	444 (8.0)
Moldova, Rep. of	r 21 (1.1)	514 (4.4)	30 (1.2)	507 (4.8)	36 (1.6)	487 (4.5)	13 (1.1)	504 (5.2)
Morocco	s 11 (1.2)	363 (16.0)	60 (1.7)	341 (5.4)	5 (1.1)	260 (15.9)	24 (1.4)	315 (10.0)
Netherlands	s 5 (0.4)	547 (5.1)	82 (1.0)	557 (1.7)	6 (0.7)	571 (5.9)	8 (0.6)	545 (5.4)
New Zealand	s 29 (1.0)	549 (2.9)	62 (1.1)	555 (2.3)	2 (0.2)	~ ~	7 (0.5)	527 (8.3)
Norway	51 (1.2)	505 (2.9)	44 (1.4)	499 (3.9)	1 (0.2)	~ ~	4 (0.5)	465 (8.8)
Poland	48 (1.3)	535 (2.8)	42 (1.1)	515 (3.0)	7 (0.5)	501 (5.4)	4 (0.4)	490 (7.8)
Qatar	s 20 (0.6)	381 (4.1)	49 (0.8)	365 (2.6)	14 (0.5)	357 (4.0)	16 (0.6)	337 (3.7)
Romania	38 (1.8)	523 (3.9)	33 (1.3)	496 (5.2)	9 (1.2)	445 (12.7)	20 (1.7)	460 (8.1)
Russian Federation	48 (1.0)	575 (3.2)	40 (0.9)	565 (4.0)	5 (0.6)	533 (12.2)	6 (0.5)	543 (6.2)
Scotland	x x	x x	x x	x x	x x	x x	x x	x x
Singapore	41 (0.7)	571 (3.0)	51 (0.8)	559 (3.2)	2 (0.2)	~ ~	6 (0.3)	545 (5.2)
Slovak Republic	62 (1.1)	547 (2.4)	29 (1.0)	535 (2.6)	5 (0.6)	446 (8.7)	3 (0.3)	514 (9.1)
Slovenia	75 (0.8)	530 (2.2)	23 (0.7)	508 (3.3)	2 (0.2)	~ ~	1 (0.2)	~ ~
South Africa	x x	x x	x x	x x	x x	x x	x x	x x
Spain	s 36 (1.1)	532 (3.1)	50 (1.4)	523 (2.9)	3 (0.5)	488 (9.0)	10 (0.7)	520 (5.4)
Sweden	44 (0.9)	556 (3.0)	51 (0.9)	551 (2.3)	3 (0.4)	537 (7.1)	2 (0.3)	~ ~
Trinidad and Tobago	r 39 (1.2)	467 (5.3)	49 (1.2)	432 (5.8)	5 (0.6)	394 (10.7)	6 (0.5)	445 (9.3)
United States	--	--	--	--	--	--	--	--
International Avg.	36 (0.2)	520 (0.8)	47 (0.2)	508 (0.6)	7 (0.1)	472 (2.1)	9 (0.1)	488 (1.5)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Background data provided by parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

NOTE: The International Average does not include the results from the Canadian provinces.



Exhibit 3.7 Parents' Occupational Level

PIRLS 2006  
4th Grade

Countries	Professional		Small Business Owner		Clerical		Skilled Worker	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	19 (1.1)	570 (2.9)	14 (0.6)	545 (3.3)	45 (1.0)	542 (1.9)	15 (1.1)	521 (4.0)
Belgium (Flemish)	43 (1.2)	567 (2.0)	14 (0.6)	548 (2.8)	24 (0.8)	543 (2.7)	12 (0.7)	523 (3.2)
Belgium (French)	r 37 (1.5)	533 (2.5)	9 (0.5)	500 (4.5)	28 (1.1)	499 (3.0)	13 (0.8)	473 (3.5)
Bulgaria	28 (1.6)	585 (5.8)	10 (0.7)	561 (5.1)	19 (1.1)	555 (4.4)	17 (1.1)	529 (6.4)
Canada, Alberta	r 56 (1.6)	576 (2.9)	15 (0.7)	562 (4.5)	16 (0.9)	554 (3.3)	7 (0.7)	543 (5.8)
Canada, British Columbia	r 51 (1.6)	578 (3.2)	16 (0.7)	557 (3.7)	19 (0.8)	547 (4.0)	8 (0.7)	548 (6.6)
Canada, Nova Scotia	52 (1.2)	563 (2.7)	9 (0.6)	536 (5.1)	23 (0.9)	532 (2.7)	9 (0.6)	525 (4.9)
Canada, Ontario	53 (2.0)	573 (3.2)	12 (1.0)	543 (4.3)	18 (1.0)	547 (3.5)	10 (1.0)	540 (5.3)
Canada, Quebec	55 (1.9)	551 (3.4)	10 (0.6)	520 (4.2)	19 (1.1)	520 (3.4)	9 (0.9)	525 (6.2)
Chinese Taipei	34 (1.3)	560 (2.5)	17 (0.6)	532 (2.5)	19 (0.7)	537 (2.6)	18 (1.0)	511 (2.8)
Denmark	53 (1.6)	565 (2.5)	10 (0.7)	535 (4.7)	23 (0.9)	538 (3.5)	9 (0.7)	517 (5.9)
England	x x	x x	x x	x x	x x	x x	x x	x x
France	39 (1.6)	552 (2.2)	11 (0.7)	525 (4.4)	23 (0.9)	521 (2.7)	16 (1.0)	496 (3.2)
Georgia	29 (1.3)	502 (3.4)	10 (0.8)	477 (5.4)	14 (0.8)	458 (5.1)	17 (1.2)	460 (5.5)
Germany	r 28 (1.1)	582 (2.3)	12 (0.7)	554 (3.1)	40 (1.2)	552 (2.4)	12 (0.9)	524 (4.4)
Hong Kong SAR	31 (1.6)	573 (2.2)	12 (0.5)	561 (3.9)	28 (0.9)	565 (2.9)	16 (0.9)	561 (4.1)
Hungary	26 (1.5)	594 (2.7)	12 (0.7)	563 (4.6)	28 (1.0)	551 (2.6)	18 (1.0)	534 (4.1)
Iceland	r 52 (0.9)	531 (2.0)	12 (0.6)	505 (3.7)	21 (0.7)	503 (3.2)	9 (0.7)	496 (3.8)
Indonesia	r 5 (0.6)	462 (8.6)	9 (0.8)	422 (7.1)	13 (1.0)	447 (5.1)	37 (2.0)	393 (5.9)
Iran, Islamic Rep. of	11 (1.1)	499 (4.6)	16 (0.7)	428 (4.4)	15 (0.9)	448 (4.4)	21 (1.2)	412 (4.3)
Israel	s 49 (1.7)	568 (3.8)	8 (0.6)	535 (6.9)	15 (1.1)	526 (6.3)	13 (0.8)	486 (6.9)
Italy	25 (1.2)	575 (3.2)	14 (0.8)	556 (3.9)	26 (0.9)	558 (3.9)	28 (1.1)	538 (3.6)
Kuwait	s 53 (1.4)	360 (4.8)	3 (0.3)	342 (17.5)	15 (0.8)	320 (7.8)	1 (0.3)	~ ~
Latvia	35 (1.2)	562 (2.6)	8 (0.5)	561 (6.0)	26 (0.9)	539 (2.4)	16 (0.9)	523 (4.2)
Lithuania	29 (1.1)	563 (2.3)	7 (0.5)	542 (4.3)	31 (1.0)	536 (2.4)	17 (0.8)	521 (2.9)
Luxembourg	29 (0.7)	592 (2.1)	8 (0.4)	557 (3.6)	35 (0.7)	563 (1.8)	17 (0.5)	528 (2.4)
Macedonia, Rep. of	r 18 (1.0)	505 (5.8)	14 (0.6)	465 (5.9)	22 (0.9)	480 (5.0)	21 (0.8)	432 (5.5)
Moldova, Rep. of	22 (1.0)	518 (5.4)	7 (0.7)	509 (8.3)	19 (0.9)	508 (3.5)	22 (1.1)	489 (3.3)
Morocco	21 (1.8)	354 (8.6)	16 (1.1)	331 (7.9)	11 (0.8)	358 (7.6)	34 (2.0)	299 (10.7)
Netherlands	s 49 (1.7)	569 (1.7)	14 (0.8)	549 (4.4)	25 (1.0)	547 (2.6)	8 (0.7)	528 (4.6)
New Zealand	s 50 (1.3)	569 (2.6)	14 (0.7)	553 (5.0)	19 (0.8)	536 (3.2)	11 (0.8)	523 (7.1)
Norway	57 (1.3)	515 (2.3)	10 (0.6)	478 (5.3)	18 (1.0)	491 (5.0)	10 (0.7)	470 (6.4)
Poland	34 (1.4)	545 (3.8)	11 (0.6)	521 (4.1)	13 (0.8)	519 (4.1)	34 (1.6)	505 (2.8)
Qatar	s 43 (0.7)	381 (2.5)	4 (0.3)	347 (9.3)	13 (0.5)	362 (4.0)	4 (0.3)	339 (7.8)
Romania	12 (1.2)	556 (4.4)	7 (0.6)	530 (6.8)	18 (0.9)	516 (4.4)	34 (1.6)	492 (5.5)
Russian Federation	38 (1.2)	583 (3.4)	5 (0.4)	573 (5.5)	33 (0.9)	565 (3.4)	14 (0.8)	543 (5.1)
Scotland	s 56 (1.9)	565 (3.5)	7 (0.7)	530 (6.6)	22 (1.3)	525 (4.6)	8 (1.1)	502 (9.1)
Singapore	44 (0.8)	588 (2.8)	13 (0.5)	554 (4.0)	22 (0.6)	545 (3.3)	11 (0.5)	523 (4.8)
Slovak Republic	30 (1.1)	566 (2.4)	12 (0.7)	542 (3.3)	26 (0.9)	534 (3.1)	20 (0.9)	519 (3.4)
Slovenia	38 (1.1)	553 (2.3)	8 (0.5)	522 (4.1)	31 (0.8)	518 (2.5)	16 (0.9)	490 (3.2)
South Africa	s 28 (1.6)	399 (12.1)	11 (0.5)	353 (12.0)	17 (0.6)	330 (7.2)	14 (0.6)	289 (6.7)
Spain	s 37 (1.8)	546 (2.9)	13 (0.8)	523 (4.6)	20 (1.0)	520 (3.9)	18 (1.2)	507 (4.1)
Sweden	57 (1.6)	566 (2.4)	11 (0.7)	537 (4.7)	23 (1.2)	537 (2.5)	7 (0.6)	524 (5.0)
Trinidad and Tobago	r 27 (1.4)	486 (5.9)	12 (0.6)	448 (8.5)	25 (1.1)	448 (5.6)	20 (1.0)	419 (7.1)
United States	--	--	--	--	--	--	--	--
International Avg.	35 (0.2)	533 (0.7)	11 (0.1)	506 (1.0)	23 (0.1)	504 (0.8)	17 (0.2)	485 (0.9)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Based on parents' response to the following question: What kind of work do the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian) do for their main jobs? Has never worked outside the home for pay (a); Small business owner (b); Clerk (c); Service or sales worker (d); Skilled agricultural or fishery worker (e); Craft or trade worker (f); Plant or machine operator (g); General laborer (h); Corporate manager or senior official (i); Professional (j); Technician or associate professional (k); Not applicable (l). Some categories were combined so that Professional includes options i through k, Clerical includes options c and d, and Skilled Worker includes options e through g. Students were categorized according to the highest occupational category of either parent, taking Professional as the highest category and Never Worked Outside the Home for Pay as the lowest.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

