

Table A.1: Results for PIRLS 2006 items on home possessions

Country	Student questionnaire								Home questionnaire									
	Percent missing values							Percent explained variance (R <sup>2</sup> )—reading achievement							Percent missing values		Percent explained variance (R <sup>2</sup> )—reading achievement	
	Books at home (ASBGBOOK)	Computer (ASBGTA1)	Study desk (ASBGTA2)	Own books (ASBGTA3)	Daily newspaper (ASBGTA4)	Own room (ASBGTA5)	Own cellphone (ASBGTA6)	Books at home (ASBGBOOK)	Computer (ASBGTA1)	Study desk (ASBGTA2)	Own books (ASBGTA3)	Daily newspaper (ASBGTA4)	Own room (ASBGTA5)	Own cellphone (ASBGTA6)	Books at home (ASBGBOOK)	Children's books (ASBHCHBK)	Books at home (ASBGBOOK)	Children's books (ASBHCHBK)
Austria	2.8	6.6	1.3	1.4	1.6	1.4	1.3	10.8	3.8	4.4	8.8	1.5	1.4	1.2	5.6	5.6	15.6	16.8
Belgium (Flemish)	1.8	1.2	0.7	0.9	1.0	0.8	1.1	7.6	2.9	0.8	3.6	1.6	1.4	5.0	4.0	4.2	7.0	8.4
Belgium (French)	7.6	7.4	7.2	7.4	8.2	7.6	7.6	8.8	2.1	0.5	4.2	0.2	1.1	4.3	11.1	10.7	11.9	15.1
Bulgaria	3.5	2.8	2.4	2.3	2.6	2.7	2.5	10.7	4.4	4.2	6.3	1.7	0.4	2.5	4.4	4.3	12.7	13.4
Chinese Taipei	2.7	1.3	1.2	1.4	1.4	1.4	1.5	11.8	3.4	0.6	5.4	3.8	0.8	0.5	3.5	3.7	10.2	11.1
Denmark	2.0	1.5	0.8	0.8	0.9	0.8	0.9	7.3	0.8	2.3	2.0	0.5	1.3	0.0	6.3	6.2	6.6	4.5
England	2.2	1.4	1.5	1.3	1.5	1.2	1.4	12.2	2.3	2.9	6.7	1.6	2.2	2.1	53.6	53.7	8.9	8.5
France	6.1	4.0	3.6	3.7	4.3	4.1	3.8	10.6	2.3	0.9	5.3	0.0	2.4	3.9	8.5	8.6	12.2	15.6
Georgia	10.5	4.9	3.4	4.3	4.6	4.9	4.4	5.6	0.0	1.4	4.5	0.0	0.0	0.0	3.2	3.4	8.5	6.1
Germany	9.1	9.1	8.1	8.1	8.9	8.5	8.8	12.9	5.1	2.4	4.4	6.2	4.2	3.0	13.3	13.2	14.2	17.9
Hong Kong SAR	2.8	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.1	0.3	1.9	2.2	0.1	0.6	3.8	3.1	2.9	3.2
Hungary	2.4	1.8	1.2	1.4	1.4	1.5	1.4	17.5	7.5	1.4	6.0	2.4	0.1	1.9	10.3	10.2	18.6	19.9
Iceland	4.1	2.0	2.0	2.0	2.2	1.9	2.0	5.4	2.9	0.4	4.7	5.4	0.8	1.1	24.4	24.4	5.2	5.8
Indonesia	20.3	5.3	4.9	5.3	5.5	6.0	5.7	0.8	0.4	1.1	1.6	0.9	0.1	1.4	3.8	3.5	3.1	1.1
Iran, Islamic Republic of	14.3	4.2	3.3	3.8	4.3	3.8	3.7	15.6	7.6	7.2	12.3	6.1	3.9	0.1	3.5	3.3	10.1	12.2
Israel	11.8	8.5	8.1	8.3	8.2	8.2	8.3	2.7	5.0	7.8	4.7	0.3	0.6	0.4	37.7	37.9	9.4	12.9
Italy	1.9	2.2	2.1	2.0	2.4	2.2	2.2	4.3	1.3	0.1	4.3	3.4	0.0	1.2	4.3	4.0	6.1	6.3
Kuwait	41.2	21.1	21.5	22.8	22.4	23.0	23.1	1.4	0.1	0.8	0.4	0.0	0.1	1.1	27.7	27.4	4.1	3.4
Latvia	2.7	1.3	1.3	1.1	1.3	1.3	1.3	5.8	2.2	1.7	5.7	0.8	0.1	0.9	5.8	5.7	6.6	10.2
Lithuania	2.3	1.0	0.9	0.7	0.9	1.2	0.8	8.9	3.2	0.6	3.0	1.7	0.2	1.5	2.5	2.4	8.2	10.3
Luxembourg	0.9	0.4	0.4	0.3	0.8	0.3	0.4	17.1	2.2	0.9	3.3	4.2	4.0	3.5	10.3	8.0	20.5	20.8
Macedonia	14.1	8.2	7.3	7.8	7.9	7.9	8.1	8.8	2.4	4.1	4.6	1.1	1.6	1.1	4.9	5.0	8.2	5.9
Moldova	1.8	3.6	1.9	2.1	2.7	2.1	2.6	6.7	0.2	0.9	2.9	1.0	0.0	0.1	3.8	3.2	5.9	4.5
Morocco	13.8	5.2	5.1	5.3	5.6	5.7	5.4	3.5	0.4	3.2	2.2	0.1	0.4	0.2	6.5	6.1	5.2	2.5
Netherlands	2.0	0.8	0.8	1.0	1.3	0.9	1.1	9.6	1.2	0.4	7.2	2.9	0.8	5.1	33.1	33.0	8.1	8.0
New Zealand	5.4	3.0	3.1	2.8	3.3	3.0	3.3	10.2	2.3	1.8	7.4	3.4	0.4	2.6	35.2	35.0	7.6	8.5
Norway	9.6	7.6	7.8	7.8	8.1	7.8	8.0	7.4	0.4	1.3	2.8	3.1	0.7	0.7	7.5	7.6	6.8	7.3
Poland	4.1	2.4	1.9	2.2	2.1	2.0	2.0	9.1	4.6	4.0	6.1	5.0	1.2	0.1	2.9	3.1	9.9	9.3
Qatar	21.6	6.6	7.0	7.3	7.4	7.4	7.4	0.4	2.8	3.5	0.2	0.0	0.0	1.6	28.7	28.8	4.4	2.5
Romania	6.0	2.6	2.3	2.3	2.7	3.0	2.1	14.5	8.5	9.5	6.4	0.2	0.9	2.4	3.0	2.9	20.6	17.8
Russian Federation	1.1	1.2	0.7	0.7	0.8	0.7	0.7	8.3	2.6	1.4	3.9	0.0	0.0	2.3	1.0	0.8	8.5	9.7
Scotland	2.6	0.9	1.0	0.9	1.3	1.0	0.9	9.6	1.7	0.8	4.5	1.2	1.0	2.2	48.2	48.2	4.8	12.6
Singapore	1.8	0.9	0.9	0.9	0.9	1.1	0.9	11.3	5.5	4.2	6.3	4.7	0.2	0.1	2.3	2.3	16.7	19.1
Slovak Republic	1.8	1.2	0.9	1.1	1.3	1.3	1.0	17.7	9.0	4.9	10.1	3.9	0.3	2.1	3.3	3.0	8.9	11.7
Slovenia	1.9	0.8	0.6	0.8	0.8	0.7	0.6	7.9	1.5	0.1	2.6	0.2	0.0	0.1	5.4	5.5	9.2	6.8
South Africa	22.4	10.7	10.5	10.4	11.0	10.7	10.8	5.0	5.5	4.6	4.0	3.4	3.2	3.9	17.3	17.1	7.6	3.8
Spain	5.4	2.4	2.3	2.2	2.7	2.8	2.9	8.4	1.7	1.9	4.8	0.0	0.1	3.8	38.3	38.5	12.6	11.4
Sweden	3.3	1.7	1.6	1.8	2.2	1.9	1.8	8.8	0.8	0.3	1.6	4.1	1.9	0.5	6.9	6.7	10.2	11.4
Trinidad and Tobago	6.7	2.8	3.3	3.1	3.4	3.0	3.1	4.9	2.4	1.4	3.8	1.6	0.1	0.0	11.7	13.1	5.8	7.4
United States	4.7	3.3	3.5	3.4	3.5	3.7	3.6	4.1	2.4	2.4	9.4	2.9	0.8	4.0	—	—	—	—
Median	3.8	2.7	2.2	2.2	2.6	2.5	2.3	8.6	2.4	1.4	4.5	1.6	0.6	1.3	6.3	6.1	8.5	9.3
Interquartile range (IQR)	7.1	3.9	2.8	3.4	3.5	3.9	3.4	5.4	2.5	2.8	3.1	3.2	1.2	2.1	11.5	11.7	4.7	6.7
25th percentile	2.2	1.3	1.1	1.1	1.3	1.3	1.2	5.3	1.5	0.8	3.0	0.3	0.1	0.4	3.8	3.4	6.3	6.0
75th percentile	9.3	5.2	4.0	4.5	4.9	5.1	4.6	10.7	3.9	3.6	6.1	3.4	1.3	2.5	15.3	15.2	11.0	12.7
Canada (Alberta)	3.8	4.3	4.2	4.3	4.6	4.5	4.5	7.5	2.2	1.5	6.3	1.7	0.6	2.8	20.1	20.1	3.3	4.6
Canada (British Columbia)	4.3	4.2	4.3	4.2	4.4	4.3	4.4	5.3	2.4	1.2	3.9	2.6	0.4	1.8	23.7	23.7	5.1	5.7
Canada (Nova Scotia)	5.2	5.3	5.4	5.5	5.8	5.5	5.6	7.2	1.5	1.2	7.8	2.1	0.3	4.4	9.6	9.6	3.8	4.9
Canada (Ontario)	3.5	3.4	3.4	3.4	3.5	3.5	3.6	3.9	2.3	1.2	5.8	4.8	0.1	3.9	11.0	10.9	4.2	4.9
Canada (Québec)	6.3	5.8	5.6	5.8	6.4	5.9	6.1	8.6	2.8	0.3	3.2	3.6	1.2	5.2	10.0	10.0	5.7	6.0
Iceland (Grade 5)	2.9	1.6	1.8	1.5	1.7	1.5	1.6	7.9	3.3	0.7	7.1	7.0	0.6	1.8	34.1	34.0	3.9	5.4
Norway (Grade 5)	7.2	5.0	4.8	4.8	5.7	5.1	4.9	9.3	0.4	1.0	4.3	6.9	0.4	0.9	10.4	10.1	10.2	8.7

