

# PIRLS

## Chapter 4



# Chapter 4

## Literacy-Related Activities in the Home

*Although formal instruction in reading is a school activity, there is little doubt that the foundation for future literacy is laid in the early years, and considerable evidence that exposure to literacy activities from an early age is a key element of this foundation. PIRLS collected information from parents about their child's experiences in learning to read, about their own reading, and about literacy resources in the home.*

**Parents generally reported a fairly high level of engagement with their child in preschool literacy activities.**

PIRLS also asked the fourth-grade students themselves about their reading activities both at home and in school. Chapter 4 presents parents' and students' responses to a subset of these questions. More specifically, information is provided about activities fostering literacy before the child began school, the language spoken in the home, literacy resources in the home, and aspects of parents' reading.

The parents' data were collected via a questionnaire in which PIRLS asked the parents or primary caregivers of each child participating in the PIRLS assessment to provide information about their child's experiences in learning to read.<sup>1</sup>

Because the sampling for the parents' questionnaires was based on participating students, the parents are representative of parents of fourth-grade students. It is important to note that when information from the parents' questionnaire is being reported, the student is always the unit of analysis. That is, the data shown are the percentages of students whose parents reported on various activities or characteristics. Using the student as the unit of analysis makes it possible to describe students' early literacy experiences and is consistent with the PIRLS goals of providing information about the educational contexts and performance of students.

For reporting purposes, the information provided by parents is tied directly to the students tested. Sometimes, however, parents did not complete the questionnaire assigned to them, so most countries had some percentage of students for whom no parents' questionnaire information is available. The exhibits in this chapter have special notations on this point. For a country where parent responses are available for 70 to 84 percent of students, an "r" is included next to its data. Where parent responses are available for 50 to 69 percent of students, an "s" is included. Where parent responses are available for less than 50 percent, an "x" replaces the data.

In an effort to summarize this information concisely and focus attention on educationally-relevant support and practice, PIRLS sometimes has combined information from individual questions to form an index that is

<sup>1</sup> The PIRLS *Learning to Read* survey was completed by parents of fourth-grade students in all PIRLS countries with the exception of Morocco and the United States.

more global 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 reading achievement.

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

To examine early literacy experiences, PIRLS asked parents how often they (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.

Responses about each activity were on a three-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 one of three 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 those in the low category never or almost never did so. Students in the medium category had parents reporting in between these extremes.

Exhibit 4.1 presents the percentage of students at each level of the index for each country, together with the average reading achievement for those students. Standard errors also are shown. Countries are ordered by the percentage of students at the high level of the index, which is also displayed graphically for each country at the right hand side of the exhibit. The international average across all countries is shown at the bottom of each column.

Parents generally reported a fairly high level of engagement with their child in preschool literacy activities, with more than half (52%) of students in the high category of the index, on average, across all countries. Highest levels of engagement were reported in England and Scotland, where more than 80 percent 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. Among the countries where parents reported lower levels of engagement were Turkey, Iran, and Hong Kong, with 30 percent or more of students in the low category, where parents reported never or almost never doing these activities with them before they began school.

Although the countries with the highest average reading achievement were not necessarily those with the highest percentages of students in the high category of the Index of Early Home Literacy Activities (Sweden, the highest performing country, had just 41%; and The Netherlands, the next highest, had 55%), there was a positive relationship between engaging in early literacy activities and performance on the PIRLS reading assessment in every country. On average, internationally, students in the high index category enjoyed a 20-point advantage in reading performance over their peers in the medium category, who in turn scored about 20 points above the 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 England, New Zealand, Belize, Singapore, and Iran.

Exhibit 4.2 provides more information on how often parents read books to their child before the child began school, one of the key elements of the Index of Early Home Literacy Activities. Although the pattern of results is generally similar to the previous exhibit, with just over half the students (51%)

**Exhibit 4.1: Index of Early Home Literacy Activities (EHLA)**

**ISC** 4th Grade  
PIRLS 2001

Countries	High EHLA		Medium EHLA		Low EHLA		Percentage of Students at High Level of EHLA	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement		
England	s	83 (1.2)	578 (3.6)	14 (1.0)	546 (6.3)	3 (0.4)	513 (15.9)	
Scotland	s	82 (1.1)	546 (4.4)	16 (1.0)	529 (5.3)	2 (0.4)	~ ~	
New Zealand	r	68 (1.2)	551 (3.5)	26 (1.1)	515 (4.8)	6 (0.6)	475 (8.8)	
Canada (O,Q)	r	67 (0.7)	559 (2.3)	27 (0.7)	535 (2.9)	6 (0.4)	526 (5.5)	
Russian Federation		66 (1.3)	536 (4.6)	27 (1.1)	514 (4.6)	7 (0.7)	507 (9.3)	
Italy		62 (1.0)	551 (2.5)	30 (0.9)	536 (3.2)	8 (0.5)	524 (4.9)	
Slovak Republic		62 (1.0)	525 (2.9)	32 (0.9)	514 (3.4)	5 (0.5)	502 (8.1)	
Bulgaria		62 (1.7)	569 (3.2)	25 (1.0)	541 (5.0)	12 (1.6)	503 (10.1)	
Macedonia, Rep. of	r	62 (1.4)	460 (5.3)	31 (1.0)	433 (6.1)	7 (0.9)	432 (11.9)	
Hungary		61 (1.0)	554 (2.6)	32 (1.0)	533 (2.5)	7 (0.5)	528 (5.2)	
Latvia		58 (1.4)	555 (2.9)	34 (1.4)	539 (3.1)	8 (0.5)	529 (5.5)	
Slovenia		57 (1.1)	515 (2.2)	37 (1.0)	490 (2.9)	6 (0.5)	479 (6.3)	
Cyprus	s	57 (1.3)	506 (4.3)	33 (1.2)	478 (4.6)	9 (0.6)	460 (7.1)	
Greece		57 (1.4)	540 (3.8)	33 (1.2)	514 (4.1)	11 (1.1)	493 (7.1)	
France		56 (1.1)	537 (2.6)	34 (1.0)	521 (3.2)	9 (0.6)	505 (4.8)	
Netherlands	s	55 (1.1)	566 (2.8)	37 (1.0)	561 (2.8)	8 (0.6)	555 (5.5)	
Romania		55 (1.4)	527 (4.6)	31 (1.1)	505 (5.5)	15 (1.2)	485 (10.8)	
Iceland	r	53 (0.9)	529 (2.0)	39 (0.9)	506 (2.3)	8 (0.6)	492 (4.5)	
Czech Republic		52 (1.1)	548 (2.4)	41 (1.0)	535 (3.1)	8 (0.6)	517 (5.6)	
Argentina	s	50 (1.5)	447 (6.6)	35 (1.1)	418 (6.9)	16 (1.4)	400 (7.8)	
Lithuania		48 (1.3)	553 (2.9)	39 (1.1)	540 (3.3)	13 (0.9)	528 (4.3)	
Norway		47 (1.2)	518 (3.5)	41 (1.1)	493 (3.4)	13 (1.0)	474 (6.5)	
Germany		43 (0.8)	550 (2.0)	43 (0.7)	542 (2.4)	14 (0.6)	526 (3.6)	
Moldova, Rep. of		42 (1.3)	511 (4.9)	39 (1.1)	486 (4.3)	19 (1.2)	469 (5.6)	
Sweden		41 (0.8)	572 (2.6)	45 (0.7)	561 (2.5)	14 (0.5)	548 (3.5)	
Belize	s	40 (2.0)	364 (6.3)	38 (1.5)	320 (7.1)	22 (2.0)	289 (6.4)	
Colombia	r	40 (1.9)	435 (6.1)	39 (1.3)	426 (4.8)	21 (1.4)	410 (5.0)	
Singapore		37 (1.0)	556 (4.6)	41 (0.7)	526 (5.0)	21 (0.8)	498 (6.4)	
Kuwait	r	30 (0.7)	418 (4.8)	48 (0.7)	400 (4.5)	22 (0.6)	381 (6.0)	
Turkey		26 (1.1)	474 (5.2)	39 (1.2)	450 (4.3)	35 (1.6)	435 (3.6)	
Iran, Islamic Rep. of		18 (1.1)	455 (7.8)	35 (1.0)	425 (5.7)	47 (1.8)	391 (4.1)	
Hong Kong, SAR	r	16 (0.8)	544 (3.3)	54 (0.9)	531 (2.8)	30 (1.2)	528 (3.9)	
Israel		x x	x x	x x	x x	x x	x x	
Morocco		--	--	--	--	--	--	
United States		--	--	--	--	--	--	
International Avg.		52 (0.2)	520 (0.7)	35 (0.2)	499 (0.8)	13 (0.2)	481 (1.3)	

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

**Index of Early Home Literacy Activities (EHLA)**

Based on parents' responses to the frequency of the following activities they engaged 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; or 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 of greater than 2.33 through 3. Medium level indicates an average of 1.67 through 2.33. Low level indicates an average 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 data are not available. A tilde (~) indicates insufficient data to report achievement.

**Exhibit 4.2: Parents Read Books with Their Children Before the Children Began Primary School**
**ISC** 4th Grade  
PIRLS 2001

Countries	Often		Sometimes		Never or Almost Never		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	35 (1.2)	452 (7.4)	53 (1.4)	422 (6.1)	11 (1.0)	391 (8.1)
Belize	s	36 (2.0)	359 (7.3)	52 (1.4)	319 (6.0)	11 (1.2)	285 (8.5)
Bulgaria		51 (1.5)	576 (3.2)	41 (1.3)	537 (4.2)	8 (1.3)	497 (10.9)
Canada (O,Q)	r	68 (0.9)	562 (2.2)	30 (0.9)	525 (2.9)	2 (0.2)	~ ~
Colombia	r	27 (1.5)	427 (6.6)	59 (1.5)	427 (4.4)	13 (1.2)	413 (6.3)
Cyprus	s	48 (1.3)	515 (4.7)	47 (1.2)	475 (3.8)	5 (0.5)	443 (11.2)
Czech Republic		62 (1.2)	553 (2.5)	36 (1.1)	520 (3.4)	2 (0.3)	~ ~
England	s	82 (1.1)	581 (3.6)	17 (1.0)	533 (5.2)	1 (0.1)	~ ~
France		57 (1.3)	547 (2.4)	39 (1.2)	503 (3.1)	4 (0.3)	505 (5.2)
Germany		57 (1.0)	561 (1.8)	36 (0.9)	522 (2.1)	7 (0.4)	508 (5.0)
Greece		49 (1.5)	547 (4.2)	39 (1.1)	510 (3.6)	12 (1.0)	496 (5.8)
Hong Kong, SAR		21 (0.9)	546 (3.3)	66 (0.8)	525 (3.0)	12 (0.8)	526 (4.7)
Hungary		59 (1.1)	560 (2.4)	37 (1.1)	526 (2.3)	4 (0.4)	523 (7.2)
Iceland	r	82 (0.7)	524 (1.5)	18 (0.7)	482 (2.8)	0 (0.1)	~ ~
Iran, Islamic Rep. of		22 (1.4)	424 (8.4)	50 (1.6)	430 (4.3)	28 (1.9)	379 (5.5)
Israel		x x	x x	x x	x x	x x	x x
Italy		37 (1.1)	567 (2.9)	50 (1.0)	531 (2.6)	13 (0.6)	528 (4.9)
Kuwait	r	17 (0.8)	413 (5.5)	61 (0.9)	406 (4.2)	23 (0.8)	379 (6.2)
Latvia		56 (1.3)	559 (3.0)	42 (1.3)	532 (2.5)	2 (0.3)	~ ~
Lithuania		45 (1.4)	560 (3.1)	51 (1.3)	533 (2.9)	5 (0.4)	518 (6.4)
Macedonia, Rep. of	r	44 (1.3)	455 (6.2)	51 (1.3)	446 (5.5)	5 (1.0)	436 (17.2)
Moldova, Rep. of		38 (1.4)	514 (5.0)	53 (1.2)	482 (4.0)	9 (0.8)	463 (8.5)
Morocco		--	--	--	--	--	--
Netherlands	s	70 (1.3)	570 (2.3)	27 (1.3)	546 (3.8)	3 (0.4)	551 (8.2)
New Zealand	r	76 (1.1)	555 (3.4)	23 (1.1)	485 (4.0)	1 (0.3)	~ ~
Norway		70 (1.1)	515 (3.1)	29 (1.0)	474 (4.2)	1 (0.3)	~ ~
Romania		42 (1.4)	531 (5.1)	51 (1.5)	505 (5.8)	7 (0.8)	473 (12.3)
Russian Federation		61 (1.4)	540 (4.2)	36 (1.4)	511 (5.4)	2 (0.5)	~ ~
Scotland	s	79 (1.3)	553 (3.8)	21 (1.3)	503 (6.8)	1 (0.2)	~ ~
Singapore		36 (1.2)	561 (4.9)	57 (1.0)	518 (4.9)	7 (0.5)	472 (9.0)
Slovak Republic		57 (1.1)	535 (2.8)	41 (1.0)	503 (3.1)	2 (0.3)	~ ~
Slovenia		51 (1.2)	524 (2.4)	47 (1.1)	483 (2.6)	2 (0.2)	~ ~
Sweden		70 (1.0)	573 (2.2)	29 (0.9)	543 (2.9)	2 (0.2)	~ ~
Turkey		22 (1.1)	452 (6.4)	53 (1.4)	456 (4.0)	25 (1.4)	437 (4.5)
United States		--	--	--	--	--	--
International Avg.		51 (0.2)	522 (0.8)	42 (0.2)	491 (0.7)	7 (0.1)	461 (2.4)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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



being read to often, on average, there were a number of countries where reading books was more common than the other activities that make up the index. In addition to England, Iceland, and Scotland, countries where 70 percent or more of students had parents reporting that they often read books to their child included The Netherlands, New Zealand, Norway, and Sweden. Also, the association between often having been read a book and high reading performance was more clear-cut than with the index, with a reading achievement difference of more than 30 points, on average, across countries, between students who sometimes read books with their parents and those who did so often.

Whereas the traditional parent-child activity of enjoying a book together was quite common in most countries, parents reported far less involvement with newer forms of literacy activities. Almost 80 percent of students, on average, had parents who reported never or almost never doing reading activities on the computer with them before they reached school-going age (see Exhibit 4.3). Only in Canada (O,Q) and France were there as many as 10 percent of students with parents reporting often using the computer for reading activities with their child. There was no clear relationship between doing reading activities on the computer and performance on the PIRLS reading assessment. Unlike the book reading, this activity was not part of the Index of Early Home Literacy Activities.

### **What Language Do Students Speak at Home?**

Although there may be some benefits to being multilingual, students who always speak a language at home different from the language in school may be at a disadvantage in some learning situations, particularly in the early grades, when reading is a focus of instruction. Exhibit 4.4 shows students' reports of how often they spoke the language of the PIRLS test at home in relation to their reading performance. Most students (79% on average, internationally) reported always or almost always speaking the language of the test at home, but there were significant percentages who reported sometimes (16% on average) or never (6% on average) speaking it. In contrast to the general picture, less than half of students in Belize, Hong Kong, Morocco, and Singapore reported always speaking the PIRLS language at home, and just over half in Iran and Kuwait.