NOTE: The International Average does not include the results from the Canadian provinces.



## Exhibit 3.7 Parents' Occupational Level (Continued)

PIRLS 2006  
4th Grade

Countries	General Laborer		Never Worked Outside Home for Pay		Not Applicable	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Austria	4 (0.3)	504 (5.5)	1 (0.1)	~ ~	3 (0.3)	516 (8.5)
Belgium (Flemish)	4 (0.4)	513 (5.7)	1 (0.1)	~ ~	2 (0.3)	~ ~
Belgium (French)	r 4 (0.4)	462 (8.1)	3 (0.4)	455 (7.4)	6 (0.5)	472 (6.1)
Bulgaria	15 (1.7)	519 (10.0)	3 (0.6)	533 (14.2)	8 (0.7)	520 (9.4)
Canada, Alberta	r 2 (0.4)	~ ~	1 (0.2)	~ ~	2 (0.3)	~ ~
Canada, British Columbia	r 3 (0.4)	540 (8.5)	1 (0.1)	~ ~	2 (0.3)	~ ~
Canada, Nova Scotia	3 (0.3)	506 (7.8)	0 (0.1)	~ ~	2 (0.3)	~ ~
Canada, Ontario	3 (0.4)	529 (7.5)	0 (0.1)	~ ~	3 (0.5)	512 (12.0)
Canada, Quebec	2 (0.4)	~ ~	1 (0.2)	~ ~	4 (0.5)	507 (6.8)
Chinese Taipei	4 (0.3)	514 (5.5)	1 (0.2)	~ ~	6 (0.4)	529 (5.0)
Denmark	2 (0.3)	~ ~	0 (0.1)	~ ~	2 (0.3)	~ ~
England	x x	x x	x x	x x	x x	x x
France	4 (0.4)	476 (4.7)	1 (0.3)	~ ~	6 (0.6)	498 (6.7)
Georgia	4 (0.5)	457 (12.9)	17 (1.2)	448 (5.1)	10 (0.9)	471 (7.4)
Germany	r 2 (0.3)	~ ~	1 (0.1)	~ ~	5 (0.4)	519 (5.7)
Hong Kong SAR	6 (0.5)	554 (5.2)	3 (0.3)	556 (5.7)	4 (0.3)	561 (6.1)
Hungary	8 (0.9)	502 (6.1)	1 (0.3)	~ ~	6 (0.6)	534 (7.1)
Iceland	r 4 (0.4)	479 (7.9)	0 (0.0)	~ ~	2 (0.3)	~ ~
Indonesia	r 26 (1.9)	394 (5.0)	7 (0.6)	398 (6.8)	3 (0.5)	415 (10.5)
Iran, Islamic Rep. of	22 (1.6)	391 (6.2)	10 (0.6)	391 (7.3)	5 (0.5)	422 (8.6)
Israel	s 3 (0.4)	478 (13.0)	8 (0.7)	438 (9.8)	4 (0.6)	496 (13.1)
Italy	3 (0.4)	526 (11.0)	2 (0.4)	~ ~	3 (0.4)	544 (10.7)
Kuwait	s 1 (0.2)	~ ~	14 (0.9)	309 (7.6)	12 (0.9)	318 (9.3)
Latvia	8 (0.7)	516 (6.7)	0 (0.2)	~ ~	7 (0.6)	527 (5.6)
Lithuania	8 (0.5)	507 (4.8)	1 (0.2)	~ ~	6 (0.5)	523 (4.1)
Luxembourg	4 (0.3)	519 (4.9)	2 (0.2)	~ ~	5 (0.3)	550 (5.0)
Macedonia, Rep. of	r 11 (0.8)	415 (6.7)	11 (0.9)	394 (6.2)	3 (0.4)	449 (10.5)
Moldova, Rep. of	13 (1.5)	486 (7.0)	4 (0.5)	467 (8.5)	12 (0.9)	500 (5.7)
Morocco	5 (0.6)	296 (13.5)	6 (0.6)	311 (14.1)	7 (0.7)	316 (11.1)
Netherlands	s 1 (0.3)	~ ~	0 (0.2)	~ ~	2 (0.4)	~ ~
New Zealand	s 3 (0.3)	500 (8.9)	1 (0.2)	~ ~	3 (0.4)	499 (11.6)
Norway	2 (0.3)	~ ~	1 (0.2)	~ ~	2 (0.2)	~ ~
Poland	3 (0.4)	490 (8.0)	2 (0.3)	~ ~	3 (0.4)	506 (10.6)
Qatar	s 1 (0.1)	~ ~	16 (0.6)	341 (3.6)	18 (0.6)	338 (3.5)
Romania	10 (1.7)	456 (9.0)	10 (1.0)	422 (12.5)	9 (1.2)	435 (9.1)
Russian Federation	5 (0.6)	530 (10.8)	1 (0.2)	~ ~	5 (0.7)	532 (10.7)
Scotland	s 4 (0.8)	496 (8.5)	1 (0.3)	~ ~	2 (0.3)	~ ~
Singapore	2 (0.2)	~ ~	2 (0.2)	~ ~	5 (0.3)	535 (5.2)
Slovak Republic	4 (0.6)	462 (12.3)	2 (0.3)	~ ~	7 (0.8)	489 (16.9)
Slovenia	3 (0.3)	481 (7.5)	1 (0.1)	~ ~	4 (0.3)	498 (6.0)
South Africa	s 10 (0.8)	282 (8.8)	12 (0.7)	261 (6.4)	8 (0.4)	294 (7.1)
Spain	s 8 (0.8)	488 (5.4)	2 (0.3)	~ ~	3 (0.5)	493 (11.7)
Sweden	1 (0.2)	~ ~	1 (0.2)	~ ~	1 (0.3)	~ ~
Trinidad and Tobago	r 11 (0.8)	387 (10.2)	3 (0.4)	408 (11.6)	3 (0.4)	425 (15.5)
United States	--	--	--	--	--	--
International Avg.	6 (0.1)	469 (1.6)	4 (0.1)	409 (2.3)	5 (0.1)	475 (1.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

### What Are Parents' Reading Habits and Attitudes?

In addition to engaging in early literacy activities with their children and providing extensive literacy materials in the home, PIRLS 2001 found that students who had high reading achievement at the fourth grade often had parents who read a lot themselves and had favorable attitudes to reading.