Key:  Moderate percentage missing value (5.0–15.0%)  High percentage missing value (> 15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  Low percentage explained variance (< 5.0%)

— Data not available

Source: Progress in International Reading Literacy Study 2006.

Table A.2: Results for TIMSS 2007 Grade 4 items on home possessions

	Percent missing values							Percent explained variance ( $R^2$ )— math achievement						Percent explained variance ( $R^2$ )— science achievement					
	Country	Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)	Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)	Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)
TIMSS 2007 Grade 4 participants	Algeria	12.8	5.0	8.1	6.8	5.7	7.2	0.7	2.1	0.7	0.2	2.9	0.2	0.7	3.2	0.8	0.5	3.8	0.0
	Armenia	11.5	6.7	7.7	7.7	7.6	9.6	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.1
	Australia	1.2	1.6	1.1	0.9	0.9	1.5	5.7	1.8	4.3	2.3	5.2	6.6	8.7	2.9	3.7	2.5	5.4	6.0
	Austria	1.6	1.1	2.0	1.0	1.0	1.2	11.2	1.8	2.0	2.4	1.2	6.0	12.7	1.7	2.0	2.4	0.7	5.3
	Chinese Taipei	1.3	2.6	2.4	1.4	1.0	1.2	12.2	2.6	5.6	1.0	3.0	2.7	11.7	2.6	3.4	0.4	2.4	1.7
	Colombia	5.8	4.2	6.5	4.6	4.0	5.9	0.5	4.2	3.3	3.5	4.3	1.3	0.5	2.5	2.1	3.6	3.7	0.8
	Czech Republic	1.3	1.1	1.3	1.1	1.3	1.4	8.4	1.1	3.1	2.0	6.5	4.1	8.5	1.1	2.7	1.8	5.4	2.2
	Denmark	4.1	3.6	4.0	3.4	3.3	3.4	6.1	1.6	1.8	1.9	1.6	2.5	7.8	1.1	0.7	2.0	1.8	1.8
	El Salvador	3.9	4.6	7.1	5.4	4.5	6.6	1.3	3.0	2.6	2.4	3.7	0.4	2.1	4.0	3.9	3.0	5.8	0.6
	England	1.2	1.8	1.2	1.2	0.9	1.0	11.7	2.0	2.2	1.8	4.3	4.1	13.7	1.5	2.1	1.7	4.5	4.8
	Georgia	5.1	4.5	10.8	4.5	5.6	8.3	1.5	0.1	0.1	1.8	2.3	0.2	3.7	0.2	0.1	2.5	2.7	0.1
	Germany	14.1	13.3	14.1	13.0	13.0	13.3	14.1	2.9	2.4	1.4	2.7	5.2	16.6	3.3	1.8	1.7	2.9	4.0
	Hong Kong SAR	1.5	1.8	1.0	0.6	0.6	0.7	3.8	0.8	1.0	0.2	1.5	1.9	2.4	0.6	0.8	0.2	1.2	1.7
	Hungary	2.2	1.2	4.4	1.3	1.9	1.6	16.6	5.5	7.5	4.9	7.0	5.6	15.4	5.7	7.2	5.4	6.1	4.3
	Iran, Islamic Republic of	2.1	3.2	7.3	2.9	2.1	3.9	8.9	6.3	9.2	7.6	4.3	6.9	9.3	7.0	10.4	9.7	5.1	7.6
	Italy	1.1	0.0	0.0	0.0	0.0	0.0	2.0	1.6	1.4	0.5	1.7	0.8	3.2	1.8	1.3	1.0	2.2	1.4
	Japan	1.2	1.4	2.4	1.3	1.3	1.6	9.7	3.3	3.9	0.4	5.0	4.1	7.6	3.1	3.0	0.2	3.9	3.0
	Kazakhstan	0.0	0.3	0.3	0.4	0.4	0.8	0.0	0.0	0.2	0.0	0.0	0.0	1.0	0.0	0.7	0.1	0.1	0.1
	Kuwait	18.9	7.3	8.1	7.2	7.7	7.7	0.1	0.8	3.8	1.8	2.7	0.9	0.0	0.7	3.4	1.8	2.1	0.5
	Latvia	2.2	1.7	2.8	1.1	1.3	1.3	5.5	1.2	4.3	0.2	2.9	3.0	6.3	1.9	2.3	0.0	2.4	1.5
	Lithuania	1.1	1.0	1.1	1.0	1.0	1.4	4.9	0.6	3.4	1.0	1.5	4.8	4.1	0.5	1.6	0.5	1.4	2.1
	Mongolia	10.0	9.1	20.5	7.6	8.1	9.4	1.9	1.6	1.7	0.6	4.3	0.0	1.2	1.0	1.3	0.7	3.4	0.0
	Morocco	13.7	8.9	9.7	8.6	9.3	9.5	1.9	2.9	2.8	1.2	5.7	0.8	3.2	3.7	3.9	1.6	6.5	0.9
	Netherlands	4.2	3.3	3.3	3.4	3.4	3.4	5.4	0.6	2.3	0.0	2.3	1.7	8.6	0.7	2.7	0.0	2.1	2.2
	New Zealand	1.5	3.3	2.3	1.7	1.3	1.6	10.7	3.7	3.2	1.4	5.4	8.1	13.2	3.1	3.3	1.4	5.7	8.6
	Norway	2.5	3.0	3.3	2.4	2.2	1.5	4.9	0.9	3.6	2.3	2.5	2.0	5.8	1.2	3.3	2.0	1.8	1.5
	Qatar	13.5	8.7	7.8	7.3	7.2	7.2	0.2	1.9	3.5	0.2	4.1	0.6	0.0	0.6	2.0	0.2	1.8	0.0
	Russian Federation	0.4	1.0	1.1	1.0	1.2	1.8	3.6	1.2	2.5	0.2	1.0	1.1	2.5	1.0	2.3	0.4	1.5	0.8
	Scotland	1.1	1.3	1.5	0.9	0.8	0.8	9.3	3.0	2.3	0.2	5.5	4.9	11.3	2.6	2.8	0.7	5.6	5.7
	Singapore	1.3	1.5	0.7	0.4	0.5	0.6	9.4	4.5	4.9	2.0	6.3	8.5	10.9	5.5	4.8	2.2	7.7	9.1
	Slovak Republic	2.1	1.6	2.8	1.2	1.4	1.5	7.6	0.1	3.3	1.5	2.6	1.5	8.8	0.3	4.1	2.2	3.4	1.7
	Slovenia	2.2	2.2	7.3	1.4	1.7	1.4	5.9	3.0	6.1	0.4	3.3	1.8	5.8	2.8	4.6	0.8	3.2	1.6
Sweden	2.3	0.9	0.9	0.8	1.7	1.3	8.9	0.4	0.2	1.0	2.9	2.0	11.6	0.2	0.2	1.4	1.7	1.7	
Tunisia	13.5	4.4	7.8	6.1	5.3	7.8	6.3	3.1	2.9	5.2	9.2	0.3	7.8	3.4	2.8	6.5	11.1	0.3	
Ukraine	2.0	2.8	3.3	2.5	3.1	4.9	5.3	1.0	3.5	0.9	3.7	0.7	4.6	0.7	3.0	1.2	3.5	0.5	
United States	1.8	2.3	1.0	1.3	1.0	1.7	9.1	3.6	3.3	3.4	4.8	7.5	8.9	4.0	3.0	3.1	3.5	7.3	
Yemen	19.1	8.8	10.0	9.5	10.3	10.5	0.1	0.3	0.1	0.1	0.1	0.2	0.0	1.4	0.2	0.4	1.0	0.1	
Median	2.2	2.6	3.3	1.4	1.7	1.6	5.5	1.8	2.9	1.2	3.0	1.9	6.3	1.7	2.7	1.4	3.2	1.7	
Interquartile range (IQR)	4.5	3.0	6.5	4.3	4.3	5.9	7.2	2.2	1.8	1.8	2.5	4.1	6.9	2.5	2.1	1.8	3.4	3.5	
25th percentile	1.3	1.4	1.2	1.0	1.0	1.3	1.9	0.8	1.8	0.2	2.3	0.7	2.4	0.7	1.3	0.4	1.8	0.5	
75th percentile	5.8	4.5	7.7	5.4	5.3	7.2	9.1	3.0	3.6	2.0	4.8	4.8	9.3	3.1	3.4	2.2	5.1	4.0	
TIMSS 2007 Grade 4 benchmark participants	Canada (Alberta)	1.5	1.9	1.7	1.4	1.5	1.5	4.4	1.4	1.8	1.0	3.8	2.2	5.5	1.3	2.2	0.7	1.8	2.8
	Canada (British Columbia)	2.7	2.8	2.6	2.5	2.4	2.5	5.9	1.2	1.6	0.7	1.3	2.3	8.0	0.8	1.0	0.2	0.9	1.7
	Canada (Ontario)	1.8	2.2	2.0	1.9	1.8	1.8	7.7	2.0	1.4	1.5	2.5	5.1	8.2	1.8	0.9	1.1	1.1	3.3
	Canada (Québec)	1.4	0.8	0.8	0.9	1.0	0.8	4.0	0.6	1.4	0.9	0.9	3.3	4.8	0.7	1.5	1.6	1.9	2.6
	United Arab Emirates (Dubai)	17.6	13.7	13.1	13.2	13.5	14.0	5.6	1.0	4.1	2.7	3.4	5.9	3.8	1.0	4.3	3.8	5.6	5.8
	United States (Massachusetts)	1.5	1.3	0.9	1.1	0.7	1.2	10.0	0.9	1.6	1.9	3.6	4.0	12.9	1.8	2.5	1.4	2.4	5.7
United States (Minnesota)	1.5	1.4	0.3	0.7	0.2	0.8	10.6	5.1	2.3	2.1	5.5	8.8	12.2	3.9	2.3	1.3	3.6	8.9	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)

High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Trends in International Mathematics and Science Study 2007.