**Exhibit 4.3: Parents Did Early Reading Activities on the Computer with Their Children**
**ISC** 4th Grade  
PIRLS 2001

Countries	Often		Sometimes		Never or Almost Never		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	6 (0.7)	452 (8.6)	10 (1.1)	459 (9.2)	84 (1.6)	428 (6.1)
Belize	s	5 (0.7)	368 (14.5)	9 (1.3)	376 (11.9)	86 (1.9)	321 (5.3)
Bulgaria		4 (0.4)	564 (8.3)	12 (0.6)	554 (4.7)	84 (0.8)	553 (3.8)
Canada (O,Q)	r	13 (0.5)	567 (3.7)	31 (0.7)	554 (3.1)	57 (0.8)	545 (2.2)
Colombia	r	4 (0.4)	435 (11.1)	8 (0.7)	444 (7.9)	88 (0.8)	425 (4.2)
Cyprus	s	4 (0.5)	493 (11.8)	10 (0.8)	501 (6.3)	86 (0.9)	493 (3.3)
Czech Republic		2 (0.3)	~ ~	8 (0.6)	550 (4.6)	90 (0.7)	540 (2.5)
England	s	8 (0.8)	580 (7.9)	25 (1.2)	571 (4.6)	66 (1.4)	572 (4.1)
France		12 (0.7)	521 (4.7)	23 (0.8)	530 (3.5)	65 (1.1)	530 (2.6)
Germany		4 (0.3)	529 (4.7)	15 (0.6)	534 (2.5)	81 (0.7)	546 (1.9)
Greece		4 (0.7)	546 (10.3)	7 (0.8)	559 (9.2)	89 (1.2)	522 (3.6)
Hong Kong, SAR	r	4 (0.4)	528 (6.5)	24 (0.8)	525 (3.6)	72 (0.9)	534 (2.9)
Hungary		2 (0.3)	~ ~	6 (0.5)	564 (5.8)	91 (0.6)	544 (2.1)
Iceland	r	4 (0.4)	528 (7.1)	21 (0.6)	519 (3.9)	74 (0.7)	516 (1.4)
Iran, Islamic Rep. of		3 (0.3)	388 (16.4)	6 (0.7)	403 (11.2)	92 (0.8)	414 (4.2)
Israel		x x	x x	x x	x x	x x	x x
Italy		6 (0.4)	548 (7.0)	15 (0.7)	549 (3.5)	79 (0.8)	544 (2.5)
Kuwait	r	9 (0.4)	407 (7.7)	24 (0.7)	409 (5.1)	67 (0.8)	397 (4.6)
Latvia		2 (0.4)	~ ~	3 (0.4)	555 (12.2)	96 (0.6)	549 (2.4)
Lithuania		--	--	--	--	--	--
Macedonia, Rep. of	r	7 (0.8)	420 (12.3)	15 (0.8)	433 (8.7)	78 (1.2)	457 (5.0)
Moldova, Rep. of		2 (0.3)	~ ~	6 (0.6)	501 (7.3)	92 (0.7)	492 (3.7)
Morocco		--	--	--	--	--	--
Netherlands	s	9 (0.7)	554 (6.8)	25 (1.1)	562 (3.0)	66 (1.3)	565 (2.7)
New Zealand	r	9 (0.7)	559 (8.6)	23 (1.1)	536 (5.2)	69 (1.1)	535 (3.7)
Norway		5 (0.5)	500 (8.3)	20 (1.1)	504 (4.8)	75 (1.1)	502 (3.0)
Romania		4 (0.5)	524 (9.7)	8 (0.7)	534 (6.9)	88 (1.0)	513 (4.7)
Russian Federation		2 (0.3)	~ ~	4 (0.4)	524 (9.4)	94 (0.6)	529 (4.5)
Scotland	s	7 (0.6)	545 (9.7)	22 (1.0)	541 (5.4)	71 (1.1)	544 (4.2)
Singapore		9 (0.4)	538 (5.9)	34 (0.7)	541 (4.7)	57 (0.7)	524 (5.4)
Slovak Republic		4 (0.4)	511 (8.7)	12 (0.6)	513 (5.4)	84 (0.7)	522 (2.8)
Slovenia		5 (0.4)	513 (6.8)	18 (0.9)	509 (3.8)	77 (0.9)	504 (2.1)
Sweden		4 (0.3)	572 (7.0)	22 (0.8)	562 (3.3)	74 (0.9)	564 (2.3)
Turkey		3 (0.3)	435 (9.8)	8 (0.6)	445 (7.5)	88 (0.7)	452 (3.6)
United States		--	--	--	--	--	--
International Avg.		5 (0.1)	505 (1.9)	15 (0.1)	512 (1.2)	79 (0.2)	506 (0.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

## Exhibit 4.4: Students Speak Language of the Test at Home

ISC  
4th Grade  
PIRLS 2001

Countries	Always or Almost Always		Sometimes		Never	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Argentina	84 (0.9)	444 (5.3)	10 (0.6)	404 (9.8)	6 (0.6)	381 (9.7)
Belize	28 (1.6)	343 (5.8)	51 (1.7)	331 (6.1)	21 (1.9)	306 (7.9)
Bulgaria	84 (2.0)	563 (3.4)	14 (1.7)	499 (9.7)	2 (0.6)	~ ~
Canada (O,Q)	84 (1.0)	551 (2.4)	15 (0.8)	520 (3.6)	2 (0.2)	~ ~
Colombia	84 (1.2)	431 (4.6)	13 (1.1)	399 (5.6)	3 (0.4)	372 (12.2)
Cyprus	82 (0.9)	500 (3.1)	16 (0.9)	477 (6.1)	2 (0.3)	~ ~
Czech Republic	93 (0.5)	540 (2.1)	6 (0.5)	510 (7.4)	1 (0.2)	~ ~
England	88 (1.0)	559 (3.4)	11 (0.9)	510 (5.9)	1 (0.2)	~ ~
France	87 (0.9)	532 (2.5)	12 (0.8)	494 (3.6)	1 (0.2)	~ ~
Germany	90 (0.7)	547 (1.8)	9 (0.7)	487 (3.6)	1 (0.1)	~ ~
Greece	94 (0.6)	527 (3.5)	6 (0.5)	507 (9.7)	0 (0.1)	~ ~
Hong Kong, SAR	5 (0.3)	527 (5.9)	50 (1.2)	535 (3.0)	45 (1.3)	523 (3.4)
Hungary	96 (0.5)	546 (2.2)	4 (0.4)	498 (6.8)	1 (0.2)	~ ~
Iceland	88 (0.4)	519 (1.2)	11 (0.4)	488 (4.6)	1 (0.2)	~ ~
Iran, Islamic Rep. of	56 (2.9)	443 (4.5)	24 (1.8)	394 (5.0)	20 (2.5)	362 (5.7)
Israel	80 (1.0)	523 (2.7)	19 (0.9)	471 (5.8)	2 (0.3)	~ ~
Italy	96 (0.4)	543 (2.4)	3 (0.3)	498 (7.4)	1 (0.2)	~ ~
Kuwait	56 (1.5)	401 (4.4)	34 (1.3)	402 (5.5)	10 (0.8)	393 (7.3)
Latvia	91 (1.1)	548 (2.3)	8 (0.9)	521 (6.7)	1 (0.3)	~ ~
Lithuania	94 (0.9)	546 (2.4)	5 (0.8)	515 (8.3)	1 (0.3)	~ ~
Macedonia, Rep. of	88 (1.6)	454 (4.2)	10 (1.4)	415 (14.8)	2 (0.5)	~ ~
Moldova, Rep. of	85 (2.0)	494 (3.7)	13 (1.5)	487 (13.6)	2 (0.6)	~ ~
Morocco	18 (1.4)	332 (10.8)	38 (2.4)	352 (8.9)	43 (3.0)	368 (15.4)
Netherlands	86 (1.5)	558 (2.3)	11 (0.9)	528 (5.7)	3 (0.9)	546 (8.5)
New Zealand	84 (1.1)	540 (3.4)	14 (1.0)	485 (8.3)	2 (0.3)	~ ~
Norway	92 (0.6)	505 (2.8)	7 (0.6)	459 (6.7)	1 (0.2)	~ ~
Romania	91 (1.6)	517 (4.5)	6 (1.0)	492 (16.3)	2 (1.1)	~ ~
Russian Federation	85 (2.2)	535 (3.6)	11 (1.5)	496 (12.8)	4 (0.8)	480 (15.3)
Scotland	89 (0.9)	533 (3.8)	9 (0.7)	502 (5.1)	2 (0.4)	~ ~
Singapore	43 (1.4)	564 (4.6)	50 (1.3)	509 (5.3)	8 (0.4)	466 (7.7)
Slovak Republic	84 (1.5)	526 (2.7)	13 (1.3)	491 (6.9)	3 (0.5)	462 (15.9)
Slovenia	86 (1.0)	507 (2.1)	12 (0.9)	471 (4.1)	1 (0.2)	~ ~
Sweden	90 (1.1)	565 (1.9)	9 (1.0)	522 (5.0)	1 (0.2)	~ ~
Turkey	87 (1.4)	456 (3.6)	12 (1.3)	408 (6.1)	1 (0.2)	~ ~
United States	85 (1.1)	551 (3.7)	14 (1.1)	506 (6.1)	2 (0.3)	~ ~
International Avg.	79 (0.2)	508 (0.7)	16 (0.2)	474 (1.4)	6 (0.1)	424 (2.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

On average, across countries, there was a strong relationship between frequency of speaking the language of the PIRLS test at home and performance on the PIRLS test, with the average score for those always speaking the PIRLS language at home (508 points) considerably higher than that for those speaking it only sometimes (474 points) or never (424 points). The principal exception to this pattern was Morocco, where French is often the language of more affluent homes. These more affluent Francophone students, who reported never speaking Arabic (the PIRLS language) at home, had higher achievement than those who sometimes or always speak Arabic.

Many countries tested in more than one language in order to cover their whole student population. These included Canada (O,Q) (English and French), Israel (Hebrew and Arabic), Italy (Italian and German), Latvia (Latvian and Russian), Macedonia (Macedonian and Albanian), Moldova (Romanian and Russian), New Zealand (English and Māori), Norway (Bokmaal and Nynorsk), and Romania (Romanian and Hungarian).

Related to the question of the language spoken in the home is the size of the immigrant population in a country. Exhibit 4.5 shows students' reports about where their parents were born, together with average reading achievement. On average, across countries, more than three-quarters of students (77%) reported that both parents were born in the country, with a further 13 percent reporting that one parent and 9 percent that neither parent was born there. Within the overall pattern, however, there was considerable variation. Some countries, such as Bulgaria, Hungary, Iran, Romania, and Turkey, have very little immigration with more than 90 percent of students reporting that both parents were born in the country. Others, including Belize, Canada (O,Q), France, Germany, Hong Kong, Israel, New Zealand, and the United States, had at least 15 percent of students reporting that neither parent was born in the country. Although performance on the PIRLS reading assessment, on average, was highest among students reporting both parents born in the country (506), in-between for students with one parent born in the country (491), and lowest for those with neither (476), Hong Kong, Israel, Kuwait, Latvia, Moldova, New Zealand, and Singapore had performance among

## Exhibit 4.5: Students' Parents Born in Country

ISC  
4th Grade  
PIRLS 2001

Countries	Father and Mother Born in Country		Father or Mother Born in Country		Neither Parent Born in Country		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	r	78 (1.0)	441 (5.5)	14 (0.8)	417 (8.3)	8 (0.8)	407 (10.3)
Belize	r	44 (1.8)	335 (6.7)	28 (1.1)	326 (7.4)	29 (1.9)	324 (6.6)
Bulgaria		95 (0.4)	555 (3.6)	4 (0.4)	526 (9.6)	0 (0.1)	~ ~
Canada (O,Q)		61 (1.6)	552 (2.6)	18 (0.7)	547 (3.0)	21 (1.7)	537 (3.8)
Colombia		86 (0.8)	426 (4.9)	10 (0.6)	410 (6.4)	4 (0.5)	401 (6.3)
Cyprus		80 (1.0)	500 (3.2)	16 (0.8)	485 (5.2)	4 (0.6)	476 (8.0)
Czech Republic		88 (0.9)	541 (2.3)	10 (0.8)	529 (4.8)	2 (0.3)	~ ~
England		67 (1.8)	559 (3.8)	21 (1.0)	553 (4.9)	12 (1.5)	536 (6.4)
France		70 (1.7)	533 (2.8)	16 (0.7)	526 (4.3)	15 (1.3)	503 (3.9)
Germany		75 (1.2)	553 (1.8)	10 (0.4)	530 (3.9)	15 (1.0)	498 (2.9)
Greece		81 (1.1)	530 (3.3)	10 (0.9)	517 (6.0)	9 (0.9)	503 (8.6)
Hong Kong, SAR	r	38 (1.8)	528 (3.3)	22 (0.6)	525 (3.9)	40 (1.8)	536 (3.5)
Hungary		93 (0.5)	546 (2.2)	4 (0.4)	532 (7.2)	2 (0.3)	~ ~
Iceland		87 (0.6)	518 (1.4)	11 (0.5)	503 (4.9)	2 (0.2)	~ ~
Iran, Islamic Rep. of		92 (0.8)	418 (4.5)	5 (0.5)	382 (10.9)	4 (0.5)	399 (6.9)
Israel		57 (1.4)	507 (3.4)	20 (0.8)	521 (5.3)	22 (1.2)	518 (4.4)
Italy		88 (0.6)	544 (2.4)	8 (0.5)	526 (5.0)	4 (0.4)	505 (6.7)
Kuwait	r	80 (1.0)	401 (5.2)	14 (0.7)	391 (5.5)	6 (0.6)	416 (9.7)
Latvia		65 (1.4)	546 (2.1)	25 (0.9)	546 (4.0)	10 (1.0)	552 (6.7)
Lithuania		88 (0.8)	547 (2.6)	11 (0.7)	536 (4.6)	2 (0.4)	~ ~
Macedonia, Rep. of		88 (1.1)	454 (4.5)	9 (0.9)	428 (10.6)	3 (0.4)	405 (14.8)
Moldova, Rep. of		79 (1.3)	493 (3.9)	16 (1.0)	489 (6.9)	5 (0.5)	503 (11.6)
Morocco		84 (1.2)	361 (11.0)	12 (0.9)	336 (12.0)	4 (0.5)	331 (12.1)
Netherlands		79 (1.4)	560 (2.3)	11 (0.6)	552 (5.0)	10 (1.2)	516 (4.7)
New Zealand		59 (1.6)	531 (4.2)	22 (1.1)	535 (4.9)	19 (1.4)	530 (6.2)
Norway		82 (1.1)	503 (2.9)	12 (0.9)	508 (4.8)	5 (0.7)	446 (7.6)
Romania		96 (0.5)	518 (4.3)	3 (0.4)	428 (9.9)	1 (0.2)	~ ~
Russian Federation		76 (1.5)	534 (3.9)	16 (1.0)	525 (5.2)	9 (1.0)	500 (11.8)
Scotland		80 (1.0)	537 (3.4)	15 (0.8)	520 (6.1)	5 (0.5)	506 (11.4)
Singapore		66 (0.9)	533 (5.1)	22 (0.7)	521 (5.9)	12 (0.6)	537 (6.0)
Slovak Republic		88 (0.8)	521 (2.9)	9 (0.6)	506 (5.3)	2 (0.5)	~ ~
Slovenia		77 (1.3)	507 (2.1)	11 (0.7)	491 (4.6)	12 (1.0)	478 (3.8)
Sweden		76 (1.6)	567 (2.1)	13 (0.6)	559 (3.6)	12 (1.6)	523 (5.0)
Turkey		93 (0.7)	453 (3.7)	3 (0.3)	428 (10.6)	4 (0.5)	419 (8.0)
United States		68 (1.8)	556 (4.1)	15 (0.8)	530 (5.3)	17 (1.7)	522 (6.9)
International Avg.		77 (0.2)	506 (0.7)	13 (0.1)	491 (1.1)	9 (0.2)	476 (1.6)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

children reporting neither parent born in the country that was as good as or better than that of children with native-born parents.

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

Earlier 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> Furthermore, TIMSS has shown that eighth-grade students from homes with large numbers of books, with a range of educational study aids, or with parents with university-level education also had higher achievement in mathematics and science.<sup>3</sup> Building on the TIMSS work, PIRLS has 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 reported coming from homes with more than 100 books, more than 25 children's books, at least three of the four educational aids, and where at least one parent finished 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 4.6 presents the percentage of students at each level of the index for each country, together with the average reading achievement for those students. Standard errors also are shown. Countries are ordered by the percentage of students at the high level of the index, which also is displayed graphically for each country at the right hand side of the exhibit. The international average across all countries is shown at the bottom of each column.

On average, internationally, there were 13 percent of students at the high level of the index, 74 percent at the medium level, and 13 percent at the

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.J., Gregory, K.D., Garden, R.A., O'Connor, K.M., Chrostowski, S.J., & Smith, T.A. (2000). *TIMSS 1999 international mathematics report: Findings from IEA's repeat of the Third International Mathematics and Science Study at the eighth grade*. Chestnut Hill, MA: Boston College.