To measure trends in the amount of time parents reported reading at home, PIRLS 2006 asked them how much time they spent reading for themselves at home, including books, magazines, newspapers, and materials for work. Exhibit 3.8 summarizes parents' responses, together with average student reading achievement and changes since 2001.

On average across countries, 37 percent of students had parents who reported reading for more than 5 hours each week, 43 percent of students had parents reading 1–5 hours each week, and 20 percent less than 1 hour per week. Countries where the majority of students had parents reporting reading more than 5 hours each week included Norway, Scotland, Iceland, Germany, and Sweden. Lowest levels of parental reading were reported in Bulgaria, Kuwait, Romania, Qatar, Morocco, Indonesia, and Iran, where more than 30 percent of students had parents reading for less than 1 hour per week.

Based on parents' reports, there appears to have been a decrease since 2001 in the amount of time parents spend reading. Of the 24 countries with data from 2001, 13 had a decrease in the percentage of students with a parent reporting reading for more than 5 hours a week, and almost all of these countries had a corresponding increase in the percentage of students with parents in either the 1–5 hours a week category or the less-than-1-hour-a-week category or both. Average reading achievement was highest among students with parents reporting reading for more than 5 hours a week (516 points), next highest among students with parents reading for 1–5 hours (502 points), and lowest for students with parents reading for less than 1 hour a week (477 points).

Regardless of the total amount of weekly reading by parents, almost half the students (47%), on average, had parents reporting reading for

enjoyment every day or almost every day, as shown in Exhibit 3.9. About one third (34%) had parents reading once or twice a week, and 18 percent reading twice a month or less. Most frequent reading for enjoyment was reported in Norway, Sweden, Scotland, Iceland, and New Zealand, where 60 percent or more of students had parents reading for enjoyment every day or almost every day. Compared with 2001, eight countries—Norway, New Zealand, Germany, Singapore, Macedonia, Slovenia, Hong Kong SAR, and Romania—showed an increase in the percentage of students in the most frequent parental reading category, while Sweden, the Russian Federation, and Bulgaria had decreased percentages.

Average reading achievement was highest among students whose parents frequently read for enjoyment—512 points for students with parents who read every day or almost every day, 498 for students with parents reading once or twice a week, and 487 for students with parents reading twice a month or less.

To monitor trends in parents' attitudes to reading, PIRLS 2006 employed an Index of Parents' Attitudes Toward Reading based on parents' agreement with five statements about reading:

- ▶ I read only if I have to (reverse coded).
- ▶ I like talking about books with other people.
- ▶ I like to spend my spare time reading.
- ▶ I read only if I need information (reverse coded).
- ▶ Reading is an important activity in my home.

Parents were asked if they agree a lot, agree a little, disagree a little, or disagree a lot with each of the statements. To construct the index, parents' responses were assigned a numerical code that was averaged across the five statements, and then students were assigned to one of three categories, high, medium, or low, on the basis of their parents' average response. Students in the high category had parents that reported agreeing a little or a lot with the five statements, on average, whereas those in the low category, on average,

disagreed a lot. Students in the medium category had parents reporting in between these extremes.

Exhibit 3.10 presents the percentage of students in 2006 at each level of the index for each country, together with average student achievement for those students. International averages are shown at the foot of the column for each level. Also shown is the change from 2001 in the percentage of students at each level of the index for countries that participated in PIRLS 2001, together with an indication of the statistical significance of the change. Participants are ordered by the percentage of students in 2006 at the high level of the index.

Parents generally reported very favorable attitudes toward reading, with more than half the students (52%), on average, at the high level of the index and 41 percent at the medium level. Just 7 percent were at the low level. Countries with the greatest percentages of students with parents having favorable attitudes toward reading included the Scandinavian countries (Sweden, Norway, and Denmark) and Scotland, where 70 percent or more of students were at the high level of the index. Countries where fewer parents expressed favorable attitudes included Hong Kong SAR (one of the countries with the highest average student reading achievement) and Indonesia, each of which had less than 30 percent of students at the high level. In comparison with 2001, seven participants showed an increase in the percentage of students with parents holding favorable attitudes toward reading—the Netherlands, Germany, Latvia, Macedonia, Lithuania, Moldova, and the Canadian province of Quebec. On average internationally, students at the high level of the index had higher average reading achievement (518 points) than students at the medium (488 points) or low level (475 points).



Exhibit 3.8 Parents Reading\* at Home with Trends

PIRLS 2006  
4th Grade

Countries	More than 5 Hours a Week			1–5 Hours a Week			Less than 1 Hour a Week		
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001
Norway	61 (1.0)	507 (2.5)	2 (1.5)	35 (1.0)	490 (3.5)	0 (1.4)	4 (0.6)	489 (11.4)	-1 (0.8)
Scotland	s 54 (1.7)	548 (4.1)	-7 (2.1) ▼	39 (1.4)	542 (4.0)	5 (1.8) ▲	7 (0.8)	505 (6.5)	1 (1.0)
Iceland	r 53 (0.9)	526 (2.1)	-1 (1.2)	41 (0.9)	509 (1.8)	0 (1.2)	6 (0.5)	489 (5.0)	1 (0.6)
Germany	51 (1.1)	566 (1.9)	0 (1.5)	40 (1.0)	545 (2.6)	-1 (1.2)	9 (0.6)	515 (6.0)	0 (0.9)
Sweden	51 (1.3)	560 (2.7)	-8 (1.7) ▼	41 (1.2)	546 (2.7)	5 (1.4) ▲	8 (0.5)	531 (6.0)	2 (0.8) ▲
New Zealand	s 49 (1.1)	557 (2.5)	-3 (1.6)	40 (1.0)	546 (2.8)	2 (1.4)	11 (0.5)	513 (5.5)	0 (0.8)
Canada, British Columbia	r 49 (1.2)	570 (3.3)	0 0	41 (0.9)	562 (3.4)	0 0	10 (0.7)	533 (4.5)	0 0
Canada, Alberta	r 47 (1.1)	571 (3.0)	0 0	44 (1.0)	564 (2.9)	0 0	9 (0.7)	542 (5.7)	0 0
Canada, Nova Scotia	45 (0.8)	555 (2.5)	0 0	45 (0.8)	541 (2.6)	0 0	10 (0.5)	526 (4.9)	0 0
Canada, Ontario	r 43 (1.1)	567 (3.6)	-10 (1.8) ▼	45 (1.0)	551 (3.2)	7 (1.5) ▲	12 (0.8)	539 (5.7)	3 (1.1) ▲
Macedonia, Rep. of	r 43 (1.1)	461 (4.7)	-2 (1.8)	42 (1.0)	449 (3.9)	3 (1.5) ▲	15 (0.9)	404 (6.1)	-1 (1.7)
Netherlands	s 43 (1.3)	565 (2.2)	-6 (1.7) ▼	45 (1.1)	552 (2.1)	4 (1.6) ▲	13 (0.8)	537 (4.0)	3 (1.1) ▲
Trinidad and Tobago	42 (1.0)	455 (5.1)	0 0	40 (1.0)	434 (5.9)	0 0	17 (0.9)	414 (7.6)	0 0
Hong Kong SAR	42 (0.9)	569 (2.3)	2 (1.4)	43 (0.8)	567 (2.6)	1 (1.1)	15 (0.8)	548 (4.4)	-3 (1.1) ▼
Georgia	42 (1.1)	486 (3.4)	0 0	38 (1.0)	471 (3.4)	0 0	21 (1.3)	445 (5.5)	0 0
Singapore	41 (0.7)	576 (3.1)	-6 (1.2) ▼	41 (0.7)	557 (3.0)	4 (1.0) ▲	18 (0.6)	527 (3.8)	2 (1.0)
Austria	40 (1.0)	555 (2.7)	0 0	48 (0.9)	534 (2.7)	0 0	11 (0.5)	509 (3.5)	0 0
Denmark	40 (1.1)	556 (2.5)	0 0	51 (1.0)	549 (2.5)	0 0	9 (0.6)	508 (6.1)	0 0
Luxembourg	40 (0.7)	581 (1.5)	0 0	42 (0.7)	553 (1.7)	0 0	18 (0.6)	527 (2.6)	0 0
Spain	s 40 (1.2)	536 (3.3)	0 0	46 (1.3)	516 (2.7)	0 0	14 (0.9)	494 (5.3)	0 0
Hungary	39 (1.3)	576 (2.7)	-7 (1.6) ▼	46 (1.0)	548 (3.3)	2 (1.4)	16 (1.2)	509 (5.0)	5 (1.4) ▲
Canada, Quebec	r 38 (1.4)	543 (3.7)	1 (1.9)	49 (1.2)	536 (3.1)	0 (1.7)	13 (0.8)	514 (5.3)	-1 (1.2)
Lithuania	38 (1.0)	548 (2.1)	0 (1.6)	46 (0.8)	536 (1.7)	-2 (1.4)	16 (0.8)	518 (3.0)	2 (1.2)
Latvia	37 (1.1)	550 (3.0)	-8 (1.4) ▼	47 (0.9)	542 (2.6)	4 (1.3) ▲	16 (0.9)	525 (3.8)	4 (1.2) ▲
South Africa	r 36 (0.7)	314 (7.8)	0 0	35 (0.6)	313 (6.7)	0 0	29 (0.7)	290 (4.9)	0 0
Israel	35 (1.2)	549 (5.0)	x x	47 (1.2)	523 (3.9)	x x	18 (0.8)	493 (7.2)	x x
Slovak Republic	35 (1.0)	551 (2.4)	-8 (1.5) ▼	48 (1.1)	534 (2.9)	2 (1.4)	17 (0.9)	489 (7.0)	7 (1.1) ▲
Belgium (French)	35 (1.2)	519 (3.1)	0 0	47 (0.9)	497 (3.0)	0 0	18 (1.0)	480 (4.2)	0 0
Chinese Taipei	34 (0.9)	552 (2.7)	0 0	41 (0.8)	538 (2.3)	0 0	25 (0.7)	513 (2.7)	0 0
Belgium (Flemish)	34 (0.8)	559 (2.4)	0 0	46 (0.8)	549 (1.9)	0 0	20 (0.8)	529 (2.4)	0 0
Slovenia	33 (1.1)	540 (2.5)	-4 (1.6) ▼	52 (0.9)	520 (2.2)	-1 (1.4)	15 (0.7)	498 (3.7)	5 (0.9) ▲
Russian Federation	32 (0.9)	574 (4.1)	-3 (1.4) ▼	45 (0.8)	566 (3.5)	4 (1.3) ▲	24 (0.8)	553 (4.0)	-1 (1.6)
Italy	31 (1.0)	569 (3.3)	-1 (1.3)	45 (1.2)	554 (3.2)	-4 (1.4) ▼	24 (0.9)	532 (4.4)	5 (1.2) ▲
Poland	30 (0.9)	539 (3.2)	0 0	53 (0.8)	517 (2.5)	0 0	16 (0.8)	498 (5.0)	0 0
Bulgaria	30 (1.5)	572 (4.4)	-17 (2.1) ▼	38 (1.0)	554 (4.1)	8 (1.4) ▲	32 (2.0)	523 (7.3)	10 (2.5) ▲
Moldova, Rep. of	30 (1.1)	512 (3.6)	-2 (1.7)	42 (1.3)	502 (3.2)	3 (1.7)	29 (1.6)	486 (5.0)	-1 (2.1)
France	28 (1.0)	545 (2.6)	-3 (1.5) ▼	53 (0.8)	523 (2.4)	3 (1.3)	19 (0.7)	498 (3.1)	1 (1.1)
Kuwait	r 26 (0.9)	348 (6.1)	0 0	43 (1.0)	343 (4.9)	0 0	32 (0.9)	324 (5.6)	0 0
Romania	24 (1.4)	521 (5.5)	-3 (2.0)	42 (1.3)	500 (4.6)	0 (1.7)	34 (1.9)	457 (7.9)	2 (2.4)
Qatar	r 21 (0.6)	376 (3.2)	0 0	43 (0.7)	364 (2.3)	0 0	36 (0.7)	338 (2.6)	0 0
Morocco	21 (1.2)	338 (7.1)	--	33 (1.4)	343 (6.5)	--	46 (2.0)	306 (9.2)	--
Indonesia	20 (1.2)	415 (6.1)	0 0	33 (1.4)	410 (4.9)	0 0	47 (1.6)	399 (4.3)	0 0
Iran, Islamic Rep. of	17 (0.9)	445 (4.6)	-6 (1.5) ▼	34 (1.0)	438 (3.1)	0 (1.6)	49 (1.5)	402 (3.9)	7 (2.2) ▲
England	x x	x x	x x	x x	x x	x x	x x	x x	x x
United States	--	--	--	--	--	--	--	--	--
International Avg.	37 (0.2)	516 (0.6)		43 (0.2)	502 (0.6)		20 (0.2)	477 (0.9)	