Table A.3: Results for TIMSS 2007 Grade 8 items on home possessions

	Country	Percent missing values						Percent explained variance (R <sup>2</sup> )—math achievement						Percent explained variance (R <sup>2</sup> )—science achievement					
		Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)	Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)	Books at home (AS4GBOOK)	Calculator (AS4GTH01)	Computer (AS4GTH02)	Study desk (AS4GTH03)	Dictionary (AS4GTH04)	Internet connection (AS4GTH05)
TIMSS 2007 Grade 8 participants	Algeria	1.9	1.8	4.1	3.2	2.0	4.0	0.6	1.3	0.1	0.5	2.4	0.0	0.8	0.4	0.0	0.3	1.3	0.0
	Armenia	2.2	4.2	4.1	4.7	4.6	5.4	1.5	0.4	0.5	0.5	0.9	0.5	0.2	0.2	0.2	0.1	0.4	0.2
	Australia	1.8	2.1	2.0	1.9	1.8	1.9	13.2	0.3	2.3	1.6	1.4	5.4	17.5	0.4	1.9	2.0	1.2	4.3
	Bahrain	0.9	1.3	1.9	1.0	0.9	0.5	3.6	2.6	0.2	3.8	4.5	1.6	2.8	2.4	0.0	3.1	5.4	0.5
	Bosnia and Herzegovina	0.8	1.0	1.3	1.4	1.5	1.8	4.8	2.0	5.8	2.4	3.6	5.7	6.2	1.4	4.8	2.6	3.8	5.0
	Botswana	1.8	3.2	3.3	4.1	2.9	3.9	1.0	2.1	0.2	1.8	6.3	0.2	1.0	2.4	0.1	1.6	5.7	0.7
	Bulgaria	1.5	2.0	2.7	1.6	2.1	2.1	11.9	2.3	4.3	3.8	6.2	5.5	7.6	2.7	1.5	3.3	3.6	1.6
	Chinese Taipei	0.3	1.1	0.8	0.4	0.4	0.5	15.5	1.3	4.8	3.4	3.1	3.4	18.2	1.5	3.4	3.1	2.8	1.7
	Colombia	0.2	0.5	1.3	0.6	0.5	1.0	10.7	4.8	5.5	2.4	4.5	5.1	12.0	3.0	4.8	2.8	3.6	4.8
	Cyprus	0.5	1.1	0.8	0.6	0.6	0.8	8.2	2.2	3.8	2.8	4.2	3.8	8.5	1.8	3.0	2.2	3.6	3.3
	Czech Republic	0.2	0.3	0.1	0.3	0.3	0.2	12.9	0.4	2.2	0.9	2.5	3.9	13.4	0.1	2.1	1.0	2.0	2.5
	Egypt	2.7	3.9	5.3	5.6	4.9	5.2	0.7	3.3	1.4	5.6	6.1	0.4	0.7	3.1	1.0	4.7	5.3	0.2
	El Salvador	0.5	1.3	3.6	1.8	1.6	3.9	5.0	2.0	3.3	1.7	1.8	2.4	6.1	1.2	3.3	0.9	1.7	2.0
	England	1.4	1.9	1.5	1.7	1.6	1.6	19.2	4.9	0.8	3.4	5.9	2.8	23.5	5.7	0.4	3.4	6.1	3.2
	Georgia	1.8	2.4	2.7	2.5	3.7	4.2	6.2	1.9	0.3	1.9	3.9	0.3	5.8	1.9	0.0	2.1	4.2	0.0
	Ghana	2.2	4.0	5.4	5.2	4.2	4.4	0.2	1.6	0.0	0.9	5.5	3.7	0.2	0.9	0.0	0.9	6.0	3.5
	Hong Kong SAR	0.6	1.7	0.8	0.5	0.5	0.7	6.4	1.2	0.5	0.4	0.7	1.3	6.9	1.3	0.6	0.0	0.9	1.0
	Hungary	0.2	0.3	1.0	0.3	0.7	0.4	20.2	2.2	6.0	0.8	5.9	9.5	19.8	2.8	5.1	0.8	5.5	7.3
	Indonesia	2.0	2.5	4.4	1.8	1.1	3.1	1.8	3.0	3.1	0.9	4.5	0.1	1.6	2.5	2.3	1.4	3.3	0.0
	Iran, Islamic Republic of	0.5	0.9	4.0	1.1	1.3	2.4	8.6	2.1	9.9	5.3	6.5	9.2	10.0	1.5	9.7	6.3	6.8	8.7
	Israel	2.4	2.6	2.5	3.0	2.2	2.4	5.8	2.7	3.0	3.7	3.6	3.9	6.8	2.5	2.2	2.1	2.4	3.0
	Italy	0.0	0.0	0.0	0.0	0.0	0.0	7.9	3.0	1.7	0.2	1.1	5.1	9.6	2.5	2.3	0.3	0.6	4.7
	Japan	0.9	1.1	1.2	1.0	1.1	1.3	8.2	0.7	3.4	2.0	2.7	5.3	9.6	0.2	2.6	2.0	3.1	3.2
	Jordan	1.8	1.4	1.7	1.4	1.1	1.9	4.2	3.6	5.4	1.8	7.3	1.9	4.6	3.1	5.2	1.9	8.4	1.9
	Korea, Republic of	0.1	0.1	0.1	0.1	0.1	0.2	15.9	0.5	1.4	1.7	3.0	3.9	16.0	0.4	0.7	1.1	2.8	2.9
	Kuwait	3.1	1.8	1.6	1.8	2.0	1.8	1.0	1.8	2.0	2.1	6.0	1.0	1.4	2.0	1.5	1.8	7.2	0.2
	Lebanon	3.0	3.0	2.7	3.8	3.1	3.4	4.1	1.0	4.2	3.3	2.4	1.6	6.7	1.2	5.5	4.0	2.7	1.7
	Lithuania	0.4	0.6	0.6	0.5	0.5	0.6	12.4	0.8	5.5	0.4	2.5	6.7	13.0	0.8	4.3	0.7	2.3	4.3