**Exhibit 4.6: Index of Home Educational Resources (HER)**

**ISC** 4th Grade  
PIRLS 2001

Countries	High HER		Medium HER		Low HER		Percentage of Students at High Level of HER
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
United States	37 (1.7)	570 (3.9)	52 (1.0)	538 (3.3)	11 (1.0)	486 (6.3)	.....○
Norway	33 (1.5)	531 (3.7)	66 (1.5)	487 (2.8)	1 (0.2)	~ ~	.....○
England	27 (1.1)	584 (4.5)	69 (1.0)	547 (3.1)	4 (0.4)	479 (8.4)	.....○
Sweden	26 (1.4)	586 (2.6)	74 (1.4)	553 (2.2)	1 (0.2)	~ ~	.....○
Iceland	23 (0.7)	547 (2.4)	76 (0.7)	508 (1.4)	1 (0.2)	~ ~	.....○
New Zealand	21 (1.3)	575 (5.2)	75 (1.4)	525 (3.3)	3 (0.4)	445 (11.0)	.....○
Hungary	21 (1.2)	586 (3.4)	75 (1.1)	537 (1.8)	4 (0.5)	473 (6.7)	.....○
Scotland	20 (1.0)	562 (5.7)	74 (1.0)	528 (3.2)	6 (0.5)	460 (7.3)	.....○
Canada (O,Q)	19 (1.0)	579 (3.7)	78 (1.0)	540 (2.1)	2 (0.3)	~ ~	.....○
Israel	19 (1.1)	550 (4.6)	76 (1.2)	515 (3.0)	5 (0.4)	454 (8.1)	.....○
Germany	17 (0.8)	577 (2.7)	79 (0.8)	538 (1.7)	4 (0.4)	472 (5.7)	.....○
Latvia	15 (0.9)	578 (3.7)	83 (0.9)	541 (2.4)	2 (0.5)	~ ~	.....○
Czech Republic	15 (1.2)	570 (3.8)	83 (1.2)	535 (2.2)	2 (0.3)	~ ~	.....○
France	14 (1.0)	571 (4.3)	79 (0.9)	523 (2.1)	7 (0.5)	477 (5.6)	.....○
Cyprus	13 (0.9)	532 (5.2)	80 (0.9)	496 (2.7)	8 (0.7)	456 (8.8)	.....○
Netherlands	12 (0.7)	573 (3.8)	84 (0.7)	555 (2.3)	4 (0.5)	506 (5.9)	.....○
Kuwait	12 (0.7)	428 (6.2)	65 (1.0)	405 (4.0)	23 (1.3)	382 (7.7)	.....○
Singapore	12 (0.8)	600 (5.1)	86 (0.8)	524 (4.8)	3 (0.3)	409 (8.0)	.....○
Slovenia	11 (0.7)	547 (3.8)	86 (0.7)	499 (1.8)	3 (0.4)	427 (13.0)	.....○
Greece	11 (1.1)	575 (5.2)	83 (1.2)	525 (3.4)	6 (0.7)	477 (7.8)	.....○
Bulgaria	11 (0.9)	605 (4.2)	75 (1.7)	558 (3.1)	14 (1.8)	493 (10.5)	.....○
Slovak Republic	10 (1.0)	561 (4.6)	86 (1.3)	519 (2.7)	4 (0.9)	429 (14.4)	.....○
Russian Federation	8 (0.6)	563 (5.4)	90 (0.7)	527 (4.4)	2 (0.4)	~ ~	.....○
Italy	7 (0.6)	585 (5.2)	86 (0.8)	542 (2.2)	7 (0.6)	498 (5.7)	.....○
Romania	5 (0.9)	575 (6.9)	78 (1.1)	520 (4.3)	17 (1.2)	469 (8.3)	.....○
Argentina	4 (0.7)	503 (11.5)	55 (2.3)	451 (5.9)	40 (2.5)	416 (5.7)	.....○
Macedonia, Rep. of	4 (0.5)	476 (9.7)	81 (1.2)	462 (4.3)	15 (1.0)	403 (9.3)	.....○
Hong Kong, SAR	4 (0.5)	549 (6.2)	81 (0.9)	531 (3.0)	15 (1.0)	514 (5.2)	.....○
Moldova, Rep. of	4 (0.7)	568 (6.8)	89 (1.1)	492 (3.9)	7 (0.9)	459 (8.0)	.....○
Belize	3 (0.7)	406 (17.0)	58 (2.0)	346 (5.0)	39 (2.0)	301 (6.1)	.....○
Morocco	3 (0.5)	379 (17.8)	21 (1.8)	366 (9.1)	76 (2.1)	362 (12.2)	.....○
Turkey	2 (0.5)	~ ~	56 (1.9)	465 (4.0)	41 (2.1)	425 (3.9)	.....○
Colombia	1 (0.3)	~ ~	50 (1.8)	439 (6.0)	48 (1.8)	407 (4.1)	.....○
Iran, Islamic Rep. of	1 (0.2)	~ ~	61 (2.1)	443 (4.4)	38 (2.1)	369 (3.8)	.....○
Lithuania	0 (0.1)	~ ~	98 (0.3)	545 (2.5)	1 (0.3)	~ ~	.....○
International Avg.	13 (0.2)	548 (1.3)	74 (0.2)	504 (0.6)	13 (0.2)	443 (1.5)	.....○

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

**Index of Home Educational Resources (HER)**

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; 3 or 4 educational aids; and highest level of education for either parent is finished university. Low level indicates 25 or fewer books in the home; 25 or fewer children's books; 2 or fewer educational aids; and highest level of education for either parent is some secondary or less. Medium level includes all other combinations of responses.

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

low level, but this distribution varied considerably from country to country. While most countries had from 60 to 80 percent of students at the middle level, the most striking differences were in the high and low levels. Countries with relatively high proportions of students from well-resourced homes (more than 20% of students at the high level of the index) included the United States, Norway, England, Sweden, Iceland, New Zealand, Hungary, and Scotland. These countries all had average student performance on the PIRLS reading assessment that was at or above the international average (as shown in Exhibit 1.1). At the other extreme, Argentina, Belize, Morocco, Turkey, Colombia, and Iran had more than one-third of their students at the low level of the index, and very few at the high level. These countries also had average student reading performance that was below the international average.

Although across countries there is a rough 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 in average reading achievement within each country between students at the three levels of the index. There was a substantial difference in the average reading achievement of students at the three index levels for every country for which data were available. The difference between the international average for those at the high level (548) and those at the low level (443) amounted to 105 score points, which is more than one and one-half times the difference between the highest-performing country (Sweden) and the international average.

Because books are probably the most important literacy resource, Exhibits 4.7 through 4.9 provide more detail about the number of books in students' homes. Parents' reports on the number of books in the home and associated average reading performance are presented in Exhibit 4.7, and students' reports on the same topic in Exhibit 4.8. Both provide a very similar picture, although the parents' reported a somewhat higher level of book ownership. Students' reports include data from more countries, however, and therefore are more comprehensive. Both reports indicated a wide range within each country. For example, according to students, countries with most books in the home included Bulgaria, Canada (O,Q), the Czech Republic, England,



## Exhibit 4.7: Parents' Reports of Books in the Home

ISC  
4th Grade  
PIRLS 2001

Countries	More than 200 Books		101-200 Books		26-100 Books		11-25 Books		0-10 Books		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	4 (0.8)	516 (9.1)	5 (0.6)	490 (10.4)	22 (1.6)	462 (6.8)	24 (1.2)	425 (5.7)	45 (2.5)	399 (6.9)
Belize	s	6 (0.7)	386 (10.6)	6 (0.9)	388 (14.6)	23 (1.4)	352 (6.9)	28 (1.5)	331 (6.9)	36 (2.4)	297 (5.9)
Bulgaria		30 (1.4)	588 (4.0)	17 (0.9)	577 (3.8)	26 (1.1)	551 (4.1)	10 (0.9)	523 (6.3)	18 (1.9)	492 (10.0)
Canada (O,Q)	r	24 (0.9)	573 (3.1)	20 (0.8)	556 (3.2)	37 (0.8)	545 (2.4)	12 (0.6)	529 (4.3)	6 (0.4)	516 (5.5)
Colombia		3 (0.4)	470 (11.3)	4 (0.5)	471 (11.7)	20 (1.0)	451 (7.0)	25 (1.4)	421 (6.4)	47 (2.0)	408 (4.4)
Cyprus	s	12 (0.8)	521 (5.9)	12 (0.9)	506 (6.2)	43 (1.1)	494 (4.5)	23 (0.9)	479 (5.7)	10 (0.9)	462 (7.7)
Czech Republic		30 (1.4)	563 (3.2)	24 (1.1)	547 (3.0)	37 (1.5)	526 (2.9)	8 (0.7)	504 (5.3)	1 (0.3)	~ ~
England	s	28 (1.9)	602 (4.3)	21 (0.9)	582 (6.0)	34 (1.5)	557 (4.4)	11 (0.9)	542 (7.5)	7 (0.7)	530 (10.3)
France		23 (1.4)	567 (3.7)	17 (0.7)	542 (3.8)	35 (1.1)	518 (2.8)	14 (0.9)	503 (4.4)	10 (0.7)	481 (4.8)
Germany		27 (1.1)	574 (1.9)	18 (0.6)	555 (3.2)	36 (0.9)	534 (1.8)	12 (0.6)	509 (3.2)	6 (0.5)	493 (4.2)
Greece		16 (1.4)	570 (4.4)	13 (0.8)	544 (7.5)	44 (1.2)	524 (3.8)	16 (1.1)	491 (4.6)	10 (0.9)	495 (7.8)
Hong Kong, SAR		6 (0.6)	552 (4.5)	7 (0.5)	544 (4.5)	30 (0.9)	533 (3.1)	27 (0.8)	527 (3.6)	30 (1.2)	521 (3.9)
Hungary		40 (1.4)	572 (2.7)	22 (0.7)	543 (2.8)	27 (1.0)	530 (2.9)	7 (0.4)	496 (4.9)	4 (0.5)	479 (6.8)
Iceland	r	40 (0.9)	534 (2.2)	26 (0.8)	519 (3.1)	27 (0.8)	497 (2.7)	5 (0.4)	480 (5.2)	1 (0.2)	~ ~
Iran, Islamic Rep. of		5 (0.4)	465 (8.9)	4 (0.4)	474 (10.5)	16 (0.8)	454 (5.5)	25 (1.0)	423 (5.5)	49 (1.6)	390 (3.9)
Israel		x x	x x	x x	x x	x x	x x	x x	x x	x x	x x
Italy		17 (0.8)	577 (3.1)	14 (0.7)	560 (3.5)	36 (0.9)	542 (2.7)	21 (0.9)	525 (3.2)	12 (0.6)	506 (5.5)
Kuwait	r	13 (0.7)	421 (5.8)	9 (0.4)	414 (5.5)	31 (0.9)	405 (5.1)	27 (0.6)	400 (5.6)	20 (0.8)	379 (5.5)
Latvia		35 (1.2)	562 (3.1)	23 (1.1)	550 (3.6)	32 (1.1)	534 (2.9)	7 (0.7)	526 (9.1)	3 (0.7)	512 (15.0)
Lithuania		19 (1.1)	568 (4.4)	18 (0.9)	557 (3.3)	39 (1.2)	545 (2.8)	16 (0.9)	520 (4.3)	8 (0.8)	499 (4.9)
Macedonia, Rep. of	r	8 (0.8)	488 (8.7)	7 (0.7)	494 (11.0)	34 (1.4)	477 (4.9)	29 (1.1)	429 (6.2)	22 (1.8)	406 (8.2)
Moldova, Rep. of		8 (0.9)	544 (6.4)	8 (0.8)	543 (8.5)	23 (1.1)	510 (4.7)	25 (1.2)	487 (4.3)	36 (1.8)	464 (5.1)
Morocco		--	--	--	--	--	--	--	--	--	--
Netherlands	s	25 (1.3)	588 (3.0)	19 (1.0)	568 (3.4)	32 (1.0)	559 (2.6)	14 (1.0)	543 (4.3)	10 (0.9)	534 (5.5)
New Zealand	r	28 (1.3)	568 (4.6)	20 (0.9)	548 (6.7)	35 (1.2)	526 (3.4)	11 (1.0)	506 (6.2)	6 (0.5)	481 (12.1)
Norway		45 (1.4)	523 (3.4)	22 (0.9)	500 (4.6)	26 (0.9)	482 (4.7)	5 (0.6)	457 (8.7)	2 (0.3)	~ ~
Romania		13 (1.1)	565 (5.1)	11 (0.8)	547 (5.0)	27 (1.3)	523 (5.0)	21 (1.3)	494 (6.7)	28 (1.9)	482 (9.4)
Russian Federation		21 (0.9)	547 (3.8)	17 (0.7)	540 (4.2)	35 (0.8)	527 (4.5)	16 (1.0)	509 (6.9)	10 (1.2)	506 (9.7)
Scotland	s	22 (1.3)	579 (6.1)	17 (1.2)	555 (7.5)	35 (1.1)	535 (4.4)	16 (1.1)	517 (6.3)	11 (1.0)	505 (7.2)
Singapore		12 (0.7)	575 (6.0)	11 (0.4)	559 (5.0)	40 (0.7)	535 (5.0)	21 (0.6)	510 (5.6)	16 (0.6)	491 (6.7)
Slovak Republic		17 (1.0)	544 (4.6)	19 (0.7)	539 (3.6)	45 (1.2)	519 (2.9)	12 (0.8)	486 (5.3)	7 (1.0)	466 (10.8)
Slovenia		13 (0.7)	531 (3.5)	16 (0.7)	519 (4.0)	44 (0.8)	504 (2.3)	19 (0.7)	484 (4.2)	7 (0.6)	463 (5.3)
Sweden		42 (1.5)	580 (2.4)	22 (0.8)	562 (2.8)	25 (1.0)	552 (3.0)	7 (0.6)	531 (5.3)	3 (0.4)	516 (7.6)
Turkey		5 (0.5)	506 (7.1)	5 (0.5)	497 (7.0)	23 (1.1)	473 (4.3)	28 (1.0)	448 (4.2)	40 (1.9)	426 (3.8)
United States		--	--	--	--	--	--	--	--	--	--
International Avg.		20 (0.2)	541 (1.0)	15 (0.1)	528 (1.1)	32 (0.2)	509 (0.7)	17 (0.2)	486 (1.1)	16 (0.2)	469 (1.5)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