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

- ▲ Percent in 2006 significantly higher
- ▼ Percent in 2006 significantly lower

Background data provided by parents.

\* Includes books, magazines, newspapers, and materials for work.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students

A dash (–) indicates comparable data are not available.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

Exhibit 3.9 Parents Reading for Enjoyment with Trends

PIRLS 2006  
4th Grade

Countries	Every Day or Almost Every Day			Once or Twice a Week			Twice a Month or Less		
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001
Norway	66 (1.0)	505 (2.5)	7 (1.6) ▲	23 (0.9)	493 (4.2)	-4 (1.4) ▼	11 (0.7)	489 (6.5)	-3 (0.9) ▼
Sweden	64 (0.9)	556 (2.4)	-3 (1.3) ▼	21 (0.8)	546 (2.9)	-1 (1.1)	15 (0.7)	540 (4.6)	5 (0.9) ▲
Scotland	s 63 (1.3)	550 (4.0)	1 (1.8)	23 (0.9)	531 (5.3)	-3 (1.5)	14 (1.1)	525 (7.0)	2 (1.4)
Iceland	r 61 (0.9)	523 (1.9)	-1 (1.2)	21 (0.8)	513 (2.9)	-4 (1.1) ▼	18 (0.6)	498 (3.3)	5 (0.8) ▲
New Zealand	s 60 (1.1)	557 (2.4)	4 (1.6) ▲	25 (0.9)	539 (3.6)	-4 (1.4) ▼	15 (0.7)	528 (4.1)	0 (1.1)
Netherlands	s 59 (1.2)	562 (1.8)	-1 (1.8)	25 (0.9)	548 (2.9)	-3 (1.3) ▼	16 (0.9)	543 (2.6)	4 (1.2) ▲
Trinidad and Tobago	59 (0.9)	441 (5.1)	◊ ◊	31 (1.0)	436 (6.1)	◊ ◊	10 (0.7)	434 (9.2)	◊ ◊
Germany	r 58 (0.9)	561 (2.4)	7 (1.3) ▲	28 (0.7)	544 (2.9)	-3 (1.0) ▼	14 (0.6)	535 (4.5)	-3 (0.9) ▼
Denmark	57 (1.0)	554 (2.6)	◊ ◊	27 (0.9)	544 (3.0)	◊ ◊	16 (0.7)	534 (5.0)	◊ ◊
Latvia	57 (1.3)	547 (2.7)	3 (2.0)	32 (1.1)	537 (3.4)	-3 (1.5)	11 (0.6)	532 (4.2)	0 (1.2)
Canada, British Columbia	r 57 (1.1)	569 (3.2)	◊ ◊	29 (1.1)	560 (3.5)	◊ ◊	15 (0.7)	547 (4.7)	◊ ◊
Canada, Alberta	r 55 (1.2)	571 (2.8)	◊ ◊	29 (1.0)	561 (3.5)	◊ ◊	17 (0.7)	554 (3.7)	◊ ◊
Luxembourg	54 (0.7)	573 (1.3)	◊ ◊	29 (0.7)	544 (2.4)	◊ ◊	18 (0.6)	543 (2.4)	◊ ◊
Canada, Nova Scotia	53 (0.9)	556 (2.1)	◊ ◊	27 (0.8)	539 (2.8)	◊ ◊	19 (0.7)	528 (3.2)	◊ ◊
Austria	53 (1.1)	549 (2.3)	◊ ◊	30 (0.9)	533 (3.2)	◊ ◊	17 (0.7)	524 (2.9)	◊ ◊
Lithuania	51 (1.1)	542 (2.0)	-1 (1.5)	36 (1.0)	532 (2.1)	-1 (1.4)	12 (0.6)	534 (2.6)	2 (0.9)
Belgium (French)	51 (1.3)	512 (2.9)	◊ ◊	32 (0.9)	496 (3.3)	◊ ◊	17 (0.8)	483 (4.4)	◊ ◊
Canada, Ontario	r 51 (1.0)	563 (3.4)	-2 (1.6)	32 (1.1)	552 (3.0)	1 (1.6)	18 (0.9)	547 (4.5)	1 (1.3)
France	50 (1.0)	535 (2.5)	-1 (1.4)	32 (0.8)	518 (2.6)	-2 (1.2)	19 (0.8)	505 (3.0)	3 (1.1) ▲
Spain	s 50 (1.2)	531 (3.0)	◊ ◊	33 (1.0)	512 (3.6)	◊ ◊	18 (0.7)	507 (4.5)	◊ ◊
Singapore	50 (0.7)	569 (3.0)	14 (1.1) ▲	33 (0.7)	552 (3.1)	-3 (0.9) ▼	17 (0.5)	546 (4.3)	-11 (0.9) ▼
Canada, Quebec	r 49 (1.4)	542 (3.2)	1 (1.9)	32 (1.2)	536 (3.5)	-2 (1.7)	18 (0.9)	518 (4.1)	1 (1.4)
Italy	49 (1.0)	564 (3.0)	2 (1.4)	32 (1.0)	547 (3.7)	-4 (1.2) ▼	19 (0.9)	535 (4.2)	2 (1.2)
Hungary	49 (1.0)	561 (3.2)	-2 (1.4)	37 (0.8)	546 (3.7)	1 (1.2)	14 (0.6)	544 (4.4)	1 (0.9)
Macedonia, Rep. of	r 48 (1.1)	459 (4.6)	7 (1.7) ▲	41 (0.9)	441 (4.5)	0 (1.4)	11 (0.9)	423 (8.4)	-7 (1.5) ▼
South Africa	r 48 (0.7)	322 (7.5)	◊ ◊	36 (0.5)	301 (5.2)	◊ ◊	16 (0.5)	276 (6.3)	◊ ◊
Israel	47 (1.4)	538 (5.0)	x x	39 (1.2)	520 (4.4)	x x	15 (0.7)	508 (6.5)	x x
Slovak Republic	46 (1.0)	544 (2.4)	-2 (1.5)	39 (1.0)	529 (3.2)	0 (1.4)	14 (0.8)	504 (7.7)	3 (1.0) ▲
Slovenia	45 (0.8)	530 (2.4)	4 (1.3) ▲	36 (0.8)	520 (2.6)	-6 (1.2) ▼	18 (0.6)	510 (3.3)	2 (0.9) ▲
Poland	45 (0.9)	529 (3.0)	◊ ◊	41 (0.8)	517 (2.8)	◊ ◊	14 (0.6)	504 (4.5)	◊ ◊
Qatar	r 44 (0.7)	361 (2.3)	◊ ◊	39 (0.7)	357 (2.3)	◊ ◊	17 (0.5)	348 (3.8)	◊ ◊
Kuwait	r 44 (1.2)	339 (5.4)	◊ ◊	36 (0.9)	337 (5.4)	◊ ◊	20 (0.9)	335 (5.9)	◊ ◊
Russian Federation	42 (1.0)	573 (3.7)	-7 (1.6) ▼	41 (0.8)	560 (3.9)	6 (1.4) ▲	17 (0.6)	557 (3.6)	1 (1.1)
Belgium (Flemish)	40 (0.9)	558 (2.2)	◊ ◊	33 (0.8)	545 (2.4)	◊ ◊	27 (1.0)	538 (2.4)	◊ ◊
Georgia	39 (1.3)	486 (3.4)	◊ ◊	44 (1.0)	467 (3.2)	◊ ◊	17 (1.2)	450 (7.6)	◊ ◊
Bulgaria	39 (1.4)	565 (4.2)	-14 (2.1) ▼	34 (1.1)	547 (4.7)	6 (1.6) ▲	27 (2.0)	532 (7.6)	8 (2.6) ▲
Hong Kong SAR	36 (0.8)	574 (2.3)	6 (1.4) ▲	39 (0.7)	561 (2.6)	10 (1.0) ▲	25 (0.6)	558 (3.4)	-15 (1.3) ▼
Chinese Taipei	35 (0.9)	547 (2.5)	◊ ◊	42 (0.7)	536 (2.5)	◊ ◊	23 (0.7)	520 (2.4)	◊ ◊
Moldova, Rep. of	35 (1.1)	509 (3.3)	-1 (1.9)	46 (1.1)	498 (3.5)	6 (1.7) ▲	20 (1.5)	491 (5.9)	-5 (1.9) ▼
Indonesia	31 (1.2)	413 (4.6)	◊ ◊	44 (1.3)	405 (4.5)	◊ ◊	25 (1.3)	395 (4.9)	◊ ◊
Romania	27 (1.1)	514 (4.7)	11 (1.6) ▲	43 (1.0)	497 (4.8)	11 (1.7) ▲	30 (1.4)	459 (8.0)	-22 (2.4) ▼
Morocco	24 (1.1)	346 (6.4)	--	34 (1.4)	329 (5.3)	--	42 (1.9)	308 (10.9)	--
Iran, Islamic Rep. of	24 (1.1)	441 (4.9)	2 (1.5)	41 (1.1)	426 (3.4)	6 (1.8) ▲	35 (1.6)	402 (4.3)	-8 (2.2) ▼
England	x x	x x	x x	x x	x x	x x	x x	x x	x x
United States	--	--	--	--	--	--	--	--	--
International Avg.	47 (0.2)	512 (0.6)		34 (0.2)	498 (0.6)		18 (0.2)	487 (0.9)	