	Malaysia	0.3	0.7	0.7	0.6	0.4	1.0	10.9	3.9	11.5	1.9	2.6	11.1	11.0	4.0	6.7	2.4	3.0	6.9
	Malta	0.4	0.8	—	0.6	0.7	—	11.0	0.8	—	3.0	4.3	—	14.0	0.8	—	3.6	3.9	—
	Mongolia	5.7	5.4	11.2	4.8	5.0	6.3	5.2	1.2	2.2	0.1	2.6	0.1	2.9	1.2	1.3	0.2	2.3	0.0
	Morocco	6.1	5.5	7.7	7.0	7.6	7.9	2.4	4.0	3.5	3.8	5.0	0.8	0.9	1.8	1.9	1.7	3.2	0.6
	Norway	1.5	1.2	1.1	1.1	1.3	1.3	11.3	1.3	0.7	1.5	0.6	1.2	14.6	0.9	1.0	1.7	0.5	1.2
	Oman	2.1	2.8	3.7	2.5	2.8	2.8	4.7	4.1	4.1	0.5	7.0	2.1	4.6	4.9	4.5	0.8	8.3	2.2
	Palestinian National Authority	2.2	2.0	2.9	2.7	2.3	2.6	1.8	1.8	2.7	1.1	4.2	1.2	2.3	1.8	2.2	1.2	5.9	1.4
	Qatar	1.4	3.7	2.2	2.1	2.3	1.8	3.0	5.9	3.2	2.5	7.9	1.5	2.4	2.3	1.6	1.0	3.4	0.2
Romania	0.7	1.7	6.1	1.6	1.8	3.5	15.7	7.6	5.0	7.5	6.9	6.1	14.3	6.5	4.6	6.4	5.2	3.1	
Russian Federation	0.4	0.8	0.7	0.7	0.9	0.8	6.9	1.2	6.0	1.7	3.8	3.3	5.8	0.3	4.7	1.2	2.6	3.2	
Saudi Arabia	2.8	2.3	3.6	3.5	3.5	2.9	3.9	5.8	1.3	3.2	6.6	4.4	3.9	4.6	1.0	2.9	7.4	3.3	
Scotland	1.1	1.2	1.0	1.1	1.0	1.1	19.5	2.8	1.1	1.9	5.6	2.6	26.7	3.9	1.3	2.8	8.3	2.5	
Serbia	0.3	0.9	0.9	1.0	1.2	1.4	10.2	1.8	6.0	4.0	6.7	7.9	9.3	1.9	4.2	2.8	6.3	7.2	
Singapore	0.2	0.6	0.3	0.3	0.2	0.3	12.4	2.2	5.4	4.5	2.1	10.5	16.3	1.9	6.7	4.9	2.9	12.3	
Slovenia	0.5	0.7	0.9	1.2	0.8	0.6	11.0	0.5	2.5	0.2	1.9	2.6	13.0	0.8	2.5	0.1	1.6	2.9	
Sweden	2.6	2.3	2.3	2.3	2.6	2.4	11.4	1.0	0.4	1.5	1.4	0.7	15.6	1.0	0.7	1.3	1.4	0.8	
Syria, Arab Republic of	2.0	4.1	5.1	4.5	3.4	4.1	0.9	1.6	0.2	1.7	5.3	0.7	0.9	2.0	0.1	1.5	5.7	0.2	
Thailand	0.3	1.4	0.8	0.8	0.8	0.9	10.7	2.9	10.7	3.3	7.5	11.4	10.4	3.3	11.3	3.3	7.6	10.4	
Tunisia	2.5	1.7	5.9	1.9	2.2	4.3	7.6	4.4	6.7	1.0	3.8	2.5	4.3	4.0	2.2	0.4	3.5	0.6	
Turkey	0.7	1.4	1.5	1.2	1.2	1.8	12.9	1.8	7.3	11.0	3.5	7.2	11.8	1.7	6.6	9.7	4.2	6.1	
Ukraine	0.3	0.7	1.3	1.1	1.5	3.5	8.9	1.3	8.3	1.5	7.4	1.8	8.6	0.8	5.9	1.2	7.2	0.9	
United States	1.4	1.1	0.9	1.1	1.0	1.1	15.1	1.9	2.2	2.5	2.3	3.4	18.0	2.0	2.6	1.9	2.0	4.2	
Median	1.2	1.4	1.7	1.4	1.4	1.8	8.0	1.9	3.1	1.9	4.0	2.8	8.1	1.9	2.2	1.8	3.5	2.5	
Interquartile range (IQR)	1.6	1.5	2.7	1.8	1.5	2.6	7.8	1.7	4.2	2.3	3.4	4.1	10.2	1.7	3.6	1.9	3.4	3.5	
25th percentile	0.4	0.9	0.9	0.7	0.8	0.9	4.0	1.3	1.3	1.0	2.5	1.2	3.1	1.0	1.0	1.0	2.3	0.7	
75th percentile	2.0	2.4	3.6	2.5	2.3	3.5	11.8	2.9	5.4	3.3	6.0	5.3	13.3	2.6	4.6	2.9	5.7	4.2	
TIMSS 2007 Grade 8 benchmark participants	Canada (British Columbia)	2.6	3.0	3.0	3.0	3.0	3.0	7.6	1.8	2.0	2.4	2.0	3.1	12.0	1.3	0.9	1.2	1.6	2.2
	Canada (Ontario)	2.5	2.4	2.5	2.5	2.4	2.4	9.1	1.5	0.3	2.0	1.2	1.3	14.2	1.1	0.5	2.7	1.4	1.2
	Canada (Québec)	2.6	2.5	2.5	2.6	2.5	2.6	9.4	0.3	0.9	1.0	0.3	1.4	12.1	0.2	0.1	1.3	0.4	0.2
	Spain (Basque Country)	0.7	0.5	1.1	1.1	0.5	0.5	12.8	1.3	3.8	2.1	4.0	3.2	13.1	0.6	3.7	1.4	3.6	2.2
	United Arab Emirates (Dubai)	12.5	11.9	12.1	11.9	11.9	11.9	9.5	1.2	3.1	8.7	9.8	5.1	10.0	0.6	2.1	5.4	6.1	3.2
	United States (Massachusetts)	0.8	0.3	0.4	0.3	0.4	0.4	19.6	1.1	1.5	1.3	2.5	4.7	22.5	0.6	1.1	0.8	2.1	4.1
	United States (Minnesota)	1.2	0.9	0.8	0.8	0.8	1.0	12.0	1.0	2.9	1.6	1.2	4.4	16.3	0.7	2.6	2.1	2.3	4.1