## Exhibit 4.8: Students' Reports of Books in the Home

ISC  
4th Grade  
PIRLS 2001

Countries	More than 200 Books		101-200 Books		26-100 Books		11-25 Books		0-10 Books		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	r	6 (0.7)	474 (12.6)	7 (0.7)	484 (11.1)	21 (1.6)	466 (9.1)	24 (1.2)	446 (6.8)	42 (2.5)	416 (5.5)
Belize		8 (0.9)	363 (12.0)	7 (0.8)	348 (11.4)	17 (1.1)	357 (8.3)	27 (1.1)	343 (6.5)	41 (2.0)	304 (5.0)
Bulgaria		27 (1.4)	583 (3.8)	16 (0.9)	579 (4.9)	24 (1.1)	565 (3.8)	13 (1.0)	537 (5.7)	20 (1.8)	498 (8.1)
Canada (O,Q)		22 (0.9)	562 (3.4)	22 (0.8)	565 (3.3)	35 (0.7)	546 (2.4)	15 (0.8)	519 (3.3)	6 (0.5)	492 (4.7)
Colombia		5 (0.5)	451 (9.9)	7 (0.5)	455 (9.0)	18 (1.1)	457 (7.3)	24 (1.0)	438 (4.7)	46 (1.8)	401 (4.8)
Cyprus		12 (0.8)	492 (5.6)	13 (0.8)	520 (5.7)	35 (1.1)	510 (3.8)	27 (1.1)	490 (3.6)	12 (0.9)	466 (6.1)
Czech Republic		20 (1.3)	557 (3.7)	21 (1.0)	552 (3.1)	41 (1.4)	538 (2.8)	15 (1.0)	512 (3.1)	4 (0.4)	479 (7.9)
England		20 (1.0)	577 (5.0)	23 (1.2)	579 (4.1)	34 (1.2)	555 (3.5)	16 (1.0)	518 (3.8)	7 (0.6)	477 (6.7)
France		19 (1.0)	555 (4.1)	19 (0.9)	545 (3.1)	36 (1.0)	526 (2.6)	19 (0.9)	506 (3.6)	8 (0.5)	472 (6.1)
Germany		16 (0.7)	570 (2.6)	16 (0.7)	568 (2.9)	35 (0.8)	546 (2.1)	24 (0.8)	523 (2.4)	9 (0.6)	486 (4.2)
Greece		15 (1.1)	544 (6.0)	15 (0.9)	548 (4.3)	35 (1.4)	536 (5.7)	25 (1.3)	514 (4.9)	9 (0.9)	488 (7.1)
Hong Kong, SAR		9 (0.6)	533 (5.0)	10 (0.5)	536 (4.0)	30 (0.8)	538 (3.0)	26 (0.7)	529 (3.4)	26 (1.1)	515 (4.4)
Hungary		28 (1.3)	568 (3.1)	19 (0.7)	559 (2.8)	29 (1.0)	544 (2.9)	16 (0.8)	522 (2.8)	7 (0.8)	481 (5.0)
Iceland		23 (0.7)	528 (3.3)	25 (0.6)	532 (2.1)	35 (0.7)	515 (2.3)	13 (0.5)	490 (3.7)	4 (0.3)	455 (6.1)
Iran, Islamic Rep. of		4 (0.4)	466 (8.0)	5 (0.4)	469 (9.0)	12 (0.9)	473 (6.1)	22 (1.3)	440 (4.6)	56 (2.5)	390 (3.4)
Israel	r	19 (1.1)	527 (5.7)	16 (0.8)	536 (4.7)	33 (1.1)	532 (3.2)	21 (1.0)	506 (4.5)	10 (0.9)	472 (7.5)
Italy		13 (0.6)	551 (4.2)	14 (0.8)	560 (3.9)	30 (0.8)	553 (3.6)	29 (1.0)	538 (2.9)	14 (0.8)	499 (4.2)
Kuwait	s	12 (0.6)	418 (6.0)	11 (0.6)	415 (6.7)	24 (0.8)	411 (5.4)	24 (1.0)	405 (5.6)	29 (1.5)	386 (6.5)
Latvia		24 (1.3)	555 (3.1)	24 (1.1)	557 (3.6)	34 (0.9)	546 (2.5)	13 (0.8)	525 (4.3)	5 (0.6)	513 (6.4)
Lithuania		9 (0.6)	562 (5.0)	16 (1.0)	568 (4.0)	39 (1.1)	552 (2.6)	25 (1.1)	529 (3.5)	10 (1.0)	505 (5.1)
Macedonia, Rep. of	r	8 (0.8)	465 (10.6)	6 (0.5)	487 (7.9)	27 (1.5)	491 (4.8)	34 (1.6)	454 (5.6)	24 (1.8)	415 (7.4)
Moldova, Rep. of		6 (0.9)	542 (8.6)	8 (0.8)	538 (5.4)	21 (1.1)	515 (4.4)	27 (1.3)	488 (4.4)	37 (2.0)	468 (5.1)
Morocco	r	2 (0.5)	~ ~	3 (0.4)	331 (17.2)	9 (1.2)	372 (13.9)	18 (1.5)	351 (8.5)	68 (2.4)	362 (12.4)
Netherlands		12 (0.8)	570 (3.8)	16 (0.7)	569 (3.0)	36 (0.9)	560 (2.6)	25 (1.0)	547 (2.7)	11 (0.8)	523 (5.3)
New Zealand		23 (1.4)	560 (5.3)	23 (1.1)	556 (4.0)	33 (1.3)	533 (4.5)	14 (0.9)	493 (5.9)	8 (0.7)	464 (7.2)
Norway		27 (1.1)	518 (3.6)	25 (0.9)	517 (3.9)	33 (1.2)	495 (3.6)	10 (0.9)	463 (6.5)	4 (0.5)	435 (7.5)
Romania		9 (0.9)	565 (5.2)	9 (0.8)	558 (5.7)	25 (1.1)	534 (4.2)	25 (1.3)	508 (5.0)	32 (1.8)	482 (9.5)
Russian Federation		17 (1.0)	541 (4.7)	16 (0.8)	543 (4.4)	35 (1.1)	535 (4.0)	21 (1.1)	519 (5.8)	11 (1.0)	496 (9.3)
Scotland		19 (0.9)	553 (5.9)	18 (1.1)	554 (6.1)	34 (1.0)	539 (3.9)	18 (0.8)	506 (4.1)	11 (0.8)	466 (6.6)
Singapore		16 (0.7)	569 (5.7)	19 (0.6)	560 (4.9)	37 (1.0)	540 (4.1)	19 (0.9)	500 (5.3)	10 (0.7)	442 (7.8)
Slovak Republic		15 (1.0)	542 (4.5)	22 (1.0)	535 (4.1)	40 (1.4)	524 (3.0)	17 (1.1)	496 (3.8)	7 (1.2)	450 (15.5)
Slovenia		15 (1.0)	513 (4.1)	19 (0.9)	523 (3.2)	37 (1.1)	511 (2.0)	21 (1.1)	484 (3.4)	8 (0.7)	454 (6.4)
Sweden		31 (1.5)	577 (2.7)	26 (0.7)	572 (2.5)	31 (1.1)	552 (2.3)	9 (0.7)	530 (4.0)	3 (0.5)	503 (6.9)
Turkey		5 (0.6)	494 (10.8)	5 (0.5)	499 (8.3)	20 (1.1)	478 (4.3)	30 (1.1)	455 (3.7)	40 (2.0)	422 (3.8)
United States		21 (1.2)	556 (5.8)	22 (1.1)	568 (4.3)	31 (1.1)	551 (3.8)	17 (1.0)	522 (4.2)	9 (1.0)	477 (7.0)
International Avg.		15 (0.2)	529 (1.3)	15 (0.1)	525 (1.1)	30 (0.2)	514 (0.8)	21 (0.2)	490 (0.8)	19 (0.2)	459 (1.2)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

Hungary, Iceland, Latvia, New Zealand, Norway, Sweden, and the United States, all of which had at least 20 percent of students reporting more than 200 books in the home. Countries where students reported having fewer books included Argentina, Belize, Colombia, Iran, Morocco, and Turkey, where 40 percent or more reported having no more than 10 books at home. On average, across countries, and in most countries individually, the more books reported in the home the higher the reading achievement.

Having children's books in the home may be more important for fostering literacy among young children than having books in general. Parents' reports of the number of children's books in the home (Exhibit 4.9) indicated a fairly high level of ownership. On average, across countries, the majority of children (58%) were in homes with more than 25 children's books. Countries where parents reported the greatest number of children's books included Canada (O,Q), England, Iceland, New Zealand, Norway, and Sweden, where 30 percent or more of students had parents reporting more than 100 children's books in the home. However, according to parents there were also countries with relatively few children's books in homes, including Argentina, Colombia, Iran, Moldova, and Turkey, where the majority of students were in homes with no more than 10 children's books. The average reading achievement difference between students from homes with lots of children's books and those from homes with few books was very large. Students from homes with more than 100 children's books had an average score of 552 points, whereas those from homes with 10 books or less had an average of just 466 score points – a difference of 86 points.

To provide further information on the educational resources in the home included in the Index of Home Educational Resources, Exhibit 4.10 presents the percent of students that reported having in their homes a computer, a study desk or table for their own use, books of their very own (not school books), and a daily newspaper. On average, 86 percent of students reported having books of their own, 78 percent a study desk or table, 58 percent a daily newspaper, and 57 percent a computer. For each of the four items, students reporting having them had higher average reading achievement than those

## Exhibit 4.9: Parents' Reports of Children's Books in the Home

ISC  
4th Grade  
PIRLS 2001

Countries	More than 100 Books		51-100 Books		26-50 Books		11-25 Books		0-10 Books		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	2 (0.5)	~ ~	4 (0.5)	511 (14.2)	12 (1.1)	481 (7.6)	18 (1.3)	455 (6.7)	64 (2.2)	407 (5.9)
Belize	s	3 (0.6)	382 (16.2)	6 (0.7)	384 (12.9)	16 (1.3)	366 (9.4)	28 (1.4)	340 (6.5)	47 (2.1)	304 (5.6)
Bulgaria		8 (0.7)	594 (8.2)	15 (0.9)	594 (4.2)	29 (1.2)	572 (3.5)	23 (1.2)	547 (4.0)	26 (2.0)	502 (8.0)
Canada (O,Q)	r	30 (1.1)	571 (2.8)	30 (0.8)	554 (2.4)	25 (0.8)	539 (2.9)	11 (0.7)	524 (3.8)	3 (0.3)	499 (6.7)
Colombia		1 (0.3)	~ ~	2 (0.2)	~ ~	7 (0.7)	471 (11.7)	18 (1.2)	438 (7.0)	73 (1.7)	417 (4.0)
Cyprus	s	8 (0.7)	525 (8.4)	16 (0.9)	524 (4.8)	31 (1.1)	498 (4.9)	31 (0.9)	478 (3.9)	15 (1.0)	458 (5.4)
Czech Republic		16 (1.0)	566 (4.2)	30 (1.2)	559 (2.6)	37 (1.0)	529 (2.8)	14 (1.1)	510 (4.5)	3 (0.3)	483 (9.2)
England	s	35 (1.6)	597 (4.3)	31 (1.1)	576 (4.6)	23 (1.1)	548 (5.7)	9 (0.8)	542 (7.8)	3 (0.5)	479 (14.6)
France		19 (1.2)	570 (3.6)	25 (0.9)	543 (2.8)	31 (1.0)	515 (2.7)	18 (0.8)	502 (3.1)	7 (0.6)	473 (5.6)
Germany		17 (0.9)	581 (2.7)	26 (0.8)	560 (2.1)	33 (0.8)	538 (1.9)	18 (0.8)	515 (2.9)	7 (0.5)	476 (4.1)
Greece		10 (1.3)	577 (6.0)	17 (1.0)	549 (4.2)	28 (1.4)	538 (4.3)	29 (1.3)	512 (4.5)	17 (1.5)	480 (6.2)
Hong Kong, SAR		3 (0.5)	561 (5.8)	7 (0.5)	543 (4.3)	18 (0.7)	534 (3.1)	28 (0.7)	528 (3.3)	44 (1.4)	525 (3.8)
Hungary		18 (1.0)	582 (3.5)	26 (0.8)	562 (2.9)	29 (0.8)	541 (2.6)	17 (0.7)	520 (2.8)	9 (0.7)	486 (4.2)
Iceland	r	33 (0.8)	535 (2.4)	40 (0.9)	518 (2.1)	23 (0.8)	495 (2.7)	4 (0.4)	485 (6.3)	1 (0.1)	~ ~
Iran, Islamic Rep. of		2 (0.3)	~ ~	4 (0.4)	493 (9.5)	10 (0.7)	463 (6.6)	20 (1.0)	448 (5.1)	64 (1.9)	393 (3.7)
Israel		x x	x x	x x	x x	x x	x x	x x	x x	x x	x x
Italy		5 (0.4)	581 (5.7)	12 (0.7)	576 (3.4)	27 (0.8)	552 (2.9)	32 (0.8)	534 (3.1)	24 (1.0)	517 (3.9)
Kuwait	r	3 (0.3)	417 (10.0)	6 (0.5)	420 (7.7)	20 (0.6)	418 (4.6)	28 (0.8)	408 (4.8)	42 (1.0)	384 (5.9)
Latvia		15 (0.8)	577 (3.5)	23 (0.9)	552 (3.9)	32 (1.1)	546 (2.9)	21 (1.0)	531 (3.5)	8 (0.9)	514 (6.9)
Lithuania		6 (0.6)	576 (6.7)	14 (0.9)	571 (4.4)	28 (1.0)	555 (3.1)	32 (1.3)	538 (2.7)	21 (1.2)	510 (3.9)
Macedonia, Rep. of	r	4 (0.5)	479 (11.9)	8 (0.7)	492 (8.7)	27 (1.2)	474 (5.6)	31 (1.0)	452 (5.4)	30 (1.8)	409 (7.6)
Moldova, Rep. of		2 (0.4)	~ ~	5 (0.6)	538 (10.4)	15 (1.3)	523 (6.9)	27 (1.1)	502 (4.3)	50 (1.8)	472 (4.4)
Morocco		--	--	--	--	--	--	--	--	--	--
Netherlands	s	18 (1.0)	585 (4.0)	30 (1.1)	573 (2.9)	30 (1.1)	558 (2.9)	16 (1.0)	544 (3.5)	5 (0.7)	516 (7.8)
New Zealand	r	34 (1.3)	569 (5.0)	29 (1.3)	542 (5.2)	23 (1.2)	517 (5.1)	9 (0.8)	487 (7.4)	4 (0.6)	468 (9.8)
Norway		30 (1.2)	522 (4.1)	36 (1.0)	506 (3.1)	25 (0.9)	487 (4.6)	7 (0.5)	473 (7.9)	2 (0.4)	~ ~
Romania		3 (0.4)	562 (10.2)	9 (0.8)	561 (5.8)	21 (1.1)	533 (4.7)	27 (1.1)	513 (4.6)	40 (2.0)	488 (7.9)
Russian Federation		12 (0.9)	553 (4.9)	19 (0.8)	543 (4.8)	29 (1.0)	530 (4.0)	23 (0.9)	518 (4.8)	17 (1.4)	506 (9.3)
Scotland	s	28 (1.4)	580 (5.3)	31 (1.4)	545 (4.7)	27 (1.7)	521 (5.6)	11 (0.8)	506 (8.7)	3 (0.5)	487 (7.9)
Singapore		20 (1.0)	583 (4.7)	24 (0.7)	553 (4.2)	30 (0.7)	521 (4.8)	17 (0.8)	491 (5.7)	8 (0.6)	448 (7.7)
Slovak Republic		7 (0.6)	557 (5.2)	19 (0.9)	545 (3.8)	38 (0.9)	527 (2.9)	25 (1.1)	499 (3.2)	11 (1.1)	472 (8.2)
Slovenia		6 (0.5)	539 (4.6)	15 (0.8)	531 (3.7)	31 (0.9)	516 (2.5)	30 (0.8)	490 (2.8)	17 (0.8)	463 (3.8)
Sweden		31 (1.1)	579 (2.4)	34 (0.8)	568 (2.6)	22 (0.7)	551 (2.3)	8 (0.5)	540 (5.3)	4 (0.8)	513 (5.7)
Turkey		2 (0.2)	~ ~	4 (0.4)	510 (10.4)	13 (0.8)	488 (5.8)	26 (1.0)	457 (4.4)	56 (1.8)	434 (3.3)
United States		--	--	--	--	--	--	--	--	--	--
International Avg.		14 (0.2)	552 (1.3)	19 (0.2)	535 (1.1)	25 (0.2)	514 (0.9)	20 (0.2)	495 (0.9)	23 (0.2)	466 (1.4)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

reporting not having them. The biggest achievement difference (54 score points) was between those having and not having books of their own.

The final component of the Index of Home Educational Resources, parents' highest level of education, is presented in detail in Exhibit 4.11. On average, 23 percent of students came from homes where parents reported that one or both of them had finished university, 15 percent where one or both finished post-secondary school but not university, 36 percent where one or both finished upper-secondary school, 17 percent where one or both finished lower-secondary school, and 9 percent where parents finished some primary or lower secondary school, or did not go to school. The average reading achievement difference between students whose parents finished university and those in the lowest educational category was almost 100 score points.

Because educational resources are dependent to a large extent on economic considerations, Exhibits 4.12 through 4.14 present information on parents' employment situations and on fathers' and mothers' occupations. As shown in Exhibit 4.12, about one-third of students internationally (34%) were from homes where both parents were working full-time for pay, almost half (49%) where one but not both were working full-time, and just 7 percent where both parents were working less than full-time. One-tenth of the students were from homes with other situations. Average student 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.