▲ Percent in 2006 significantly higher

▼ Percent in 2006 significantly lower

Background data provided by parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.



Exhibit 3.10 Index of Parents' Attitudes Toward Reading (PATR) with Trends

PIRLS 2006  
4th Grade

Countries	High PATR			Medium PATR			Low PATR		
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001
Sweden	71 (0.9)	559 (2.3)	0 (1.2)	24 (0.8)	535 (3.3)	0 (1.1)	5 (0.5)	521 (6.3)	0 (0.6)
Norway	71 (1.0)	508 (2.6)	-2 (1.5)	24 (1.0)	485 (4.2)	1 (1.4)	5 (0.5)	471 (7.6)	1 (0.7)
Scotland	s 70 (1.4)	552 (3.9)	1 (1.9)	24 (1.2)	525 (4.7)	-1 (1.7)	6 (0.8)	505 (9.8)	0 (1.0)
Denmark	70 (1.0)	557 (2.4)	0 0	25 (0.9)	531 (3.5)	0 0	6 (0.5)	513 (8.4)	0 0
Hungary	68 (1.3)	568 (2.6)	-6 (1.7) ▼	28 (1.2)	528 (3.9)	5 (1.5) ▲	4 (0.5)	524 (7.4)	1 (0.6)
Netherlands	s 68 (1.3)	563 (1.8)	5 (1.9) ▲	25 (1.2)	542 (2.7)	-7 (1.6) ▼	7 (0.5)	530 (4.0)	2 (0.8) ▲
Canada, Alberta	r 67 (1.2)	573 (2.5)	0 0	27 (1.1)	551 (4.4)	0 0	5 (0.4)	539 (4.6)	0 0
Canada, Nova Scotia	67 (0.9)	558 (2.3)	0 0	27 (0.9)	524 (3.0)	0 0	7 (0.5)	515 (4.8)	0 0
New Zealand	s 66 (1.1)	562 (2.5)	1 (1.6)	28 (1.0)	526 (3.3)	-2 (1.5)	6 (0.5)	510 (8.3)	1 (0.7)
Canada, British Columbia	r 66 (1.4)	572 (2.7)	0 0	29 (1.2)	547 (4.3)	0 0	5 (0.4)	538 (7.3)	0 0
Canada, Quebec	r 65 (1.2)	545 (3.1)	7 (1.8) ▲	27 (1.2)	523 (3.6)	-11 (1.8) ▼	8 (0.5)	509 (4.9)	4 (0.7) ▲
Trinidad and Tobago	r 65 (1.1)	454 (5.0)	0 0	31 (1.1)	419 (5.2)	0 0	4 (0.4)	407 (13.4)	0 0
Iceland	r 64 (1.0)	526 (1.9)	-3 (1.3) ▼	31 (0.9)	503 (2.3)	2 (1.2)	5 (0.4)	486 (6.2)	2 (0.5) ▲
Slovak Republic	62 (1.1)	551 (2.2)	-4 (1.7) ▼	33 (1.0)	516 (3.2)	1 (1.6)	5 (0.8)	463 (17.8)	3 (0.9) ▲
Canada, Ontario	r 61 (1.4)	565 (2.9)	-6 (1.9) ▼	32 (1.5)	544 (3.8)	3 (2.0)	6 (0.6)	542 (6.8)	3 (0.7) ▲
Spain	s 61 (1.4)	533 (2.5)	0 0	34 (1.2)	506 (4.0)	0 0	5 (0.6)	494 (7.2)	0 0
Germany	r 60 (1.3)	567 (2.0)	5 (1.7) ▲	33 (1.2)	537 (2.7)	-3 (1.5)	7 (0.5)	517 (4.4)	-2 (0.8) ▼
Latvia	57 (1.2)	551 (2.3)	9 (1.8) ▲	37 (1.1)	535 (3.0)	-13 (1.8) ▼	6 (0.5)	524 (8.4)	4 (0.7) ▲
Poland	56 (1.1)	536 (2.7)	0 0	39 (1.1)	508 (3.1)	0 0	4 (0.4)	486 (7.5)	0 0
Austria	56 (0.9)	555 (2.1)	0 0	35 (0.8)	525 (3.0)	0 0	10 (0.5)	517 (4.2)	0 0
Israel	55 (1.4)	549 (3.9)	x x	39 (1.3)	502 (5.5)	x x	6 (0.6)	512 (8.1)	x x
Italy	55 (1.1)	570 (2.7)	-1 (1.6)	36 (0.9)	540 (4.3)	-1 (1.4)	9 (0.6)	529 (5.8)	2 (0.8) ▲
Slovenia	55 (1.1)	538 (2.4)	-6 (1.5) ▼	41 (1.0)	509 (2.5)	5 (1.4) ▲	4 (0.3)	508 (5.5)	2 (0.4) ▲
Macedonia, Rep. of	r 54 (1.2)	479 (4.0)	6 (2.3) ▲	42 (1.1)	419 (4.4)	-6 (2.1) ▼	3 (0.4)	405 (12.5)	0 (0.6)
Luxembourg	53 (0.7)	577 (1.3)	0 0	38 (0.7)	543 (1.9)	0 0	9 (0.5)	535 (4.2)	0 0
Belgium (French)	53 (1.3)	518 (2.7)	0 0	41 (1.1)	489 (2.9)	0 0	7 (0.6)	474 (6.1)	0 0
Lithuania	51 (0.9)	549 (1.9)	9 (1.5) ▲	43 (0.9)	529 (1.9)	-9 (1.5) ▼	6 (0.4)	524 (5.0)	0 (0.6)
France	51 (1.2)	541 (2.5)	-2 (1.6)	44 (1.1)	512 (2.4)	1 (1.6)	5 (0.4)	494 (6.1)	1 (0.6)
Russian Federation	50 (1.3)	577 (3.9)	0 (1.8)	43 (1.1)	558 (3.2)	-2 (1.7)	7 (0.4)	539 (5.9)	2 (0.6) ▲
Belgium (Flemish)	49 (1.0)	562 (2.1)	0 0	38 (0.9)	538 (2.5)	0 0	13 (0.8)	529 (2.9)	0 0
Kuwait	s 45 (0.9)	353 (5.0)	0 0	49 (0.9)	330 (5.4)	0 0	6 (0.5)	327 (12.6)	0 0
Bulgaria	44 (1.7)	573 (3.6)	-10 (2.5) ▼	37 (1.3)	535 (5.2)	0 (1.9)	18 (2.0)	535 (9.7)	10 (2.3) ▲
Iran, Islamic Rep. of	43 (1.4)	441 (4.4)	0 (2.0)	52 (1.4)	410 (3.4)	-1 (1.9)	5 (0.5)	377 (11.3)	0 (1.0)
Qatar	s 43 (0.7)	376 (2.3)	0 0	50 (0.7)	347 (2.0)	0 0	6 (0.3)	346 (5.4)	0 0
Georgia	r 41 (1.4)	488 (3.2)	0 0	54 (1.4)	466 (3.8)	0 0	5 (1.0)	432 (20.4)	0 0
Singapore	39 (0.8)	575 (2.9)	-1 (1.2)	55 (0.7)	551 (3.0)	1 (1.2)	6 (0.3)	556 (4.6)	0 (0.4)
Chinese Taipei	39 (0.8)	548 (2.2)	0 0	58 (0.8)	531 (2.3)	0 0	3 (0.3)	520 (6.7)	0 0
Romania	38 (1.7)	528 (3.8)	4 (2.4)	48 (1.4)	479 (5.8)	-7 (2.0) ▼	14 (1.5)	428 (12.7)	3 (1.9)
Morocco	37 (1.7)	340 (6.5)	--	53 (1.9)	313 (8.8)	--	10 (1.3)	316 (12.7)	--
South Africa	r 37 (1.1)	358 (9.1)	0 0	60 (1.1)	276 (4.2)	0 0	4 (0.3)	291 (11.6)	0 0
Moldova, Rep. of	34 (1.2)	514 (3.8)	5 (1.9) ▲	59 (1.2)	495 (3.3)	-5 (2.0) ▼	7 (0.8)	481 (7.8)	-1 (1.1)
Hong Kong SAR	29 (0.9)	575 (2.4)	0 (1.3)	65 (0.9)	562 (2.4)	1 (1.2)	6 (0.4)	562 (4.9)	0 (0.5)
Indonesia	27 (1.1)	420 (5.3)	0 0	71 (1.1)	401 (4.1)	0 0	3 (0.4)	375 (10.3)	0 0
England	x x	x x	x x	x x	x x	x x	x x	x x	x x
United States	--	--	--	--	--	--	--	--	--
International Avg.	52 (0.2)	518 (0.6)		41 (0.2)	488 (0.6)		7 (0.1)	475 (1.5)	