Key:  Moderate percentage missing value (5.0–15.0%)  High percentage missing value (> 15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  Low percentage explained variance (< 5.0%)

— Data not available

Source: Trends in International Mathematics and Science Study 2007.



Table A.5: Results for PIRLS 2006 items on immigration status

	Student questionnaire								
	Country	Percent missing values				Percent explained variance ( $R^2$ )—reading achievement			
		Mother born in country (ASBGBRNM)	Father born in country (ASBGBRNF)	Parents born in country (ASDGBRN)	Student born in country (ASBGBRN1)	Mother born in country (ASBGBRNM)	Father born in country (ASBGBRNF)	Parents born in country (ASDGBRN)	Student born in country (ASBGBRN1)
PIRLS 2006 participants	Austria	3.0	4.6	2.4	9.2	5.9	6.3	0.2	2.0
	Belgium (Flemish)	0.7	0.7	2.6	0.7	4.4	3.6	2.3	0.8
	Belgium (French)	7.4	7.4	12.1	7.3	1.9	2.5	0.8	0.8
	Bulgaria	2.2	2.2	2.8	2.1	1.2	0.7	1.3	0.7
	Chinese Taipei	13.0	12.9	10.4	1.2	2.5	2.3	1.7	4.4
	Denmark	3.6	5.1	2.7	0.8	1.2	2.0	0.1	0.4
	England	8.8	12.5	6.4	1.4	2.4	2.3	0.4	3.4
	France	4.1	4.1	6.9	3.7	2.1	2.7	0.7	0.5
	Georgia	6.8	5.7	4.4	3.8	0.2	0.5	0.8	0.0
	Germany	11.3	13.2	10.3	8.8	6.0	7.1	1.7	1.5
	Hong Kong SAR	20.7	22.5	17.0	7.2	0.4	0.6	0.0	0.1
	Hungary	2.4	3.2	1.9	1.2	0.0	0.0	0.1	0.3
	Iceland	1.9	1.9	4.4	2.0	0.6	1.5	0.3	0.3
	Indonesia	6.5	6.9	16.6	6.8	1.1	1.7	2.3	1.1
	Iran, Islamic Republic of	5.6	5.5	4.7	2.6	0.0	0.0	0.6	0.1
	Israel	7.9	7.8	12.1	7.4	0.0	0.3	0.0	0.2
	Italy	2.4	2.5	1.7	0.6	1.0	1.1	0.5	0.7
	Kuwait	34.4	31.1	26.5	23.4	0.0	0.1	1.3	0.1
	Latvia	8.1	14.8	5.5	1.2	0.2	0.2	0.2	0.4
	Lithuania	4.5	7.3	3.4	0.7	0.2	0.2	0.7	0.1
	Luxembourg	0.3	0.3	2.1	0.3	11.3	12.3	1.5	1.2
	Macedonia	7.4	7.3	8.7	6.8	0.9	0.1	0.7	1.0
	Moldova	2.2	2.4	4.3	2.3	0.1	0.0	0.0	0.0
	Morocco	12.5	11.9	7.4	9.8	1.3	0.6	2.3	0.3
	Netherlands	3.6	4.6	2.5	2.4	4.4	4.8	0.2	0.7
	New Zealand	10.7	14.8	8.3	3.1	0.1	0.0	0.0	0.3
	Norway	10.6	11.8	9.4	8.4	2.2	2.4	0.1	0.6
	Poland	1.5	1.6	2.7	1.5	0.3	0.0	0.3	0.0
	Qatar	19.4	18.6	14.6	6.3	4.9	4.7	0.1	1.1
	Romania	2.6	2.6	2.9	2.4	0.4	0.1	0.7	0.1
	Russian Federation	5.0	8.7	3.3	0.6	0.1	0.0	0.0	0.1
	Scotland	8.9	13.5	7.1	0.9	0.7	1.5	0.3	0.8
	Singapore	9.3	12.0	7.1	0.9	0.1	0.4	0.0	0.0
	Slovak Republic	2.8	4.1	1.9	0.7	0.3	0.1	0.2	0.6
Slovenia	3.1	4.6	2.1	0.5	2.0	1.1	0.2	0.9	
South Africa	12.0	12.2	21.8	10.7	0.8	0.3	0.9	1.5	
Spain	2.2	2.3	4.1	2.2	2.3	2.2	0.3	1.6	
Sweden	4.5	3.6	2.4	1.8	2.7	2.4	0.4	2.1	
Trinidad and Tobago	2.9	3.1	7.8	2.7	0.0	0.2	0.0	0.5	
United States	13.5	17.8	11.1	3.3	1.8	2.1	1.1	1.9	
Median	5.3	6.3	5.1	2.4	1.0	0.9	0.4	0.6	
Interquartile range (IQR)	6.9	9.1	6.9	5.7	2.1	2.2	0.8	1.0	
25th percentile	2.7	3.1	2.7	1.1	0.2	0.2	0.1	0.2	
75th percentile	9.6	12.3	9.7	6.8	2.3	2.3	0.9	1.1	
PIRLS 2006 benchmark participants	Canada (Alberta)	4.6	4.7	11.5	4.6	0.4	0.4	0.3	0.3
	Canada (British Columbia)	4.5	4.7	11.5	4.5	0.0	0.0	0.0	0.2
	Canada (Nova Scotia)	5.6	5.7	11.0	5.6	0.0	0.0	0.0	0.1
	Canada (Ontario)	3.7	3.7	9.9	3.6	0.6	1.1	0.2	0.0
	Canada (Québec)	6.2	6.3	12.2	6.2	1.7	2.0	0.3	0.6
	Iceland (Grade 5)	1.8	1.8	2.8	1.9	0.9	0.2	0.4	0.3
Norway (Grade 5)	7.2	6.8	7.2	5.7	0.2	1.1	0.1	0.7	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Progress in International Reading Literacy Study 2006.