As shown in Exhibits 4.13 and 4.14, parents' responses to a question about the kind of work they did for their main job were grouped into seven categories: professional, small business owner, clerical, skilled, general laborer, never worked outside the home for pay, and not applicable. The distribution of responses for fathers and mothers was similar across several of the categories, including professional, small business owner, and laborer. For example, 25 percent of students had fathers in the professional category and 22 percent had mothers in this category. However, a greater percentage of students had fathers in the skilled category than mothers (34% vs. 8%), and greater percentages had mothers in the clerical category (28% vs. 12%) or who had never worked outside the home for pay (12% vs. 2%). Average student reading

## Exhibit 4.10: Educational Resources in the Home

ISC  
4th Grade  
PIRLS 2001

Countries	Computer				Study Desk/Table			
	Yes		No		Yes		No	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Argentina	r 38 (1.9)	444 (7.6)	62 (1.9)	427 (5.1)	r 37 (1.4)	436 (6.7)	63 (1.4)	432 (5.6)
Belize	26 (1.8)	360 (8.1)	74 (1.8)	317 (5.2)	56 (2.4)	337 (5.4)	44 (2.4)	319 (7.0)
Bulgaria	18 (1.0)	574 (5.6)	82 (1.0)	548 (3.9)	76 (1.7)	562 (3.4)	24 (1.7)	526 (6.6)
Canada (O,Q)	88 (0.5)	549 (2.5)	12 (0.5)	521 (3.4)	78 (0.8)	550 (2.5)	22 (0.8)	532 (3.4)
Colombia	21 (1.3)	443 (9.3)	79 (1.3)	418 (4.1)	54 (1.7)	427 (5.3)	46 (1.7)	420 (4.9)
Cyprus	61 (1.2)	502 (3.6)	39 (1.2)	490 (3.3)	86 (0.8)	502 (2.9)	14 (0.8)	460 (5.0)
Czech Republic	65 (1.4)	544 (2.6)	35 (1.4)	528 (3.0)	91 (0.7)	542 (2.4)	9 (0.7)	503 (4.9)
England	85 (0.8)	558 (3.4)	15 (0.8)	530 (5.4)	89 (0.7)	557 (3.5)	11 (0.7)	525 (5.7)
France	76 (1.0)	532 (2.5)	24 (1.0)	511 (3.1)	85 (0.8)	530 (2.4)	15 (0.8)	507 (4.4)
Germany	85 (0.6)	547 (1.9)	15 (0.6)	515 (3.5)	93 (0.5)	545 (1.8)	7 (0.5)	499 (4.2)
Greece	55 (2.0)	533 (3.7)	45 (2.0)	519 (4.1)	83 (1.0)	533 (3.2)	17 (1.0)	493 (6.0)
Hong Kong, SAR	74 (1.3)	530 (3.0)	26 (1.3)	525 (4.2)	70 (1.0)	529 (3.0)	30 (1.0)	528 (4.2)
Hungary	58 (1.2)	557 (2.6)	42 (1.2)	526 (2.4)	92 (0.5)	546 (2.1)	8 (0.5)	519 (4.1)
Iceland	89 (0.5)	519 (1.2)	11 (0.5)	485 (4.7)	92 (0.5)	519 (1.2)	8 (0.5)	477 (5.2)
Iran, Islamic Rep. of	18 (1.3)	430 (7.7)	82 (1.3)	410 (3.8)	42 (1.9)	446 (5.3)	58 (1.9)	392 (3.6)
Israel	74 (1.1)	529 (3.0)	26 (1.1)	466 (4.4)	91 (0.7)	519 (2.7)	9 (0.7)	450 (8.8)
Italy	80 (0.9)	542 (2.5)	20 (0.9)	541 (3.8)	81 (0.8)	543 (2.3)	19 (0.8)	534 (3.9)
Kuwait	r 64 (1.5)	408 (4.3)	36 (1.5)	389 (6.2)	r 75 (1.0)	408 (4.2)	25 (1.0)	381 (6.4)
Latvia	29 (1.2)	549 (3.3)	71 (1.2)	544 (2.6)	92 (1.1)	548 (2.3)	8 (1.1)	523 (5.8)
Lithuania	30 (1.4)	551 (3.8)	70 (1.4)	542 (2.7)	92 (0.6)	548 (2.4)	8 (0.6)	510 (5.7)
Macedonia, Rep. of	40 (1.6)	450 (6.2)	60 (1.6)	447 (4.2)	84 (0.9)	451 (4.2)	16 (0.9)	429 (8.2)
Moldova, Rep. of	8 (0.8)	482 (8.7)	92 (0.8)	493 (4.1)	82 (1.6)	496 (4.2)	18 (1.6)	472 (6.4)
Morocco	19 (1.5)	338 (10.9)	81 (1.5)	358 (11.4)	42 (2.5)	351 (7.0)	58 (2.5)	358 (14.8)
Netherlands	92 (0.5)	557 (2.5)	8 (0.5)	524 (5.0)	95 (0.5)	556 (2.5)	5 (0.5)	530 (6.4)
New Zealand	81 (1.1)	538 (4.0)	19 (1.1)	509 (6.2)	78 (0.9)	536 (3.8)	22 (0.9)	512 (5.0)
Norway	92 (0.6)	503 (3.0)	8 (0.6)	472 (6.9)	89 (0.8)	505 (2.9)	11 (0.8)	469 (6.0)
Romania	19 (1.4)	535 (5.2)	81 (1.4)	508 (5.0)	77 (1.5)	526 (4.8)	23 (1.5)	471 (6.3)
Russian Federation	23 (0.8)	519 (6.1)	77 (0.8)	531 (4.2)	82 (1.2)	531 (4.2)	18 (1.2)	518 (7.0)
Scotland	76 (1.2)	536 (3.7)	24 (1.2)	508 (4.8)	75 (1.3)	534 (3.5)	25 (1.3)	515 (5.2)
Singapore	84 (0.8)	537 (4.9)	16 (0.8)	486 (6.5)	88 (0.6)	538 (4.5)	12 (0.6)	468 (8.6)
Slovak Republic	45 (1.4)	528 (3.6)	55 (1.4)	511 (3.0)	79 (1.2)	524 (3.0)	21 (1.2)	498 (4.6)
Slovenia	65 (1.2)	512 (2.2)	35 (1.2)	484 (3.3)	94 (0.5)	505 (2.0)	6 (0.5)	463 (7.3)
Sweden	95 (0.5)	563 (2.1)	5 (0.5)	531 (6.5)	93 (0.5)	563 (2.2)	7 (0.5)	544 (5.5)
Turkey	22 (1.8)	467 (6.3)	78 (1.8)	445 (3.3)	57 (1.7)	465 (4.5)	43 (1.7)	431 (3.3)
United States	85 (1.1)	550 (3.5)	15 (1.1)	504 (5.6)	79 (1.2)	549 (3.8)	21 (1.2)	518 (5.1)
International Avg.	57 (0.2)	509 (0.8)	43 (0.2)	488 (0.8)	78 (0.2)	507 (0.6)	22 (0.2)	478 (1.0)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

Exhibit 4.10: Educational Resources in the Home (Continued)

ISC  
4th Grade  
PIRLS 2001

Countries	Books of Your Very Own				Daily Newspaper			
	Yes		No		Yes		No	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Argentina	r 74 (1.3)	443 (6.0)	26 (1.3)	408 (6.4)	r 70 (1.1)	439 (5.9)	30 (1.1)	419 (5.8)
Belize	70 (2.1)	338 (5.9)	30 (2.1)	309 (6.2)	39 (2.2)	341 (7.7)	61 (2.2)	322 (6.1)
Bulgaria	85 (1.4)	561 (3.4)	15 (1.4)	507 (8.8)	41 (1.6)	568 (3.8)	59 (1.6)	543 (4.5)
Canada (O,Q)	95 (0.4)	550 (2.4)	5 (0.4)	481 (4.5)	61 (0.9)	555 (2.8)	39 (0.9)	531 (2.5)
Colombia	74 (1.3)	430 (4.9)	26 (1.3)	405 (4.1)	26 (1.5)	407 (5.2)	74 (1.5)	429 (5.0)
Cyprus	92 (0.6)	501 (2.8)	8 (0.6)	431 (6.9)	45 (1.3)	505 (3.2)	55 (1.3)	488 (3.5)
Czech Republic	95 (0.5)	542 (2.2)	5 (0.5)	467 (6.8)	61 (1.3)	551 (2.5)	39 (1.3)	519 (2.7)
England	96 (0.5)	557 (3.3)	4 (0.5)	463 (7.7)	78 (1.0)	559 (3.5)	22 (1.0)	533 (5.0)
France	89 (0.7)	533 (2.3)	11 (0.7)	480 (4.2)	37 (1.2)	528 (3.4)	63 (1.2)	526 (2.4)
Germany	95 (0.4)	545 (1.8)	5 (0.4)	477 (3.9)	63 (1.0)	555 (1.9)	37 (1.0)	520 (2.7)
Greece	89 (0.9)	533 (3.3)	11 (0.9)	471 (5.8)	30 (1.9)	540 (4.5)	70 (1.9)	521 (3.5)
Hong Kong, SAR	87 (0.6)	533 (2.9)	13 (0.6)	505 (5.0)	55 (1.4)	535 (3.1)	45 (1.4)	522 (3.6)
Hungary	95 (0.5)	548 (2.1)	5 (0.5)	482 (7.2)	61 (1.2)	555 (2.5)	39 (1.2)	527 (2.3)
Iceland	94 (0.4)	519 (1.2)	6 (0.4)	449 (5.9)	80 (0.8)	523 (1.4)	20 (0.8)	486 (3.0)
Iran, Islamic Rep. of	69 (2.2)	437 (4.4)	31 (2.2)	366 (4.1)	64 (2.4)	434 (3.9)	36 (2.4)	381 (5.6)
Israel	86 (0.7)	519 (3.0)	14 (0.7)	472 (4.8)	66 (1.0)	520 (2.7)	34 (1.0)	497 (4.4)
Italy	82 (0.7)	547 (2.3)	18 (0.7)	516 (4.4)	55 (1.1)	554 (2.6)	45 (1.1)	526 (3.1)
Kuwait	r 70 (1.5)	408 (3.9)	30 (1.5)	386 (7.0)	r 68 (1.3)	405 (4.2)	32 (1.3)	394 (5.7)
Latvia	94 (0.8)	549 (2.2)	6 (0.8)	491 (5.5)	66 (1.3)	555 (2.2)	34 (1.3)	527 (2.7)
Lithuania	92 (0.7)	548 (2.4)	8 (0.7)	500 (5.6)	66 (1.2)	551 (2.8)	34 (1.2)	531 (3.1)
Macedonia, Rep. of	82 (1.3)	458 (4.5)	18 (1.3)	406 (8.3)	60 (1.6)	454 (4.5)	40 (1.6)	439 (5.7)
Moldova, Rep. of	82 (1.4)	499 (4.0)	18 (1.4)	463 (6.6)	49 (2.3)	506 (4.6)	51 (2.3)	479 (4.2)
Morocco	54 (2.4)	351 (7.6)	46 (2.4)	360 (16.6)	23 (1.7)	344 (11.4)	77 (1.7)	359 (11.0)
Netherlands	93 (0.6)	559 (2.4)	7 (0.6)	503 (4.7)	68 (1.3)	562 (2.3)	32 (1.3)	538 (3.1)
New Zealand	93 (0.8)	538 (3.2)	7 (0.8)	455 (9.0)	77 (1.2)	540 (3.4)	23 (1.2)	501 (6.7)
Norway	93 (0.7)	505 (2.8)	7 (0.7)	434 (6.2)	78 (1.1)	509 (3.0)	22 (1.1)	472 (3.9)
Romania	83 (1.3)	523 (4.6)	17 (1.3)	467 (8.6)	32 (1.7)	515 (6.1)	68 (1.7)	512 (4.5)
Russian Federation	89 (0.7)	533 (4.2)	11 (0.7)	494 (7.7)	51 (1.3)	532 (5.1)	49 (1.3)	525 (4.3)
Scotland	92 (0.6)	535 (3.5)	8 (0.6)	457 (8.1)	70 (1.4)	535 (3.9)	30 (1.4)	516 (5.1)
Singapore	89 (0.7)	540 (4.3)	11 (0.7)	444 (8.8)	81 (0.8)	541 (4.6)	19 (0.8)	478 (6.7)
Slovak Republic	93 (0.9)	523 (2.7)	7 (0.9)	456 (9.6)	57 (1.6)	529 (3.1)	43 (1.6)	506 (3.3)
Slovenia	87 (0.8)	508 (2.0)	13 (0.8)	460 (6.4)	64 (1.4)	511 (2.2)	36 (1.4)	486 (3.2)
Sweden	93 (0.7)	563 (2.2)	7 (0.7)	537 (6.4)	88 (0.8)	564 (2.1)	12 (0.8)	542 (4.9)
Turkey	71 (1.4)	465 (3.9)	29 (1.4)	414 (4.8)	44 (2.1)	461 (4.7)	56 (2.1)	442 (3.7)
United States	92 (0.9)	549 (3.5)	8 (0.9)	469 (6.3)	62 (1.6)	554 (3.8)	38 (1.6)	524 (4.3)
International Avg.	86 (0.2)	508 (0.6)	14 (0.2)	454 (1.2)	58 (0.2)	510 (0.7)	42 (0.2)	487 (0.8)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

**Exhibit 4.11: Highest Level of Education of Either Parent**ISC  
4th Grade  
PIRLS 2001

Countries	Finished University or Higher		Finished Post-Secondary School but Not University		Finished Upper-Secondary School		Finished Lower-Secondary School		Finished Some Primary or Lower-Secondary or Did Not Go to School		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	14 (1.7)	501 (8.9)	0 (0.0)	~ ~	24 (1.6)	451 (6.5)	20 (1.4)	419 (7.3)	42 (2.7)	402 (5.8)
Belize	s	10 (1.2)	390 (11.6)	9 (1.0)	385 (13.1)	15 (1.2)	366 (10.2)	47 (2.0)	311 (6.2)	19 (1.7)	291 (7.5)
Bulgaria		24 (1.4)	595 (4.0)	6 (0.4)	577 (6.1)	53 (1.9)	550 (3.3)	13 (1.5)	500 (11.4)	3 (0.9)	473 (18.9)
Canada (O,Q)	r	32 (1.4)	578 (2.5)	37 (0.9)	549 (2.7)	26 (0.9)	528 (2.3)	3 (0.3)	508 (9.0)	2 (0.2)	~ ~
Colombia	r	16 (2.0)	462 (14.2)	4 (0.5)	453 (10.7)	14 (0.9)	443 (5.6)	14 (0.9)	428 (6.7)	51 (1.7)	403 (3.8)
Cyprus	s	38 (1.8)	518 (4.2)	0 (0.0)	~ ~	45 (1.3)	485 (4.2)	12 (0.9)	458 (5.9)	5 (0.5)	451 (7.7)
Czech Republic		22 (1.4)	569 (3.4)	7 (0.6)	554 (5.9)	66 (1.6)	532 (2.5)	4 (0.5)	499 (11.0)	0 (0.0)	~ ~
England	s	36 (1.8)	603 (6.1)	3 (0.5)	577 (15.8)	17 (1.0)	568 (6.0)	35 (1.7)	558 (4.5)	8 (0.8)	514 (9.1)
France	r	23 (1.7)	571 (3.0)	16 (0.9)	548 (3.8)	20 (0.9)	530 (3.1)	31 (1.4)	505 (2.8)	9 (0.7)	498 (5.0)
Germany	s	27 (1.2)	575 (2.2)	36 (1.2)	542 (2.4)	23 (0.6)	546 (2.5)	12 (0.6)	501 (4.7)	2 (0.3)	~ ~
Greece	r	23 (1.9)	572 (3.4)	22 (1.0)	535 (5.1)	28 (1.3)	521 (3.9)	17 (1.4)	494 (4.9)	10 (1.4)	483 (8.3)
Hong Kong, SAR		12 (1.0)	540 (4.0)	7 (0.5)	539 (5.2)	30 (1.0)	533 (2.8)	27 (0.8)	530 (3.6)	23 (1.0)	519 (4.8)
Hungary		30 (1.4)	582 (2.9)	3 (0.3)	545 (5.9)	57 (1.1)	538 (2.0)	8 (0.6)	492 (3.8)	1 (0.2)	~ ~
Iceland	r	33 (0.8)	544 (2.1)	10 (0.5)	520 (4.0)	42 (0.8)	506 (2.2)	13 (0.6)	484 (4.3)	2 (0.2)	~ ~
Iran, Islamic Rep. of		6 (0.6)	503 (6.0)	5 (0.5)	484 (7.2)	25 (1.5)	457 (4.6)	17 (1.0)	421 (4.2)	47 (2.2)	376 (3.9)
Israel		x x	x x	x x	x x	x x	x x	x x	x x	x x	x x
Italy		18 (1.0)	569 (3.5)	4 (0.3)	540 (7.8)	46 (1.1)	550 (2.4)	30 (1.1)	520 (3.4)	3 (0.4)	499 (10.0)
Kuwait		--	--	--	--	--	--	--	--	--	--
Latvia		26 (1.2)	577 (3.4)	34 (1.0)	546 (2.9)	35 (1.2)	532 (3.5)	5 (0.5)	505 (7.8)	0 (0.1)	~ ~
Lithuania		29 (1.8)	572 (3.6)	30 (1.1)	547 (3.5)	40 (1.6)	524 (3.4)	1 (0.2)	~ ~	0 (0.1)	~ ~
Macedonia, Rep. of	s	11 (1.0)	487 (7.3)	14 (1.5)	524 (6.5)	26 (1.4)	468 (5.7)	26 (1.2)	466 (6.9)	23 (1.6)	397 (7.4)
Moldova, Rep. of		19 (1.6)	532 (5.3)	10 (0.9)	503 (5.0)	64 (1.7)	484 (4.4)	4 (0.6)	465 (12.7)	3 (0.5)	469 (11.0)
Morocco		--	--	--	--	--	--	--	--	--	--
Netherlands	s	12 (0.9)	592 (4.6)	28 (1.1)	580 (2.9)	14 (0.8)	570 (4.0)	45 (1.7)	544 (2.8)	1 (0.3)	~ ~
New Zealand	r	37 (1.4)	571 (4.3)	22 (1.1)	543 (5.1)	34 (1.3)	514 (4.4)	4 (0.5)	474 (10.9)	3 (0.4)	487 (13.6)
Norway		53 (1.7)	522 (3.8)	0 (0.0)	~ ~	44 (1.6)	484 (3.3)	3 (0.4)	442 (10.4)	0 (0.1)	~ ~
Romania		11 (1.6)	576 (4.9)	5 (0.4)	545 (9.2)	64 (1.6)	514 (4.5)	15 (1.4)	483 (10.3)	4 (0.7)	474 (14.6)
<sup>a</sup> Russian Federation		27 (1.3)	549 (4.5)	42 (1.0)	525 (4.4)	27 (1.0)	515 (6.1)	4 (0.5)	502 (9.5)	0 (0.1)	~ ~
Scotland	s	27 (1.8)	581 (6.1)	29 (1.4)	540 (5.9)	19 (1.1)	536 (6.0)	19 (1.2)	525 (5.4)	6 (0.8)	478 (9.9)
Singapore		20 (1.2)	590 (5.2)	21 (0.6)	552 (4.4)	45 (0.9)	520 (5.1)	0 (0.0)	~ ~	14 (0.8)	470 (7.0)
Slovak Republic		19 (1.2)	556 (3.8)	6 (0.4)	544 (5.4)	69 (1.4)	516 (2.5)	4 (0.8)	465 (17.2)	1 (0.3)	~ ~
Slovenia		25 (1.1)	537 (2.9)	0 (0.0)	~ ~	65 (1.1)	498 (2.1)	9 (0.6)	460 (5.3)	1 (0.2)	~ ~
Sweden		35 (1.4)	583 (2.6)	23 (0.6)	564 (2.8)	36 (1.2)	552 (2.6)	6 (0.5)	525 (4.6)	0 (0.1)	~ ~
<sup>b</sup> Turkey		12 (1.3)	512 (7.0)	23 (1.1)	474 (4.5)	0 (0.0)	~ ~	65 (2.0)	437 (3.5)	0 (0.0)	~ ~
United States		--	--	--	--	--	--	--	--	--	--
International Avg.		23 (0.3)	549 (1.0)	15 (0.1)	531 (1.2)	36 (0.2)	511 (0.8)	17 (0.2)	480 (1.5)	9 (0.2)	452 (4.4)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

Background data provided by parents.