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

▲ Percent in 2006 significantly higher  
▼ Percent in 2006 significantly lower

Based on parents' agreement with the following: I read only if I have to, I like talking about books with other people, I like to spend my spare time reading, I read only if I need information, and reading is an important activity in my home. Average is computed across the 5 items based on a 4-point scale: Disagree a lot = 1, Disagree a little = 2, Agree a little = 3, and Agree a lot = 4. Responses for negative statements were reverse-coded. Higher level indicates an average of greater than 3 through 4. Medium level indicates an average of 2 through 3. Low level indicates an average of 1 to less than 2.

(1) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available.

A diamond (◊) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.

### What Languages Are Spoken at Home?

Although speaking more than one language has advantages, PIRLS 2001 has shown that countries with large proportions of students from homes where the language of the test is not often spoken had lower average reading achievement at the fourth grade than those who spoke it more often. For PIRLS 2006, Exhibit 3.11 presents students' reports of how frequently they speak the language of the PIRLS test at home, together with average student reading achievement. To complement the students' reports, the exhibit also presents the percentage of students whose parents reported that the language of the test is the language they speak most often at home.

About two thirds of the students (66%), on average internationally, reported always speaking the language of the test at home, but there were significant percentages that reported sometimes (29% on average) or never (5% on average) speaking it. Only about half the students in Iran, Israel, and Morocco reported always speaking the language of the PIRLS test at home, and even lower percentages in Indonesia (38%), Chinese Taipei (36%), Kuwait (26%), Singapore (21%), and Luxembourg (3%).

According to parents' reports, in almost all countries, a large majority of students (87%), on average, were from homes where at least one parent spoke the language of the PIRLS test at home most of the time. Notable exceptions were Luxembourg, where almost all parents spoke Luxembourgish most of the time, and Kuwait, where the Kuwaiti dialect, a variant of the classical Arabic taught in school, is widely spoken at home.

Although in many countries there was a positive relationship between frequency of students speaking the language of the PIRLS test at home and performance on the PIRLS reading test, the relationship was by no means universal, and in about one third of the countries, average achievement among students reporting sometimes speaking the language of the PIRLS test at home was greater than for those reporting always speaking the language. In all countries the students who reported never speaking the language of the PIRLS test at home had lower average reading achievement than those speaking it more frequently.

Many of the PIRLS 2006 participants tested in two languages in order to cover their whole population. These included the five Canadian provinces (English and French), Israel (Hebrew and Arabic), Latvia (Latvian and Russian), Macedonia (Macedonian and Albanian), Moldova (Romanian and Russian), New Zealand (English and Māori), Norway (Bokmål and Nynorsk), Romania (Romanian and Hungarian), and the Slovak Republic (Slovak and Hungarian). Spain tested in five languages (Castilian, Catalanian, Galician, Basque, and Valencian) and South Africa in 11 languages (Afrikaans, English, isiZulu, isiXhosa, Sepedi, Sesotho, Setswana, isiNdebele, Siswati, Tshivenda, and Xitsonga).

Related to the question of the language spoken in the home is the size of the immigrant population. Exhibit 3.12 presents students' reports of where their parents were born. The exhibit shows the percentage of students in 2006 reporting both parents, one parent only, or neither parent born in the country, together with their average achievement. Also shown is the change in percentage of students in each category since 2001. In most countries, a large majority of students reported that both parents were born in the country—76 percent on average. However, there were substantial percentages of students, on average internationally, reporting only one parent (14%) or neither parent (10%) born in the country. Some countries, such as Bulgaria, Georgia, Hungary, Iran, Poland, Romania, and the Slovak Republic, had very little immigration, with more than 90 percent of students reporting that both parents were born in the country. In contrast, participants with the greatest percentages of students (20% or more) reporting both parents born abroad included Hong Kong SAR, Israel, Latvia, Luxembourg, New Zealand, Qatar, and the Canadian provinces of Alberta, British Columbia, and Ontario. Participants showing increases since 2001 in the percentage of students with both parents born abroad included Italy, Latvia, Singapore, and the Canadian provinces of Ontario and Quebec.

On average internationally, and in most countries, students with both parents born in the country had the highest average reading achievement (508 points), followed by students with one parent born in the country

(492 points). Students with both parents born abroad had the lowest average achievement (477 points). Although generally students with one or both parents born in the country had an advantage in terms of reading achievement, Israel, New Zealand, Singapore, and British Columbia showed little difference in achievement among the three categories of students. In Hong Kong SAR, Qatar, and Trinidad and Tobago, students with both parents born abroad had the highest achievement, while students in this category in Kuwait and Latvia had higher achievement than students with one but not both parents born in the country.