Table A.6: Results for TIMSS 2007 Grade 4 items on immigration status

	Country	Percent missing values					Percent explained variance (R <sup>2</sup> )— math achievement					Percent explained variance (R <sup>2</sup> )— science achievement				
		Mother born in country (AS4GMBRN)	Father born in country (AS4GFBRN)	Parents born in country (ASDGBORN)	Student born in country (AS4GBORN)	Student's age of immigration (AS4GBRNC*)	Mother born in country (AS4GMBRN)	Father born in country (AS4GFBRN)	Parents born in country (ASDGBORN)	Student born in country (AS4GBORN)	Student's age of immigration (AS4GBRNC*)	Mother born in country (AS4GMBRN)	Father born in country (AS4GFBRN)	Parents born in country (ASDGBORN)	Student born in country (AS4GBORN)	Student's age of immigration (AS4GBRNC*)
TIMSS 2007 Grade 4 participants	Algeria	5.4	6.1	3.7	6.3	32.4	0.1	0.3	0.4	0.6	0.3	0.5	0.4	0.8	0.8	0.2
	Armenia	8.1	7.8	6.3	5.5	2.0	0.0	0.0	0.0	0.1	0.0	0.3	0.1	0.1	0.1	0.0
	Australia	1.4	1.9	1.0	1.1	2.3	1.5	0.5	1.0	2.7	1.5	0.3	0.0	0.1	3.6	1.1
	Austria	1.4	1.3	0.9	0.9	3.6	4.4	5.4	5.8	8.3	0.1	10.0	10.8	12.3	10.2	0.5
	Chinese Taipei	2.0	2.6	1.7	1.2	5.5	3.5	3.8	5.1	10.4	1.0	3.7	3.9	5.3	11.6	0.4
	Colombia	8.0	6.8	5.5	5.2	8.0	0.3	0.5	0.7	1.7	1.9	0.2	0.5	0.6	2.4	0.7
	Czech Republic	1.1	1.4	0.6	0.8	3.6	0.2	0.5	0.5	1.9	3.2	0.3	0.9	0.9	2.0	0.7
	Denmark	4.4	4.3	3.7	3.8	1.0	2.8	3.6	4.0	3.0	0.6	4.0	4.8	5.5	2.6	5.3
	El Salvador	4.7	4.5	2.7	3.6	5.7	0.8	0.8	1.5	3.2	1.0	0.5	0.5	1.0	2.4	1.4
	England	1.7	2.7	1.2	1.3	4.6	0.8	1.1	1.3	6.9	0.0	1.7	2.0	2.5	6.6	0.0
	Georgia	5.1	5.2	4.2	4.1	5.4	2.6	2.6	3.6	6.2	1.7	2.4	2.5	3.4	5.4	2.0
	Germany	13.4	14.0	13.1	12.9	3.1	5.7	5.8	6.9	4.5	0.2	10.3	10.4	12.4	6.4	0.8
	Hong Kong SAR	1.8	2.2	1.6	1.1	0.8	0.2	0.3	0.2	0.6	1.2	0.2	0.2	0.2	0.2	1.6
	Hungary	2.2	2.1	1.4	1.7	5.2	0.3	0.7	1.1	7.1	2.8	0.2	1.1	1.3	6.4	0.9
	Iran, Islamic Republic of	1.1	1.4	0.8	1.9	26.7	0.3	0.1	0.3	0.1	14.6	0.0	0.0	0.0	0.0	3.5
	Italy	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.7	0.6	2.2	0.5	1.0	0.9	1.0	0.7
	Japan	2.8	3.2	2.7	1.4	1.8	0.8	1.7	1.7	0.1	1.4	0.7	1.6	1.5	0.1	2.3
	Kazakhstan	0.3	0.2	0.1	0.1	2.8	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.2
	Kuwait	8.9	9.9	7.9	7.6	3.8	0.3	0.0	0.0	5.9	1.8	0.4	0.0	0.1	4.9	2.7
	Latvia	2.6	3.5	2.3	2.0	1.8	0.9	0.6	1.1	5.8	4.8	1.2	1.0	1.7	9.0	1.2
	Lithuania	1.0	1.3	0.8	0.7	2.6	1.0	0.5	1.1	8.8	4.4	0.4	0.5	0.7	7.4	2.0
	Mongolia	11.7	11.3	10.0	9.2	4.5	1.0	1.2	1.4	8.4	3.0	0.6	0.6	0.7	6.3	1.9
	Morocco	7.4	8.0	6.1	8.5	17.7	0.5	0.1	0.5	1.2	1.8	0.2	0.0	0.1	0.7	0.1
	Netherlands	5.6	7.0	4.8	3.8	2.9	5.4	5.6	6.7	5.1	2.0	6.6	8.1	8.7	8.2	1.3
	New Zealand	2.8	2.9	1.8	1.5	1.4	0.1	0.0	0.0	3.9	0.4	0.0	0.2	0.1	5.1	0.2
	Norway	3.9	3.7	3.4	3.6	6.2	0.8	1.1	1.4	0.9	0.4	1.8	1.8	2.6	2.1	0.0
	Qatar	8.7	8.9	7.8	7.9	2.8	2.7	1.2	2.4	5.0	0.3	2.8	1.8	2.9	2.2	0.0
	Russian Federation	1.0	1.8	0.8	0.8	9.4	1.5	1.3	2.0	2.4	1.7	1.7	1.2	2.0	2.4	2.8
	Scotland	1.4	2.4	0.9	1.0	4.1	1.3	0.7	1.6	8.9	0.6	1.5	1.0	2.1	8.5	0.8
	Singapore	1.9	1.9	1.7	0.1	6.3	0.1	0.1	0.1	0.9	2.7	0.0	0.0	0.0	0.2	0.4
	Slovak Republic	2.4	2.6	1.7	1.6	14.8	3.1	3.2	4.2	3.2	0.6	2.4	2.9	3.6	2.3	2.9
	Slovenia	2.2	2.0	1.7	1.5	2.2	2.4	1.4	2.3	5.8	0.5	2.3	1.7	2.5	6.7	0.1
	Sweden	1.6	1.6	1.3	1.3	0.3	2.0	2.7	2.9	3.7	1.5	5.3	6.3	7.1	4.7	0.4
Tunisia	5.9	6.8	5.1	7.3	21.0	0.1	0.9	0.9	0.9	1.4	0.1	0.5	0.6	0.8	0.8	
Ukraine	3.2	3.2	2.3	2.5	7.7	0.8	0.7	1.2	6.3	0.0	1.0	0.9	1.5	7.9	0.1	
United States	3.5	3.2	2.2	1.6	1.2	0.5	1.2	1.1	10.8	0.0	2.6	4.1	4.2	13.5	0.2	
Yemen	7.4	10.1	6.0	10.0	6.9	0.4	0.3	0.8	0.8	0.0	0.1	0.1	0.2	0.6	0.8	
Median	2.8	3.2	2.2	1.7	3.8	0.8	0.8	1.1	3.2	1.2	0.6	1.0	1.3	2.6	0.8	
Interquartile range (IQR)	4.0	4.9	3.6	4.0	4.1	1.7	1.1	1.8	5.2	1.6	2.2	1.8	2.7	5.8	1.4	
25th percentile	1.6	1.9	1.2	1.1	2.2	0.3	0.3	0.5	0.9	0.3	0.2	0.2	0.2	0.8	0.2	
75th percentile	5.6	6.8	4.8	5.2	6.3	2.0	1.4	2.3	6.2	1.9	2.4	2.0	2.9	6.6	1.6	
TIMSS 2007 Grade 4 benchmark participants	Canada (Alberta)	3.7	4.1	3.1	2.8	1.5	0.1	0.2	0.2	1.4	1.0	1.3	2.1	2.0	4.0	0.1
	Canada (British Columbia)	3.9	4.9	3.4	2.5	1.3	0.5	0.2	0.4	1.0	0.4	0.3	0.7	0.6	2.7	0.0
	Canada (Ontario)	3.0	3.9	2.7	2.6	1.1	0.5	0.0	0.2	2.1	0.1	0.0	0.4	0.1	2.3	0.1
	Canada (Quebec)	2.3	3.0	1.9	1.7	4.4	1.9	2.1	2.4	3.9	0.2	2.6	3.2	3.4	4.8	0.5
	United Arab Emirates (Dubai)	16.3	16.6	15.7	15.3	3.3	8.2	6.1	8.2	0.1	3.4	11.0	7.1	10.3	0.0	1.9
	United States (Massachusetts)	3.2	3.5	2.2	1.3	0.9	0.3	0.5	0.7	3.7	2.9	2.2	3.3	3.8	6.5	8.1
United States (Minnesota)	2.8	2.5	1.3	1.1	3.8	4.2	5.4	6.0	11.5	0.9	7.1	7.9	9.1	16.2	3.0	