- a For the Russian Federation, Finished Upper-Secondary School includes those who received initial vocational training on the basis of lower-secondary school.
- b For Turkey, Finished Lower-Secondary School includes those who finished some primary or lower-secondary or did not go to school. Finished Post-Secondary School but Not University includes those who finished upper-secondary school.
- ( ) 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 data are not available. A tilde (~) indicates insufficient data to report achievement.



Exhibit 4.12: Parents' Employment Situations

ISC  
4th Grade  
PIRLS 2001

Countries	Both Working Full-Time for Pay		One, but Not Both, Working Full-Time for Pay		Both Working 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
Argentina	x x	x x	x x	x x	x x	x x	x x	x x
Belize s	21 (1.7)	385 (8.6)	57 (1.6)	328 (6.0)	5 (0.6)	285 (14.1)	17 (1.1)	305 (8.8)
Bulgaria	41 (1.5)	579 (3.4)	33 (1.0)	556 (3.9)	22 (1.5)	512 (7.4)	4 (0.6)	541 (8.6)
Canada (O,Q) r	50 (1.0)	553 (2.4)	45 (1.0)	552 (2.6)	1 (0.2)	~ ~	3 (0.3)	524 (6.6)
Colombia s	15 (1.2)	445 (8.0)	51 (2.2)	437 (5.3)	15 (1.4)	419 (6.3)	19 (2.8)	412 (6.0)
Cyprus s	43 (1.9)	508 (4.2)	46 (1.7)	490 (4.2)	3 (0.4)	456 (9.0)	7 (0.6)	492 (6.2)
Czech Republic r	60 (1.3)	543 (2.7)	34 (1.2)	544 (3.0)	2 (0.3)	~ ~	5 (0.5)	536 (9.0)
England s	26 (1.4)	579 (4.3)	65 (1.4)	578 (4.5)	2 (0.4)	~ ~	6 (0.6)	516 (10.7)
France r	37 (1.0)	531 (2.6)	54 (1.1)	533 (3.0)	2 (0.3)	~ ~	7 (0.6)	515 (6.2)
Germany r	16 (0.6)	540 (2.3)	73 (0.7)	550 (1.9)	1 (0.2)	~ ~	10 (0.5)	526 (4.4)
Greece r	40 (2.4)	546 (4.2)	48 (1.6)	520 (4.0)	6 (1.0)	492 (14.0)	5 (0.9)	530 (6.9)
Hong Kong, SAR r	29 (1.2)	535 (2.6)	55 (0.9)	531 (3.4)	4 (0.4)	524 (5.7)	12 (0.7)	529 (4.2)
Hungary	53 (1.0)	556 (2.5)	38 (0.9)	547 (2.9)	3 (0.3)	505 (6.5)	6 (0.4)	518 (5.5)
Iceland r	48 (0.8)	522 (2.1)	49 (0.8)	515 (2.1)	1 (0.2)	~ ~	2 (0.3)	~ ~
Iran, Islamic Rep. of s	8 (1.2)	414 (12.7)	50 (1.9)	438 (5.2)	7 (0.8)	405 (10.3)	34 (2.0)	399 (6.7)
Israel	x x	x x	x x	x x	x x	x x	x x	x x
Italy	32 (1.1)	558 (3.0)	54 (1.1)	543 (2.5)	4 (0.4)	514 (6.1)	10 (0.6)	533 (4.6)
Kuwait s	16 (0.9)	422 (6.2)	50 (1.0)	402 (4.8)	16 (0.8)	413 (5.7)	18 (1.1)	384 (6.3)
Latvia	37 (1.0)	560 (3.5)	47 (1.0)	546 (2.6)	7 (0.9)	517 (5.7)	10 (0.8)	546 (5.6)
Lithuania	36 (1.5)	559 (3.0)	42 (1.3)	547 (3.0)	9 (0.7)	517 (6.8)	13 (0.9)	528 (5.3)
Macedonia, Rep. of s	29 (1.8)	503 (5.1)	35 (1.7)	454 (5.8)	25 (1.8)	441 (8.8)	12 (1.7)	456 (8.4)
Moldova, Rep. of r	16 (1.3)	517 (7.1)	28 (1.2)	508 (5.4)	45 (1.9)	481 (4.1)	12 (1.1)	492 (6.8)
Morocco	--	--	--	--	--	--	--	--
Netherlands s	6 (0.5)	549 (7.4)	83 (0.8)	566 (2.4)	4 (0.5)	580 (5.9)	8 (0.6)	551 (3.9)
New Zealand r	29 (1.4)	538 (4.0)	62 (1.4)	548 (3.5)	3 (0.5)	504 (11.1)	7 (0.5)	507 (9.6)
Norway	42 (1.2)	511 (3.1)	53 (1.3)	501 (3.5)	1 (0.2)	~ ~	4 (0.5)	497 (8.8)
Romania r	32 (1.5)	538 (5.4)	36 (1.7)	523 (5.1)	18 (1.3)	483 (8.5)	14 (1.3)	500 (10.7)
Russian Federation	45 (1.4)	534 (4.3)	45 (1.1)	528 (4.3)	6 (0.8)	508 (9.8)	5 (0.4)	525 (8.6)
Scotland s	31 (1.3)	548 (4.0)	61 (1.4)	550 (4.2)	2 (0.3)	~ ~	7 (0.9)	501 (12.0)
Singapore	35 (0.9)	552 (4.6)	58 (0.8)	528 (5.2)	1 (0.1)	~ ~	6 (0.3)	506 (6.4)
Slovak Republic	58 (1.1)	533 (3.2)	31 (1.1)	519 (2.9)	7 (0.8)	480 (8.6)	4 (0.4)	491 (11.0)
Slovenia	70 (0.9)	512 (2.0)	26 (0.9)	489 (3.3)	2 (0.3)	~ ~	2 (0.3)	~ ~
Sweden	42 (1.0)	569 (2.5)	53 (1.0)	565 (2.3)	2 (0.3)	~ ~	3 (0.3)	545 (7.3)
Turkey r	8 (0.7)	487 (8.7)	52 (1.7)	459 (3.9)	4 (0.5)	435 (8.1)	36 (1.7)	451 (5.3)
United States	--	--	--	--	--	--	--	--
International Avg.	34 (0.2)	523 (0.9)	49 (0.2)	513 (0.7)	7 (0.1)	474 (2.0)	10 (0.2)	495 (1.4)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

**Exhibit 4.13: Fathers' Occupation\***ISC  
4th Grade  
PIRLS 2001

Countries	Professional		Small Business Owner		Clerical		Skilled	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Argentina	x x	x x	x x	x x	x x	x x	x x	x x
Belize s	14 (1.3)	398 (11.0)	10 (1.0)	352 (9.5)	7 (0.9)	363 (11.9)	32 (2.1)	325 (7.9)
Bulgaria	17 (1.1)	594 (5.1)	12 (0.6)	567 (4.8)	5 (0.5)	572 (9.0)	36 (1.4)	550 (3.8)
Canada (O,Q) r	36 (1.3)	575 (3.0)	12 (0.6)	549 (3.6)	8 (0.5)	554 (4.5)	32 (1.0)	539 (2.3)
Colombia s	13 (1.8)	467 (15.8)	11 (0.8)	443 (8.3)	11 (0.9)	443 (5.9)	27 (1.6)	428 (5.4)
Cyprus s	21 (1.3)	519 (5.3)	17 (1.0)	512 (6.2)	18 (1.0)	494 (5.9)	35 (1.5)	479 (4.5)
Czech Republic r	26 (1.5)	570 (3.5)	11 (0.7)	550 (4.3)	7 (0.5)	539 (6.6)	43 (1.7)	527 (3.0)
England s	40 (1.9)	597 (5.7)	10 (0.8)	568 (8.2)	10 (0.9)	575 (7.0)	28 (1.4)	561 (5.0)
France r	35 (1.8)	560 (3.3)	9 (0.7)	532 (4.7)	10 (0.7)	520 (4.9)	30 (1.6)	512 (3.3)
Germany r	25 (1.1)	576 (2.5)	10 (0.4)	551 (3.7)	18 (0.6)	553 (3.2)	36 (1.1)	527 (2.3)
Greece r	21 (1.6)	567 (3.6)	17 (1.3)	540 (5.4)	19 (1.0)	530 (6.0)	36 (1.9)	503 (4.0)
Hong Kong, SAR	18 (1.2)	539 (3.7)	13 (0.8)	534 (4.2)	12 (0.6)	527 (3.6)	33 (1.2)	532 (3.5)
Hungary	20 (1.1)	583 (3.6)	13 (0.7)	560 (3.5)	14 (0.8)	545 (3.7)	36 (1.2)	537 (2.6)
Iceland r	33 (0.9)	540 (2.3)	12 (0.6)	508 (4.4)	8 (0.5)	514 (4.5)	36 (0.9)	505 (2.4)
Iran, Islamic Rep. of r	10 (0.9)	478 (6.6)	6 (0.6)	442 (6.9)	20 (1.2)	459 (5.5)	31 (1.7)	400 (4.9)
Israel	x x	x x	x x	x x	x x	x x	x x	x x
Italy	20 (0.9)	569 (3.0)	12 (0.7)	546 (5.5)	24 (0.9)	550 (3.7)	37 (1.4)	530 (2.7)
Kuwait s	38 (1.2)	416 (5.4)	8 (0.4)	396 (5.3)	12 (0.5)	394 (6.1)	3 (0.3)	415 (10.7)
Latvia r	15 (0.8)	578 (3.7)	7 (0.7)	556 (5.4)	7 (0.6)	561 (4.5)	40 (1.0)	542 (3.5)
Lithuania r	17 (1.3)	572 (4.8)	9 (0.7)	562 (5.3)	12 (0.7)	557 (4.1)	41 (1.3)	536 (4.0)
Macedonia, Rep. of s	17 (1.4)	514 (6.9)	7 (0.8)	452 (10.3)	19 (1.2)	478 (7.2)	31 (1.6)	454 (6.3)
Moldova, Rep. of	12 (1.2)	517 (7.7)	3 (0.4)	513 (11.9)	6 (0.6)	520 (8.7)	41 (1.4)	487 (4.3)
Morocco	--	--	--	--	--	--	--	--
Netherlands s	42 (1.8)	582 (2.8)	12 (0.8)	559 (4.2)	13 (0.7)	559 (4.4)	25 (1.2)	546 (4.7)
New Zealand r	31 (1.2)	571 (4.8)	15 (1.0)	562 (5.8)	7 (0.7)	540 (6.7)	33 (1.4)	529 (4.6)
Norway r	38 (1.5)	527 (3.8)	11 (0.6)	499 (6.1)	9 (0.6)	503 (6.6)	32 (1.4)	488 (3.0)
Romania r	15 (1.4)	533 (8.4)	5 (0.4)	540 (6.7)	15 (1.1)	529 (8.7)	55 (2.0)	509 (5.0)
Russian Federation r	21 (1.1)	545 (5.0)	4 (0.4)	550 (5.8)	9 (0.6)	523 (4.7)	50 (1.5)	525 (4.8)
Scotland s	40 (1.8)	574 (5.1)	9 (0.8)	546 (6.7)	8 (0.6)	545 (10.0)	30 (1.5)	528 (4.3)
Singapore	39 (1.3)	570 (4.3)	16 (0.6)	546 (4.3)	15 (0.6)	521 (5.4)	18 (0.8)	503 (6.7)
Slovak Republic	21 (1.1)	552 (4.1)	12 (0.6)	531 (4.7)	7 (0.5)	528 (5.1)	46 (1.3)	515 (3.0)
Slovenia	25 (1.1)	532 (3.6)	10 (0.6)	510 (6.2)	16 (0.9)	500 (4.2)	37 (1.0)	494 (2.9)
Sweden r	37 (1.5)	583 (2.3)	15 (0.7)	559 (3.5)	10 (0.6)	562 (3.5)	31 (1.5)	552 (2.9)
Turkey r	10 (1.2)	505 (8.6)	17 (0.9)	463 (5.4)	15 (1.1)	468 (4.7)	27 (1.8)	445 (6.4)
United States	--	--	--	--	--	--	--	--
International Avg.	25 (0.2)	542 (1.0)	11 (0.1)	519 (1.1)	12 (0.1)	517 (1.2)	34 (0.3)	501 (0.8)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

\*Based on parents' responses to the following: What kind of work does the child's father/stepfather/male guardian do for their main job? a) Has never worked outside the home for pay; b) Small business owner; c) Clerk; d) Service or sales worker; e) Skilled agricultural or fishery worker; f) Craft or trade worker; g) Plant or machine operator; h) General laborer; i) Corporate

manager or senior official; j) Professional; k) Technician or associate professional; l) not applicable. Some categories were combined so that Professional includes options i through k, Clerical includes options c and d, and Skilled includes options e through g.