Exhibit 3.11 Students and Parents Speak Language of the Test at Home

PIRLS 2006  
4th Grade

Countries	Students Speak Language of the Test at Home						Percentage of Students Whose Parents Most Often Speak Language of the Test at Home	
	Always		Sometimes		Never		Either Parent	Both Parents
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement		
Austria	74 (1.2)	551 (1.9)	24 (1.1)	520 (3.5)	2 (0.5)	~ ~	90 (0.8)	80 (1.1)
Belgium (Flemish)	77 (1.3)	555 (1.7)	21 (1.1)	526 (3.5)	2 (0.3)	~ ~	94 (0.8)	85 (1.2)
Belgium (French)	66 (1.3)	507 (2.3)	32 (1.2)	493 (4.0)	2 (0.2)	~ ~	r 93 (0.9)	79 (1.2)
Bulgaria	70 (2.2)	558 (3.9)	27 (2.0)	537 (7.2)	3 (0.7)	494 (16.0)	83 (2.0)	72 (2.1)
Canada, Alberta	70 (1.5)	566 (2.2)	29 (1.4)	554 (3.9)	1 (0.2)	~ ~	r 92 (1.1)	84 (1.5)
Canada, British Columbia	64 (1.8)	563 (2.6)	35 (1.8)	556 (3.5)	1 (0.2)	~ ~	r 84 (1.6)	73 (2.3)
Canada, Nova Scotia	72 (0.9)	548 (2.3)	28 (0.9)	544 (3.0)	1 (0.1)	~ ~	98 (0.3)	89 (0.8)
Canada, Ontario	61 (1.8)	562 (2.8)	38 (1.8)	550 (3.5)	1 (0.2)	~ ~	85 (1.6)	75 (2.2)
Canada, Quebec	64 (1.4)	540 (3.4)	35 (1.4)	532 (2.6)	2 (0.3)	~ ~	93 (1.0)	78 (1.5)
Chinese Taipei	36 (0.8)	528 (2.6)	63 (0.8)	544 (2.0)	1 (0.2)	~ ~	r 82 (1.0)	54 (1.3)
Denmark	81 (1.1)	551 (2.3)	18 (1.0)	535 (4.3)	1 (0.2)	~ ~	96 (0.5)	88 (1.0)
England	76 (1.3)	546 (2.7)	23 (1.2)	532 (4.5)	1 (0.2)	~ ~	x x	x x
France	66 (1.2)	531 (2.1)	34 (1.2)	512 (2.7)	1 (0.1)	~ ~	96 (0.6)	85 (1.2)
Georgia	r 85 (1.5)	475 (3.4)	14 (1.2)	486 (6.3)	1 (0.8)	~ ~	97 (1.2)	73 (1.9)
Germany	r 73 (1.0)	564 (2.1)	26 (0.9)	536 (3.3)	1 (0.2)	~ ~	r 93 (0.6)	81 (1.1)
Hong Kong SAR	65 (0.8)	562 (2.4)	33 (0.8)	571 (2.5)	2 (0.3)	~ ~	98 (0.4)	80 (0.8)
Hungary	75 (1.2)	553 (2.9)	24 (1.2)	550 (4.4)	1 (0.2)	~ ~	99 (0.2)	89 (0.8)
Iceland	64 (0.8)	512 (1.5)	35 (0.8)	513 (1.9)	1 (0.1)	~ ~	r 99 (0.2)	92 (0.5)
Indonesia	r 38 (2.0)	403 (5.7)	50 (1.8)	424 (4.3)	11 (1.0)	406 (7.9)	--	--
Iran, Islamic Rep. of	53 (2.2)	447 (3.5)	28 (1.5)	423 (5.1)	19 (1.6)	364 (7.4)	62 (2.0)	52 (2.1)
Israel	r 57 (1.1)	524 (4.1)	39 (1.1)	539 (2.9)	4 (0.4)	468 (14.4)	s 90 (1.3)	76 (1.5)
Italy	71 (1.2)	558 (3.1)	27 (1.1)	549 (4.1)	3 (0.4)	521 (13.4)	97 (0.4)	89 (0.7)
Kuwait	s 26 (1.5)	330 (8.2)	43 (1.6)	367 (5.5)	32 (2.1)	336 (6.3)	r 5 (0.5)	1 (0.3)
Latvia	69 (1.4)	546 (2.4)	28 (1.2)	538 (3.6)	3 (0.5)	525 (13.0)	94 (0.8)	77 (1.4)
Lithuania	79 (1.0)	539 (1.7)	21 (1.0)	538 (2.8)	0 (0.1)	~ ~	99 (0.3)	86 (0.7)
Luxembourg	3 (0.2)	568 (7.1)	44 (0.6)	563 (1.4)	53 (0.6)	553 (1.6)	4 (0.3)	1 (0.1)
Macedonia, Rep. of	r 83 (1.2)	450 (4.0)	15 (1.0)	489 (6.8)	2 (0.5)	~ ~	95 (1.2)	84 (1.4)
Moldova, Rep. of	74 (1.1)	498 (3.3)	25 (1.1)	511 (3.9)	1 (0.2)	~ ~	96 (0.6)	80 (1.1)
Morocco	50 (2.9)	337 (6.7)	24 (1.7)	337 (8.1)	26 (2.8)	303 (15.0)	71 (3.1)	51 (2.8)
Netherlands	76 (1.2)	553 (1.6)	23 (1.2)	533 (2.6)	1 (0.3)	~ ~	s 95 (1.1)	87 (1.5)
New Zealand	73 (1.0)	542 (2.1)	26 (0.9)	519 (3.1)	1 (0.2)	~ ~	s 92 (0.8)	78 (1.1)
Norway	80 (0.9)	505 (2.2)	20 (0.9)	494 (4.0)	1 (0.1)	~ ~	100 (0.1)	93 (0.7)
Poland	85 (0.6)	519 (2.3)	14 (0.6)	533 (4.1)	0 (0.1)	~ ~	100 (0.1)	90 (0.5)
Qatar	r 61 (0.7)	360 (1.9)	35 (0.7)	369 (2.0)	4 (0.3)	309 (8.6)	s 96 (0.3)	78 (0.6)
Romania	81 (1.6)	495 (4.0)	17 (1.2)	515 (8.8)	2 (0.6)	~ ~	92 (1.8)	82 (1.9)
Russian Federation	82 (1.1)	568 (3.4)	16 (1.0)	568 (6.3)	2 (0.4)	~ ~	93 (1.0)	76 (1.2)
Scotland	80 (1.0)	528 (3.0)	19 (1.0)	536 (4.4)	1 (0.2)	~ ~	s 99 (0.3)	90 (0.8)
Singapore	21 (0.7)	571 (3.5)	73 (0.8)	559 (3.0)	5 (0.3)	516 (5.2)	r 56 (0.8)	26 (0.9)
Slovak Republic	71 (1.6)	537 (2.3)	26 (1.4)	531 (5.1)	3 (0.7)	439 (31.6)	95 (1.2)	84 (1.3)
Slovenia	--	--	--	--	--	--	97 (0.6)	89 (0.9)
South Africa	r 62 (1.2)	306 (6.6)	30 (1.0)	359 (8.0)	8 (0.5)	270 (8.1)	r 79 (1.4)	43 (1.4)
Spain	60 (1.3)	519 (2.5)	32 (1.1)	517 (3.0)	8 (0.7)	498 (6.0)	s 84 (1.5)	69 (1.7)
Sweden	75 (1.2)	555 (2.3)	24 (1.1)	538 (3.4)	1 (0.2)	~ ~	93 (0.8)	84 (1.0)
Trinidad and Tobago	77 (1.3)	439 (5.0)	20 (1.1)	455 (7.5)	3 (0.4)	351 (13.2)	99 (0.3)	84 (0.9)
United States	72 (1.4)	547 (3.4)	27 (1.4)	534 (4.7)	1 (0.2)	~ ~	--	--
International Avg.	66 (0.2)	506 (0.7)	29 (0.2)	505 (0.8)	5 (0.1)	424 (3.4)	87 (0.2)	73 (0.2)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2006

Background data provided by students and parents.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A dash (–) indicates comparable data are not available. A tilde (~) indicates insufficient data to report achievement.

NOTE: The International Average does not include the results from the Canadian provinces.