Key:  Moderate percentage missing value (5.0–15.0%)  High percentage missing value (> 15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  Low percentage explained variance (< 5.0%)

Note: \* The variable AS4GBRNC is filter-dependent. The only students selected during determination of the amount of missing values for this variable were those who answered “No” (not born in country) to variable AS4GBORN.

Source: Trends in International Mathematics and Science Study 2007.

Table A.7: Results for TIMSS 2007 Grade 8 items on immigration status

	Country	Percent missing values					Percent explained variance ( $R^2$ )— math achievement					Percent explained variance ( $R^2$ )— science achievement				
		Mother born in country (BS4GMBRN)	Father born in country (BS4GFBRN)	Parents born in country (BSDGBORN)	Student born in country (BS4GBORN)	Student's age of immigration (BS4GBRNC*)	Mother born in country (BS4GMBRN)	Father born in country (BS4GFBRN)	Parents born in country (BSDGBORN)	Student born in country (BS4GBORN)	Student's age of immigration (BS4GBRNC*)	Mother born in country (BS4GMBRN)	Father born in country (BS4GFBRN)	Parents born in country (BSDGBORN)	Student born in country (BS4GBORN)	Student's age of immigration (BS4GBRNC*)
TIMSS 2007 Grade 4 participants	Algeria <sup>1</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Armenia	7.4	7.5	7.0	7.0	6.6	0.3	0.5	0.5	0.1	1.8	0.6	0.6	0.7	0.3	1.7
	Australia	2.7	3.2	2.6	2.4	1.6	0.2	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	1.2
	Bahrain	3.4	3.0	2.8	2.5	2.8	0.3	0.0	0.1	1.2	0.2	0.4	0.1	0.2	2.7	0.2
	Bosnia and Herzegovina	1.5	1.8	1.3	1.2	6.8	0.0	0.2	0.2	0.1	2.6	0.1	0.3	0.2	0.0	2.3
	Botswana	1.4	1.4	1.1	1.6	14.6	0.0	0.4	0.4	0.3	0.3	0.2	0.7	0.7	0.8	1.1
	Bulgaria	2.7	2.6	2.4	2.5	1.9	0.0	0.5	0.4	3.8	0.2	0.3	1.1	1.2	3.1	0.0
	Chinese Taipei	0.7	0.8	0.5	0.4	2.0	0.2	0.6	0.6	6.4	0.3	0.3	0.6	0.7	6.5	0.3
	Colombia	1.7	2.1	1.5	1.4	8.4	1.3	1.0	1.4	3.2	1.0	1.0	0.9	1.1	3.2	1.7
	Cyprus	1.2	1.2	1.2	1.4	4.7	0.3	0.8	0.8	2.2	4.1	0.1	0.2	0.3	1.1	2.5
	Czech Republic	0.8	1.1	0.7	0.5	7.4	0.2	0.2	0.3	0.1	1.6	0.4	0.2	0.4	0.4	0.3
	Egypt	4.6	4.3	3.6	3.4	2.6	3.0	2.8	5.0	12.6	0.1	2.7	3.0	4.8	14.3	0.4
	El Salvador	2.7	3.1	2.4	2.4	6.4	0.2	0.2	0.5	2.1	2.5	0.6	0.3	0.7	2.2	2.3
	England	2.6	3.2	2.6	2.3	4.0	0.3	0.2	0.2	0.5	0.3	0.0	0.0	0.0	1.0	0.8
	Georgia	7.4	7.3	7.0	7.2	9.2	2.1	2.2	2.7	1.1	0.2	3.2	3.5	4.2	2.5	2.6
	Ghana	3.1	3.3	2.4	3.3	4.4	0.8	1.2	1.7	6.2	1.2	0.9	1.1	1.7	6.4	1.0
	Hong Kong SAR	1.4	1.8	1.4	1.1	0.8	0.2	0.0	0.1	1.6	0.1	0.0	0.0	0.0	0.9	0.0
	Hungary	1.2	1.6	1.1	1.3	10.0	0.1	0.0	0.0	1.4	0.0	0.2	0.0	0.0	1.6	0.3
	Indonesia	6.2	6.1	5.9	6.1	1.4	1.7	1.2	1.6	5.8	0.1	1.6	1.0	1.5	7.1	0.8
	Iran, Islamic Republic of	0.6	1.0	0.6	1.1	32.7	0.3	0.3	0.4	0.1	1.4	0.3	0.4	0.4	0.0	1.9
	Israel	5.3	5.4	5.1	5.2	5.8	0.0	0.0	0.0	1.2	2.6	0.0	0.0	0.0	1.3	7.5
	Italy	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.7	0.1	0.2	0.3	0.3	0.9	1.8
	Japan	2.7	3.0	2.7	2.3	6.7	0.2	0.1	0.2	0.2	14.2	0.3	0.1	0.2	0.3	15.8
	Jordan	2.5	2.2	1.7	2.0	3.8	1.2	0.5	0.8	2.8	1.4	0.6	0.2	0.4	4.1	0.1
	Korea, Republic of	0.7	0.8	0.7	0.1	0.0	0.1	0.2	0.2	0.1	6.9	0.0	0.1	0.1	0.2	3.3
	Kuwait	6.1	5.9	4.9	4.6	7.3	0.4	0.0	0.1	2.4	2.4	0.3	0.1	0.0	3.2	4.6
	Lebanon	5.9	6.2	5.7	7.2	4.5	0.1	1.0	0.7	4.1	7.0	0.0	0.6	0.4	3.3	9.1
	Lithuania	1.2	1.6	1.0	1.1	5.6	0.0	0.0	0.0	2.8	0.0	0.0	0.1	0.1	2.9	0.3
	Malaysia	1.4	1.7	1.2	1.3	4.8	0.9	1.2	1.5	2.8	1.7	1.0	1.3	1.6	6.2	0.1