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

Exhibit 4.13: Fathers' Occupation (Continued)

ISC  
4th Grade  
PIRLS 2001

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
Argentina	x x	x x	x x	x x	x x	x x
Belize s	19 (1.7)	293 (8.2)	10 (1.2)	296 (10.4)	6 (0.8)	312 (12.8)
Bulgaria	12 (1.5)	499 (11.7)	4 (0.6)	506 (14.3)	13 (0.9)	561 (5.6)
Canada (O,Q) r	6 (0.5)	528 (6.4)	0 (0.1)	~ ~	6 (0.4)	529 (4.7)
Colombia s	16 (1.8)	409 (7.3)	13 (1.7)	394 (9.7)	9 (1.3)	411 (9.4)
Cyprus s	3 (0.6)	471 (11.9)	1 (0.2)	~ ~	5 (0.6)	486 (9.1)
Czech Republic r	3 (0.5)	528 (15.8)	1 (0.2)	~ ~	9 (0.7)	533 (5.6)
England s	5 (0.6)	538 (10.7)	0 (0.2)	~ ~	6 (0.7)	533 (10.2)
France r	3 (0.4)	499 (7.3)	1 (0.2)	~ ~	12 (0.7)	518 (3.6)
Germany r	2 (0.2)	~ ~	0 (0.1)	~ ~	9 (0.5)	533 (4.0)
Greece r	5 (0.6)	517 (14.9)	1 (0.4)	~ ~	1 (0.3)	~ ~
Hong Kong, SAR	13 (0.7)	528 (5.1)	2 (0.3)	~ ~	9 (0.5)	527 (4.5)
Hungary	7 (0.7)	497 (6.5)	1 (0.2)	~ ~	10 (0.6)	536 (4.3)
Iceland r	5 (0.4)	489 (7.3)	0 (0.1)	~ ~	6 (0.4)	512 (8.4)
Iran, Islamic Rep. of r	20 (1.6)	385 (7.0)	3 (0.4)	371 (14.5)	9 (0.9)	411 (8.1)
Israel	x x	x x	x x	x x	x x	x x
Italy	3 (0.3)	506 (9.1)	1 (0.2)	~ ~	3 (0.3)	534 (6.0)
Kuwait s	0 (0.1)	~ ~	10 (0.6)	383 (7.8)	29 (0.8)	397 (4.3)
Latvia r	13 (1.0)	531 (4.9)	0 (0.1)	~ ~	17 (1.0)	544 (4.5)
Lithuania r	11 (0.7)	529 (5.3)	1 (0.2)	~ ~	10 (0.6)	544 (5.8)
Macedonia, Rep. of s	11 (1.0)	446 (8.4)	8 (1.2)	399 (13.6)	7 (1.5)	493 (9.5)
Moldova, Rep. of	21 (1.7)	485 (6.6)	1 (0.2)	~ ~	15 (1.5)	491 (6.0)
Morocco	--	--	--	--	--	--
Netherlands s	3 (0.6)	547 (6.9)	0 (0.1)	~ ~	5 (0.5)	554 (6.4)
New Zealand r	6 (0.6)	503 (8.6)	1 (0.2)	~ ~	7 (0.6)	505 (14.9)
Norway r	4 (0.5)	467 (10.3)	1 (0.2)	~ ~	4 (0.5)	494 (9.7)
Romania r	2 (0.3)	~ ~	8 (0.7)	486 (12.8)	1 (0.6)	~ ~
Russian Federation r	6 (0.8)	514 (9.2)	1 (0.3)	~ ~	9 (0.7)	531 (7.5)
Scotland s	8 (0.8)	506 (8.4)	0 (0.1)	~ ~	6 (0.8)	508 (7.3)
Singapore	4 (0.3)	457 (8.3)	1 (0.1)	~ ~	7 (0.4)	506 (8.6)
Slovak Republic	5 (0.9)	475 (14.9)	1 (0.2)	~ ~	8 (0.6)	501 (7.0)
Slovenia	3 (0.4)	482 (8.9)	1 (0.2)	~ ~	8 (0.6)	496 (6.2)
Sweden r	4 (0.4)	558 (7.1)	0 (0.1)	~ ~	3 (0.3)	561 (9.6)
Turkey r	10 (1.0)	437 (6.0)	5 (0.5)	409 (7.8)	15 (0.9)	441 (4.8)
United States	--	--	--	--	--	--
International Avg.	8 (0.2)	487 (1.9)	2 (0.1)	~ ~	8 (0.1)	500 (1.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

**Exhibit 4.14: Mothers' Occupation\***ISC  
4th Grade  
PIRLS 2001

Countries	Professional		Small Business Owner		Clerical		Skilled	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Argentina	x x	x x	x x	x x	x x	x x	x x	x x
Belize s	9 (1.2)	399 (11.7)	9 (1.1)	357 (13.4)	15 (1.9)	374 (11.3)	3 (0.4)	323 (22.0)
Bulgaria	27 (1.2)	592 (3.9)	9 (0.7)	559 (5.9)	19 (1.0)	563 (4.6)	10 (0.7)	543 (5.9)
Canada (O,Q) r	35 (1.1)	571 (2.6)	7 (0.4)	549 (5.2)	34 (0.7)	549 (2.5)	7 (0.6)	529 (5.7)
Colombia s	10 (1.5)	464 (16.7)	8 (0.7)	449 (10.9)	16 (1.1)	451 (6.1)	7 (0.8)	442 (9.1)
Cyprus s	15 (1.1)	533 (5.6)	9 (0.6)	503 (6.4)	36 (1.4)	496 (4.6)	4 (0.5)	458 (12.6)
Czech Republic r	26 (1.4)	565 (3.7)	5 (0.6)	551 (7.0)	34 (1.1)	542 (3.0)	9 (0.9)	519 (5.6)
England s	36 (1.7)	598 (3.9)	4 (0.5)	575 (12.3)	34 (1.3)	570 (4.2)	4 (0.6)	545 (15.3)
France r	25 (1.3)	563 (3.2)	5 (0.6)	536 (6.9)	31 (1.0)	529 (2.7)	7 (0.6)	507 (5.3)
Germany r	10 (0.7)	580 (3.4)	5 (0.4)	543 (5.4)	53 (0.9)	552 (2.0)	6 (0.4)	529 (4.9)
Greece r	18 (1.5)	569 (4.2)	10 (1.0)	531 (6.9)	25 (1.4)	539 (6.6)	12 (1.4)	499 (9.6)
Hong Kong, SAR r	11 (0.9)	536 (4.1)	5 (0.4)	539 (6.6)	28 (0.9)	534 (2.9)	4 (0.4)	536 (6.9)
Hungary	22 (1.2)	579 (3.9)	6 (0.4)	558 (4.2)	34 (1.0)	552 (2.8)	8 (0.6)	528 (5.1)
Iceland r	34 (0.9)	542 (2.5)	7 (0.5)	501 (6.7)	32 (0.9)	510 (2.1)	6 (0.5)	511 (5.9)
Iran, Islamic Rep. of s	4 (0.4)	490 (8.7)	2 (0.2)	~ ~	3 (0.4)	486 (10.2)	4 (0.8)	387 (16.4)
Israel	x x	x x	x x	x x	x x	x x	x x	x x
Italy r	16 (0.9)	567 (4.2)	8 (0.6)	549 (6.3)	28 (1.2)	562 (2.5)	11 (0.8)	534 (4.5)
Kuwait s	17 (1.3)	424 (6.2)	1 (0.1)	~ ~	8 (0.6)	401 (9.3)	0 (0.1)	~ ~
Latvia	24 (1.2)	566 (3.0)	4 (0.5)	546 (6.5)	29 (1.1)	553 (3.3)	6 (0.5)	537 (5.8)
Lithuania	21 (1.4)	564 (4.2)	4 (0.4)	551 (5.7)	36 (0.9)	552 (3.4)	10 (0.8)	533 (6.4)
Macedonia, Rep. of s	14 (1.2)	524 (5.7)	3 (0.5)	487 (12.5)	23 (1.6)	502 (5.0)	11 (1.1)	472 (9.4)
Moldova, Rep. of	21 (1.4)	524 (6.3)	3 (0.3)	519 (9.1)	18 (1.0)	508 (5.0)	14 (1.0)	467 (6.4)
Morocco	--	--	--	--	--	--	--	--
Netherlands s	20 (1.1)	583 (3.3)	6 (0.6)	554 (5.4)	50 (1.3)	565 (3.1)	4 (0.5)	531 (8.1)
New Zealand r	35 (1.5)	568 (4.2)	10 (0.9)	552 (7.2)	28 (1.3)	535 (5.3)	6 (0.7)	527 (8.9)
Norway	41 (1.5)	525 (3.6)	4 (0.4)	503 (9.0)	28 (1.1)	497 (4.1)	9 (0.8)	483 (6.0)
Romania r	22 (1.6)	530 (7.6)	4 (0.5)	540 (7.1)	23 (1.2)	528 (5.4)	31 (1.9)	498 (5.7)
Russian Federation	29 (1.1)	541 (5.5)	2 (0.3)	~ ~	35 (1.5)	530 (4.3)	11 (1.0)	516 (7.3)
Scotland s	32 (1.3)	573 (4.6)	4 (0.5)	561 (9.9)	36 (1.2)	539 (5.0)	6 (0.7)	510 (12.3)
Singapore r	23 (1.2)	584 (4.5)	7 (0.3)	539 (5.5)	30 (0.7)	541 (4.5)	9 (0.6)	501 (7.6)
Slovak Republic	24 (1.1)	547 (4.1)	6 (0.4)	522 (6.4)	33 (1.1)	530 (2.6)	17 (1.1)	507 (3.9)
Slovenia	27 (1.2)	533 (2.9)	5 (0.4)	513 (6.2)	41 (1.0)	502 (2.5)	9 (0.8)	488 (5.3)
Sweden	41 (1.5)	580 (2.6)	6 (0.4)	578 (5.5)	38 (1.1)	559 (2.1)	7 (0.8)	542 (5.0)
Turkey r	4 (0.6)	530 (11.5)	3 (0.5)	438 (13.2)	5 (0.6)	496 (8.3)	3 (0.4)	449 (11.0)
United States	--	--	--	--	--	--	--	--
International Avg.	22 (0.2)	543 (1.1)	5 (0.1)	525 (1.6)	28 (0.2)	521 (0.9)	8 (0.1)	498 (1.8)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

\*Based on parents' responses to the following: What kind of work does the child's mother/stepmother/female guardian do for their main job? a) Has never worked outside the home for pay; b) Small business owner; c) Clerk; d) Service or sales worker; e) Skilled agricultural or fishery worker; f) Craft or trade worker; g) Plant or machine operator; h) General laborer; i) Corporate

manager or senior official; j) Professional; k) Technician or associate professional; l) not applicable. Some categories were combined so that Professional includes options i through k, Clerical includes options c and d, and Skilled includes options e through g.

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

Exhibit 4.14: Mothers' Occupation\* (Continued)

ISC  
4th Grade  
PIRLS 2001

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
Argentina	x x	x x	x x	x x	x x	x x
Belize s	15 (1.6)	310 (9.7)	35 (2.4)	306 (7.1)	14 (1.4)	301 (7.8)
Bulgaria	14 (1.6)	509 (10.4)	7 (0.8)	499 (11.0)	15 (0.9)	553 (5.1)
Canada (O,Q) r	5 (0.5)	533 (5.9)	2 (0.2)	~ ~	10 (0.5)	533 (4.2)
Colombia s	15 (1.6)	414 (7.5)	34 (2.0)	411 (5.3)	10 (1.5)	412 (7.4)
Cyprus s	7 (0.8)	471 (7.4)	6 (0.7)	481 (9.6)	23 (1.1)	486 (5.0)
Czech Republic r	10 (0.9)	519 (8.8)	1 (0.3)	~ ~	14 (0.9)	531 (4.6)
England s	6 (0.7)	552 (9.9)	4 (0.5)	515 (13.5)	13 (0.8)	556 (8.4)
France r	9 (0.7)	502 (6.4)	3 (0.4)	506 (10.2)	20 (0.9)	515 (3.8)
Germany r	6 (0.5)	518 (4.3)	3 (0.4)	507 (9.1)	17 (0.7)	536 (3.4)
Greece r	9 (0.9)	506 (6.5)	10 (1.0)	515 (7.5)	16 (1.0)	518 (5.6)
Hong Kong, SAR r	9 (0.5)	529 (4.9)	24 (1.0)	527 (3.9)	20 (1.0)	537 (4.2)
Hungary	13 (0.8)	509 (4.0)	1 (0.2)	~ ~	17 (1.0)	537 (3.4)
Iceland r	10 (0.6)	489 (5.1)	1 (0.1)	~ ~	10 (0.5)	497 (5.0)
Iran, Islamic Rep. of s	7 (1.5)	367 (16.8)	45 (2.8)	413 (6.8)	35 (2.1)	418 (5.2)
Israel	x x	x x	x x	x x	x x	x x
Italy r	8 (0.5)	522 (6.2)	18 (0.9)	527 (4.6)	11 (0.7)	539 (5.2)
Kuwait s	0 (0.1)	~ ~	54 (1.9)	394 (6.0)	20 (0.9)	409 (4.3)
Latvia	16 (0.9)	529 (3.7)	1 (0.4)	~ ~	19 (0.9)	537 (4.5)
Lithuania	15 (0.9)	527 (5.0)	1 (0.2)	~ ~	12 (0.9)	538 (4.7)
Macedonia, Rep. of s	8 (0.9)	451 (9.3)	31 (2.0)	417 (7.1)	11 (1.9)	458 (10.8)
Moldova, Rep. of	23 (1.7)	478 (6.8)	2 (0.4)	~ ~	18 (1.5)	485 (4.8)
Morocco	--	--	--	--	--	--
Netherlands s	9 (0.7)	555 (4.8)	2 (0.4)	~ ~	9 (0.7)	559 (5.6)
New Zealand r	7 (0.8)	519 (9.0)	4 (0.6)	513 (19.1)	10 (0.8)	519 (8.0)
Norway	10 (0.8)	478 (5.6)	1 (0.3)	~ ~	6 (0.5)	489 (8.5)
Romania r	1 (0.3)	~ ~	19 (1.8)	516 (10.5)	1 (0.5)	~ ~
Russian Federation	11 (1.0)	517 (7.4)	3 (0.4)	492 (12.8)	9 (0.9)	522 (7.5)
Scotland s	8 (0.8)	504 (8.0)	3 (0.4)	505 (15.9)	11 (0.8)	528 (7.2)
Singapore r	3 (0.3)	472 (10.4)	13 (0.6)	504 (6.5)	15 (0.6)	528 (6.5)
Slovak Republic	7 (0.9)	493 (11.3)	2 (0.4)	~ ~	12 (0.7)	502 (5.1)
Slovenia	5 (0.5)	481 (8.6)	2 (0.3)	~ ~	11 (0.8)	494 (5.0)
Sweden	5 (0.4)	527 (5.7)	1 (0.2)	~ ~	3 (0.3)	555 (8.3)
Turkey r	3 (0.5)	453 (8.6)	51 (2.0)	452 (4.3)	32 (1.8)	449 (4.0)
United States	--	--	--	--	--	--
International Avg.	9 (0.2)	491 (2.2)	12 (0.2)	474 (2.1)	14 (0.2)	501 (1.8)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

achievement varied across the occupational categories, with the highest among students with parents in professional occupations and the lowest in the skilled category for fathers and in the never worked outside the home for pay category for mothers.

### How Often Do Parents Read?

To examine the association between parents' reading and students' reading achievement, PIRLS asked parents how much time they spent reading for themselves at home, including books, magazines, newspapers, and materials for work. Exhibit 4.15 summarizes their responses, together with the average reading achievement of the students. On average, 17 percent of students had a parent that reported reading for more than 10 hours a week, 24 percent had a parent reporting 6-10 hours a week, 41 percent had a parent reporting 1-5 hours a week, and 19 percent less than one hour a week. Reading achievement was highest among students whose parents read for 6-10 hours (520 score points) or for more than 10 hours per week (524 score points), lower among those whose parents read for 1-5 hours (505 points), and lowest among those whose parents read for less than one hour per week (478 points).

Almost half the students (45%) had parents reporting reading for enjoyment every day or almost every day, about one-third (34%) once or twice a week, 13 percent once or twice a week, and just 8 percent never or almost never (Exhibit 4.16). Students' average reading achievement was associated with parents' reports of reading for enjoyment, with the highest achievement (516 score points) among students of parents that read most frequently and the lowest (484 score points) among students whose parents never or almost never read for enjoyment.

To summarize parents' attitudes towards reading, PIRLS constructed 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 numeric 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 4.17 presents the percentage of students at each level of the index for each country, together with the average reading achievement for those students. Standard errors also are shown. Countries are ordered by the percentage of students at the high level of the index, which is also displayed graphically for each country at the right hand side of the exhibit. The international average across all countries is shown at the bottom of each column. The exhibit also describes in detail how the index was computed.

Parents' responses generally indicated very favorable attitudes toward reading, with more than half the students (53%), on average, at the high level of the index and 42 percent at the medium level. Just 5 percent were at the low level. Countries with the highest percentages of students with parents holding positive attitudes toward reading included Hungary, Norway, and Sweden, where more than 70 percent of students were at the high level of the index. Countries where fewer parents expressed positive attitudes included Turkey, Hong Kong, and Moldova, each of which had less than 30 percent of students at the high level. On average, internationally, students at the high level of the index had higher average reading achievement (524 points) than students at the medium (492 points) or low level (482 points).