Exhibit 3.12 Students' Parents Born in Country with Trends

PIRLS 2006  
4th Grade

Countries	Both Parents Born in Country			Only One Parent Born in Country			Neither Parent Born in Country		
	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001	2006 Percent of Students	Average Achievement	Difference in Percent from 2001
Austria	72 (1.3)	548 (2.0)	◇ ◇	11 (0.6)	540 (3.9)	◇ ◇	17 (1.1)	501 (3.6)	◇ ◇
Belgium (Flemish)	79 (1.4)	554 (1.8)	◇ ◇	13 (0.7)	530 (3.6)	◇ ◇	8 (0.9)	511 (5.7)	◇ ◇
Belgium (French)	56 (1.7)	511 (2.4)	◇ ◇	25 (1.0)	498 (4.3)	◇ ◇	19 (1.5)	479 (5.1)	◇ ◇
Bulgaria	95 (0.6)	552 (3.9)	0 (0.7)	4 (0.5)	504 (15.5)	0 (0.6)	1 (0.2)	~ ~	1 (0.2)
Canada, Alberta	59 (1.8)	568 (2.5)	◇ ◇	21 (0.8)	560 (3.6)	◇ ◇	21 (1.8)	553 (4.8)	◇ ◇
Canada, British Columbia	44 (2.0)	563 (3.0)	◇ ◇	23 (1.0)	562 (3.8)	◇ ◇	33 (2.3)	559 (3.8)	◇ ◇
Canada, Nova Scotia	82 (0.9)	549 (2.3)	◇ ◇	14 (0.7)	546 (3.6)	◇ ◇	5 (0.5)	537 (6.1)	◇ ◇
Canada, Ontario	45 (2.8)	564 (3.3)	-8 (3.7) ▼	18 (1.0)	557 (4.0)	-2 (1.4)	37 (3.5)	548 (4.0)	10 (4.3) ▲
Canada, Quebec	73 (2.2)	544 (3.0)	-1 (2.8)	12 (0.7)	534 (4.9)	-4 (1.1) ▼	15 (2.0)	517 (4.1)	5 (2.4) ▲
Chinese Taipei	86 (0.5)	544 (1.9)	◇ ◇	11 (0.5)	519 (4.1)	◇ ◇	3 (0.3)	481 (7.5)	◇ ◇
Denmark	79 (1.3)	551 (2.3)	◇ ◇	12 (0.7)	546 (4.1)	◇ ◇	9 (1.0)	511 (5.4)	◇ ◇
England	71 (1.7)	552 (2.5)	4 (2.5)	17 (0.8)	539 (4.8)	-4 (1.2) ▼	12 (1.5)	502 (6.4)	0 (2.1)
France	67 (1.7)	531 (2.2)	-2 (2.4)	19 (0.8)	518 (3.0)	3 (1.1) ▲	14 (1.3)	496 (3.9)	-1 (1.8)
Georgia	92 (0.6)	476 (3.1)	◇ ◇	6 (0.5)	448 (6.4)	◇ ◇	2 (0.3)	~ ~	◇ ◇
Germany	71 (1.2)	564 (2.1)	-4 (1.7) ▼	14 (0.7)	543 (3.9)	3 (0.8) ▲	16 (1.0)	515 (3.4)	1 (1.5)
Hong Kong SAR	r 44 (1.5)	562 (2.9)	7 (2.4) ▲	26 (0.9)	562 (3.1)	4 (1.1) ▲	29 (1.4)	572 (3.0)	-11 (2.3) ▼
Hungary	93 (0.5)	553 (3.0)	0 (0.7)	4 (0.5)	541 (6.8)	0 (0.6)	2 (0.3)	~ ~	0 (0.4)
Iceland	85 (0.6)	516 (1.5)	-2 (0.9) ▼	13 (0.6)	504 (3.8)	2 (0.8) ▲	3 (0.3)	462 (8.9)	1 (0.4)
Indonesia	r 84 (1.1)	415 (4.3)	◇ ◇	9 (0.7)	374 (6.0)	◇ ◇	7 (0.6)	374 (7.0)	◇ ◇
Iran, Islamic Rep. of	93 (0.9)	425 (3.5)	1 (1.2)	3 (0.4)	383 (11.7)	-2 (0.6) ▼	4 (0.7)	430 (7.7)	0 (0.8)
Israel	62 (1.4)	521 (3.6)	5 (2.0) ▲	17 (0.7)	524 (5.8)	-3 (1.1) ▼	20 (1.3)	519 (5.0)	-2 (1.8)
Italy	86 (0.7)	555 (3.0)	-3 (1.0) ▼	8 (0.5)	538 (4.6)	0 (0.7)	6 (0.6)	524 (7.0)	2 (0.7) ▲
Kuwait	r 67 (1.4)	344 (5.0)	◇ ◇	24 (1.2)	315 (7.0)	◇ ◇	9 (0.7)	350 (12.0)	◇ ◇
Latvia	58 (1.3)	543 (2.7)	-8 (1.9) ▼	21 (0.9)	537 (4.3)	-4 (1.3) ▼	21 (1.1)	547 (3.7)	11 (1.5) ▲
Lithuania	89 (0.7)	540 (1.7)	1 (1.1)	9 (0.7)	525 (4.3)	-1 (1.0)	2 (0.2)	~ ~	0 (0.4)
Luxembourg	40 (0.6)	583 (1.4)	◇ ◇	20 (0.5)	568 (2.1)	◇ ◇	40 (0.5)	528 (1.6)	◇ ◇
Macedonia, Rep. of	86 (0.8)	453 (3.9)	-2 (1.4)	11 (0.7)	427 (8.0)	2 (1.1)	3 (0.3)	399 (9.7)	0 (0.5)
Moldova, Rep. of	82 (1.1)	501 (3.1)	3 (1.7)	13 (0.8)	504 (4.7)	-3 (1.3) ▼	5 (0.4)	497 (8.8)	0 (0.7)
Morocco	83 (1.2)	335 (6.2)	0 (1.7)	13 (1.0)	287 (10.2)	0 (1.4)	4 (0.5)	286 (11.9)	0 (0.7)
Netherlands	77 (1.3)	553 (1.7)	-2 (1.9)	11 (0.6)	547 (2.3)	0 (0.9)	12 (1.3)	513 (3.1)	2 (1.8)
New Zealand	56 (1.0)	536 (2.6)	-2 (1.9)	23 (0.7)	536 (3.7)	1 (1.3)	20 (1.1)	536 (3.9)	1 (1.8)
Norway	82 (0.9)	504 (2.4)	0 (1.5)	12 (0.7)	500 (3.8)	0 (1.1)	6 (0.6)	446 (6.2)	0 (0.9)
Poland	97 (0.3)	522 (2.3)	◇ ◇	3 (0.3)	498 (9.8)	◇ ◇	0 (0.1)	~ ~	◇ ◇
Qatar	54 (0.6)	344 (1.8)	◇ ◇	18 (0.5)	339 (3.2)	◇ ◇	28 (0.5)	391 (2.8)	◇ ◇
Romania	96 (0.4)	495 (4.6)	0 (0.6)	3 (0.4)	452 (13.5)	0 (0.5)	1 (0.2)	~ ~	0 (0.2)
Russian Federation	79 (0.9)	566 (3.5)	3 (1.8)	14 (0.6)	568 (4.5)	-1 (1.2)	7 (0.5)	557 (6.0)	-2 (1.1)
Scotland	79 (0.8)	537 (2.9)	-1 (1.3)	15 (0.6)	525 (5.7)	0 (1.0)	6 (0.6)	484 (7.8)	1 (0.7)
Singapore	60 (0.6)	559 (3.0)	-6 (1.1) ▼	25 (0.6)	559 (3.6)	3 (0.9) ▲	15 (0.5)	566 (4.3)	3 (0.8) ▲
Slovak Republic	91 (0.5)	533 (2.9)	3 (0.9) ▲	8 (0.5)	521 (5.8)	-1 (0.8)	1 (0.1)	~ ~	-1 (0.5)
Slovenia	81 (1.2)	527 (2.2)	4 (1.8) ▲	12 (0.6)	517 (3.9)	1 (0.9)	8 (0.8)	488 (4.7)	-4 (1.3) ▼
South Africa	r 69 (1.0)	326 (6.5)	◇ ◇	20 (0.7)	294 (8.4)	◇ ◇	11 (0.5)	266 (9.2)	◇ ◇
Spain	81 (1.1)	521 (2.2)	◇ ◇	8 (0.5)	509 (5.2)	◇ ◇	10 (1.0)	481 (4.9)	◇ ◇
Sweden	73 (1.6)	557 (2.3)	-3 (2.3)	15 (0.7)	547 (3.9)	2 (1.0)	13 (1.2)	520 (5.0)	1 (2.0)
Trinidad and Tobago	81 (0.9)	438 (4.9)	◇ ◇	16 (0.7)	435 (8.1)	◇ ◇	4 (0.4)	448 (11.2)	◇ ◇
United States	66 (1.8)	552 (3.9)	-2 (2.5)	16 (0.7)	533 (5.1)	1 (1.0)	18 (1.5)	522 (4.7)	1 (2.3)
International Avg.	76 (0.2)	508 (0.5)		14 (0.1)	491 (1.0)		10 (0.1)	476 (1.2)	

▲ Percent in 2006 significantly higher

▼ Percent in 2006 significantly lower

Background data provided by students.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates data are available for 70–84% of the students. An "s" indicates data are available for 50–69% of the students. An "x" indicates data are available for less than 50% of the students.

A tilde (~) indicates insufficient data to report achievement.

A diamond (◇) indicates the country did not participate in the 2001 assessment.

NOTE: The International Average does not include the results from the Canadian provinces.

Trend Note: The primary education systems of the Russian Federation and Slovenia underwent structural changes. Data for Canada, Ontario include only public schools.