Exhibit 4.15: Parents Read at Home

ISC  
4th Grade  
PIRLS 2001

Countries	More than 10 Hours a Week		6-10 Hours a Week		1-5 Hours a Week		Less than One Hour a Week		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	7 (0.8)	467 (9.4)	14 (0.7)	452 (9.1)	42 (1.2)	436 (6.1)	37 (1.5)	402 (6.8)
Belize	s	12 (1.3)	370 (14.0)	13 (1.1)	351 (8.0)	35 (1.7)	341 (7.4)	40 (2.5)	303 (6.2)
Bulgaria		27 (1.1)	573 (4.9)	21 (0.9)	573 (3.4)	30 (0.9)	554 (4.1)	22 (1.6)	507 (8.2)
Canada (O,Q)	r	21 (0.6)	561 (3.3)	27 (0.8)	557 (3.0)	42 (0.8)	547 (2.5)	10 (0.6)	524 (3.8)
Colombia		6 (0.4)	442 (8.9)	10 (0.8)	430 (11.7)	40 (1.4)	436 (5.4)	44 (1.8)	411 (4.3)
Cyprus	s	12 (0.7)	516 (7.7)	21 (0.9)	506 (5.0)	46 (1.1)	490 (4.0)	21 (1.1)	469 (4.6)
Czech Republic		20 (0.9)	552 (3.9)	29 (0.9)	546 (3.5)	44 (1.0)	534 (2.9)	7 (0.5)	519 (6.2)
England	s	22 (1.3)	591 (5.7)	30 (1.2)	581 (4.3)	39 (1.3)	563 (4.6)	9 (0.8)	529 (8.3)
France		11 (0.7)	547 (4.8)	20 (0.9)	544 (3.9)	50 (1.1)	529 (2.6)	19 (0.8)	495 (3.3)
Germany		19 (0.7)	558 (3.0)	31 (0.8)	551 (2.3)	41 (0.8)	536 (2.7)	9 (0.6)	509 (3.6)
Greece		15 (1.0)	556 (4.6)	19 (1.0)	547 (4.7)	45 (1.1)	519 (4.5)	21 (1.3)	500 (5.3)
Hong Kong, SAR		17 (0.7)	541 (3.1)	23 (0.7)	535 (3.2)	42 (0.7)	529 (3.4)	18 (0.8)	513 (4.3)
Hungary		18 (0.8)	565 (3.1)	27 (0.7)	559 (3.1)	43 (0.9)	538 (2.7)	11 (0.7)	503 (4.1)
Iceland	r	20 (0.6)	524 (3.7)	34 (1.0)	524 (2.3)	41 (0.8)	510 (2.1)	5 (0.4)	489 (6.1)
Iran, Islamic Rep. of		12 (0.8)	435 (7.3)	12 (0.7)	420 (10.3)	34 (1.2)	428 (4.9)	42 (1.6)	403 (4.5)
Israel		x x	x x	x x	x x	x x	x x	x x	x x
Italy		12 (0.6)	563 (4.3)	20 (0.7)	558 (3.5)	49 (0.8)	539 (2.6)	19 (0.8)	520 (3.6)
Kuwait	r	15 (0.5)	412 (5.3)	16 (0.5)	410 (4.7)	42 (0.9)	403 (5.0)	27 (0.9)	386 (5.8)
Latvia		18 (0.8)	557 (3.8)	27 (1.0)	554 (3.3)	43 (1.0)	540 (3.2)	12 (0.7)	530 (5.1)
Lithuania		15 (0.8)	546 (4.8)	23 (1.0)	558 (4.1)	48 (1.1)	543 (2.6)	14 (0.9)	524 (4.1)
Macedonia, Rep. of	r	20 (1.0)	474 (6.7)	25 (0.9)	461 (6.4)	38 (1.1)	443 (5.2)	17 (1.5)	419 (8.6)
Moldova, Rep. of		14 (0.7)	504 (6.0)	18 (1.2)	516 (5.5)	39 (1.2)	496 (4.4)	29 (1.4)	469 (5.1)
Morocco		--	--	--	--	--	--	--	--
Netherlands	s	18 (0.9)	573 (4.6)	32 (0.9)	569 (3.0)	41 (1.2)	559 (2.7)	10 (0.7)	541 (5.8)
New Zealand	r	23 (1.1)	545 (6.6)	29 (1.0)	557 (5.4)	37 (1.0)	533 (4.0)	10 (0.7)	480 (6.5)
Norway		23 (1.1)	519 (5.5)	37 (1.1)	509 (3.7)	35 (1.1)	491 (4.1)	5 (0.5)	451 (8.2)
Romania		12 (0.8)	535 (6.6)	14 (1.1)	538 (6.0)	42 (1.1)	517 (4.5)	32 (1.6)	490 (7.1)
Russian Federation		16 (0.7)	532 (4.5)	19 (0.8)	533 (6.8)	40 (1.0)	529 (4.5)	25 (1.4)	522 (5.6)
Scotland	s	27 (1.3)	552 (5.6)	33 (1.4)	555 (4.0)	33 (1.1)	531 (5.6)	6 (0.6)	501 (10.7)
Singapore		18 (0.6)	559 (4.6)	28 (0.7)	546 (4.9)	37 (0.8)	525 (5.5)	16 (0.8)	482 (6.8)
Slovak Republic		18 (0.8)	533 (4.5)	26 (0.8)	531 (3.5)	46 (1.0)	516 (2.9)	10 (0.7)	481 (6.5)
Slovenia		10 (0.6)	529 (4.2)	26 (1.0)	517 (3.4)	53 (1.1)	496 (2.3)	11 (0.6)	477 (4.9)
Sweden		23 (0.8)	574 (2.9)	35 (0.9)	568 (2.5)	36 (0.8)	557 (2.5)	6 (0.5)	528 (5.5)
Turkey		9 (0.5)	457 (7.1)	18 (0.9)	468 (5.7)	37 (0.8)	456 (3.9)	36 (1.6)	433 (3.9)
United States		--	--	--	--	--	--	--	--
International Avg.		17 (0.2)	524 (1.0)	24 (0.2)	520 (1.0)	41 (0.2)	505 (0.7)	19 (0.2)	478 (1.1)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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



Exhibit 4.16: Parents Read for Enjoyment

ISC  
4th Grade  
PIRLS 2001

Countries	Every Day or Almost Every Day		Once or Twice a Week		Once or Twice a Month		Never or Almost Never		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Argentina	s	36 (1.3)	440 (7.5)	36 (1.2)	433 (6.4)	14 (0.9)	432 (9.1)	14 (0.9)	420 (10.5)
Belize	s	28 (1.4)	343 (8.2)	39 (1.3)	343 (6.4)	17 (0.8)	328 (8.7)	16 (1.5)	289 (7.3)
Bulgaria		53 (1.6)	567 (3.5)	28 (1.2)	554 (4.9)	11 (0.6)	534 (8.0)	9 (1.5)	506 (10.8)
Canada (O,Q)	r	51 (1.0)	558 (2.5)	32 (0.8)	547 (2.9)	12 (0.6)	537 (4.1)	4 (0.3)	532 (6.3)
Colombia	r	24 (1.0)	433 (7.5)	38 (1.1)	430 (5.9)	19 (1.2)	424 (6.7)	19 (1.3)	414 (5.1)
Cyprus	s	35 (1.3)	503 (4.8)	41 (1.3)	493 (4.2)	16 (0.9)	482 (6.0)	8 (0.5)	482 (7.0)
Czech Republic	r	51 (1.1)	541 (3.0)	38 (1.1)	543 (3.2)	9 (0.6)	537 (5.0)	1 (0.3)	~ ~
England	s	56 (1.5)	582 (3.8)	31 (1.2)	568 (4.5)	9 (0.8)	558 (7.8)	4 (0.5)	533 (14.9)
France		51 (1.0)	537 (3.0)	34 (0.9)	523 (3.3)	10 (0.7)	519 (3.7)	5 (0.4)	499 (7.6)
Germany	r	51 (0.9)	553 (2.0)	32 (0.7)	538 (2.3)	12 (0.5)	534 (3.5)	5 (0.4)	522 (5.1)
Greece		41 (1.3)	536 (3.9)	38 (1.2)	522 (4.0)	12 (0.9)	528 (7.4)	9 (0.8)	499 (7.3)
Hong Kong, SAR		31 (1.1)	538 (3.0)	29 (0.7)	529 (3.5)	19 (0.7)	528 (4.0)	21 (0.8)	524 (4.1)
Hungary		51 (0.9)	553 (2.5)	36 (0.8)	543 (2.7)	9 (0.5)	530 (4.7)	4 (0.4)	513 (6.1)
Iceland	r	62 (0.8)	519 (1.9)	25 (0.8)	516 (3.2)	9 (0.5)	512 (6.0)	3 (0.3)	509 (7.8)
Iran, Islamic Rep. of		22 (1.0)	417 (6.6)	36 (1.4)	423 (4.8)	21 (1.0)	420 (5.8)	22 (1.6)	398 (6.3)
Israel		x x	x x	x x	x x	x x	x x	x x	x x
Italy		47 (0.9)	555 (2.5)	36 (0.8)	540 (2.9)	10 (0.6)	530 (4.8)	7 (0.5)	526 (5.3)
Kuwait	r	40 (0.6)	405 (5.1)	39 (0.7)	402 (4.6)	14 (0.6)	395 (5.9)	6 (0.4)	391 (8.3)
Latvia		53 (1.6)	550 (2.5)	35 (1.1)	545 (3.1)	9 (0.7)	544 (5.2)	3 (0.4)	534 (13.8)
Lithuania		52 (1.0)	546 (3.3)	37 (1.0)	545 (3.1)	8 (0.6)	547 (5.5)	2 (0.3)	~ ~
Macedonia, Rep. of	r	41 (1.3)	471 (5.9)	41 (1.0)	441 (5.0)	13 (0.9)	426 (8.4)	5 (0.8)	439 (14.4)
Moldova, Rep. of		35 (1.6)	505 (5.2)	40 (1.2)	492 (4.2)	16 (0.8)	481 (5.1)	9 (0.8)	474 (7.4)
Morocco		--	--	--	--	--	--	--	--
Netherlands	s	60 (1.3)	567 (2.5)	28 (1.0)	560 (3.4)	7 (0.6)	552 (6.0)	5 (0.6)	550 (5.7)
New Zealand	r	56 (1.2)	547 (4.0)	29 (1.1)	536 (4.4)	11 (0.8)	516 (7.3)	4 (0.4)	502 (12.5)
Norway		59 (1.2)	507 (3.6)	28 (1.1)	498 (4.5)	10 (0.5)	503 (7.4)	4 (0.4)	488 (10.1)
Romania		16 (1.2)	532 (6.4)	33 (1.4)	526 (4.8)	24 (1.1)	518 (6.6)	27 (1.7)	492 (7.6)
Russian Federation		49 (1.2)	532 (3.9)	34 (1.1)	527 (6.5)	13 (0.8)	526 (6.2)	3 (0.3)	507 (8.5)
Scotland	s	62 (1.3)	552 (4.3)	26 (1.2)	532 (5.7)	7 (0.6)	525 (9.6)	5 (0.6)	526 (13.2)
Singapore		36 (0.8)	551 (4.3)	36 (0.6)	530 (5.3)	19 (0.6)	518 (5.8)	9 (0.4)	496 (8.4)
Slovak Republic		49 (1.1)	528 (3.0)	40 (1.0)	521 (3.3)	8 (0.5)	511 (5.3)	3 (0.4)	487 (13.0)
Slovenia		41 (1.0)	509 (2.6)	42 (0.9)	504 (2.8)	13 (0.6)	498 (4.0)	4 (0.4)	479 (10.0)
Sweden		68 (0.9)	568 (2.1)	22 (0.7)	556 (3.2)	7 (0.4)	554 (5.2)	3 (0.3)	540 (6.0)
Turkey	r	21 (1.2)	463 (6.3)	34 (1.1)	455 (5.0)	20 (0.9)	449 (4.7)	25 (1.5)	438 (4.7)
United States		--	--	--	--	--	--	--	--
International Avg.		45 (0.2)	516 (0.8)	34 (0.2)	507 (0.8)	13 (0.1)	500 (1.1)	8 (0.1)	484 (1.7)

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

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

**Exhibit 4.17: Index of Parents' Attitudes Toward Reading (PATR)**

ISC 4th Grade PIRLS 2001

Countries	High PATR		Medium PATR		Low PATR		Percentage of Students at High Level of PATR
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Hungary	74 (1.0)	556 (2.2)	23 (0.9)	518 (2.5)	3 (0.4)	509 (8.3)	.....○
Norway	73 (1.1)	512 (3.2)	23 (1.0)	481 (4.5)	4 (0.5)	470 (10.8)	.....○
Sweden	71 (0.8)	571 (2.1)	24 (0.9)	547 (3.4)	5 (0.4)	536 (4.5)	.....○
Scotland	s 69 (1.3)	554 (3.9)	24 (1.2)	520 (6.3)	7 (0.6)	511 (9.3)	.....○
England	s 69 (1.3)	586 (3.5)	26 (1.2)	543 (5.0)	6 (0.6)	535 (8.2)	.....○
Iceland	r 67 (0.8)	522 (1.6)	30 (0.7)	510 (2.7)	3 (0.4)	489 (8.1)	.....○
Slovak Republic	65 (1.2)	533 (3.0)	32 (1.2)	503 (3.8)	3 (0.4)	483 (10.8)	.....○
New Zealand	r 65 (1.2)	559 (3.8)	30 (1.2)	501 (4.0)	5 (0.6)	488 (10.1)	.....○
Czech Republic	r 64 (1.1)	551 (2.7)	32 (0.9)	528 (3.0)	4 (0.5)	515 (9.8)	.....○
Canada (O,Q)	r 64 (1.0)	561 (2.4)	32 (1.0)	534 (2.7)	4 (0.3)	525 (5.4)	.....○
Greece	64 (1.4)	539 (3.5)	31 (1.3)	505 (4.9)	6 (0.6)	505 (9.6)	.....○
Netherlands	s 62 (1.3)	571 (2.6)	33 (1.1)	553 (3.0)	5 (0.6)	537 (7.4)	.....○
Slovenia	61 (1.0)	516 (2.3)	37 (1.0)	487 (2.7)	2 (0.3)	~ ~	.....○
Cyprus	s 57 (1.4)	507 (3.5)	38 (1.5)	477 (4.6)	5 (0.6)	466 (6.9)	.....○
Italy	56 (1.2)	560 (2.1)	37 (1.1)	527 (2.9)	7 (0.5)	523 (5.2)	.....○
Germany	r 55 (1.1)	559 (2.0)	35 (1.0)	528 (2.5)	10 (0.6)	519 (3.9)	.....○
Bulgaria	54 (1.8)	574 (3.7)	37 (1.4)	538 (5.0)	9 (1.2)	497 (11.6)	.....○
France	53 (1.1)	545 (2.5)	43 (1.1)	512 (3.2)	4 (0.4)	497 (6.1)	.....○
Russian Federation	51 (1.3)	536 (4.6)	45 (1.2)	522 (5.2)	5 (0.5)	516 (6.6)	.....○
Macedonia, Rep. of	r 49 (1.9)	479 (4.8)	48 (1.8)	426 (6.8)	3 (0.4)	420 (12.2)	.....○
Latvia	48 (1.3)	560 (2.9)	50 (1.4)	537 (2.7)	3 (0.4)	532 (13.8)	.....○
Iran, Islamic Rep. of	43 (1.4)	438 (4.8)	52 (1.2)	402 (4.8)	5 (0.8)	373 (16.9)	.....○
Lithuania	42 (1.2)	558 (2.9)	52 (1.2)	537 (3.0)	6 (0.5)	528 (6.1)	.....○
Belize	s 41 (1.8)	358 (6.1)	52 (1.7)	309 (6.7)	7 (1.0)	315 (16.8)	.....○
Colombia	r 41 (1.4)	443 (5.4)	52 (1.3)	414 (5.0)	7 (0.6)	428 (7.4)	.....○
Singapore	40 (0.9)	553 (4.6)	54 (0.9)	517 (5.5)	6 (0.3)	517 (6.9)	.....○
Romania	34 (1.6)	542 (4.2)	55 (1.5)	501 (5.5)	11 (1.2)	492 (10.6)	.....○
Kuwait	r 34 (0.6)	413 (4.2)	61 (0.6)	396 (5.1)	5 (0.3)	388 (7.2)	.....○
Argentina	s 33 (1.6)	462 (7.1)	62 (1.7)	417 (6.8)	5 (0.5)	410 (11.0)	.....○
Turkey	29 (1.4)	483 (5.0)	63 (1.3)	440 (3.5)	7 (0.8)	436 (6.8)	.....○
Hong Kong, SAR	29 (0.9)	539 (3.1)	65 (0.8)	527 (3.1)	6 (0.4)	526 (6.2)	.....○
Moldova, Rep. of	29 (1.5)	516 (5.1)	63 (1.6)	487 (4.2)	8 (0.7)	463 (7.5)	.....○
Israel	x x	x x	x x	x x	x x	x x	.....○
Morocco	--	--	--	--	--	--	.....○
United States	--	--	--	--	--	--	.....○
International Avg.	53 (0.2)	524 (0.7)	42 (0.2)	492 (0.8)	5 (0.1)	482 (1.6)	.....○

SOURCE: IEA Progress in International Reading Literacy Study (PIRLS) 2001.

**Index of Parents' Attitudes Toward Reading (PATR)**

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. High level indicates an average of greater than 3 through 4, Medium level indicates an average of 2 through 3, and Low level indicates an average of 1 to less than 2.

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