	Malta	2.4	2.6	2.4	2.4	8.3	0.1	0.0	0.1	3.1	1.6	0.0	0.0	0.1	1.5	2.6
	Mongolia	9.3	9.6	8.9	8.7	3.2	4.6	4.3	4.9	4.7	0.1	3.6	3.5	4.0	5.1	1.1
	Morocco	14.4	14.1	13.5	13.8	8.7	1.7	1.2	2.4	4.0	0.8	1.6	1.9	2.7	2.6	2.0
	Norway	2.8	3.0	2.7	2.5	3.7	1.6	1.1	1.8	1.1	3.9	3.7	3.1	4.3	2.1	12.8
	Oman	2.7	2.4	1.7	1.4	5.0	0.3	1.0	1.2	6.6	4.1	0.2	0.9	0.9	6.5	3.2
	Palestinian National Authority	2.2	2.4	1.9	1.9	5.3	0.2	1.7	1.3	4.0	0.8	0.4	2.9	2.2	4.8	1.6
Qatar	4.2	4.3	3.7	3.6	2.6	3.6	1.9	3.1	0.7	1.1	4.4	3.1	4.2	0.1	1.1	
Romania	1.8	1.8	1.7	1.6	0.9	0.6	0.4	0.9	2.4	7.0	0.8	0.7	1.1	2.0	0.4	
Russian Federation	0.9	1.7	0.8	0.8	5.8	0.3	0.4	0.5	0.2	2.0	0.4	0.4	0.5	0.3	5.8	
Saudi Arabia	3.6	3.7	3.0	2.7	3.1	1.1	0.5	0.9	3.7	1.3	1.0	0.1	0.4	4.9	2.9	
Scotland	2.5	3.1	2.5	2.3	2.1	0.0	0.1	0.1	1.6	0.7	0.0	0.1	0.0	1.9	0.9	
Serbia	1.5	1.8	1.4	1.3	2.5	0.0	0.0	0.0	0.8	4.6	0.0	0.0	0.0	1.0	4.1	
Singapore	1.1	1.0	1.0	0.1	2.3	0.9	1.3	1.4	1.2	0.1	0.4	0.8	0.7	0.3	2.3	
Slovenia	1.3	1.4	1.2	1.1	4.0	2.1	2.4	2.8	3.2	0.8	2.4	2.8	3.3	3.1	0.7	
Sweden	3.2	3.2	3.1	3.0	2.4	1.4	2.4	2.4	2.1	1.7	3.1	4.9	4.9	3.1	1.8	
Syria, Arab Republic of	4.7	4.3	3.6	3.6	3.9	0.6	0.8	1.1	4.9	0.8	1.1	1.5	2.0	7.2	0.8	
Thailand	1.3	2.0	0.9	1.0	14.2	0.3	0.1	0.4	0.2	0.7	0.3	0.2	0.6	0.2	14.9	
Tunisia	2.2	2.6	1.8	1.9	16.4	0.8	1.1	1.4	0.2	0.7	1.1	1.8	2.0	0.6	1.2	
Turkey	1.0	1.3	1.0	1.2	8.4	0.3	0.9	0.7	0.1	3.8	0.3	0.8	0.7	0.1	1.2	
Ukraine	2.0	2.6	1.9	2.0	5.5	0.0	0.0	0.0	4.3	3.1	0.0	0.1	0.1	5.0	2.8	
United States	1.6	1.9	1.4	1.4	0.9	1.7	1.7	2.0	3.0	0.0	3.6	3.8	4.3	3.7	0.1	
Median	2.4	2.6	1.9	2.0	4.5	0.3	0.5	0.6	2.1	1.1	0.4	0.6	0.7	2.1	1.6	
Interquartile range (IQR)	2.1	1.6	1.8	1.8	4.4	0.9	1.0	1.2	3.3	2.3	0.9	1.2	1.5	3.1	2.0	
25th percentile	1.3	1.7	1.2	1.2	2.5	0.2	0.1	0.2	0.5	0.2	0.1	0.1	0.2	0.6	0.7	
75th percentile	3.4	3.3	3.0	3.0	6.8	1.1	1.2	1.4	3.7	2.5	1.0	1.3	1.7	3.7	2.6	
TIMSS 2007 Grade 8 benchmark participants	Canada (British Columbia)	4.4	4.8	4.2	4.1	2.0	4.6	3.3	4.5	2.2	0.1	0.1	0.0	0.0	0.0	2.0
	Canada (Ontario)	3.8	4.0	3.6	3.4	2.1	1.4	0.5	1.0	0.8	1.8	0.1	0.0	0.0	0.0	0.1
	Canada (Québec)	4.4	4.8	4.3	4.4	2.6	0.4	0.2	0.4	0.4	2.5	1.8	1.5	1.9	0.6	2.0
	Spain (Basque Country)	2.1	3.2	1.7	3.7	2.8	1.9	2.5	3.7	3.9	0.7	1.2	1.3	2.5	2.8	0.3
	United Arab Emirates (Dubai)	14.2	14.2	13.9	13.6	3.1	14.9	14.3	16.5	6.9	0.1	11.9	11.4	13.2	4.6	0.0
	United States (Massachusetts)	1.2	1.7	1.2	1.1	1.3	2.8	3.5	3.8	4.3	0.6	5.7	6.4	7.1	6.4	0.7
United States (Minnesota)	1.1	1.2	1.0	0.9	2.5	3.1	2.9	3.4	3.8	9.2	7.3	6.9	8.0	5.7	20.9	

Key:  Moderate percentage missing value (5.0–15.0%)  High percentage missing value (> 15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  Low percentage explained variance (< 5.0%)

- Data not available

Notes: \* The variable BS4GBRNC is filter-dependent. The only students selected during determination of the amount of missing values for this variable were those who answered "No" (not born in country) to variable AS4GBORN.

<sup>1</sup> Algeria had only four records with valid data.

Table A.8: Results for PISA 2006 items on immigration status

		Student questionnaire																		
		Percent missing values					Percent explained variance (R <sup>2</sup> )— math achievement					Percent explained variance (R <sup>2</sup> )— reading achievement					Percent explained variance (R <sup>2</sup> )— science achievement			
Country	Mother born in country (ST11Q02)	Father born in country (ST11Q03)	Student born in country (ST11Q01)	Student's age of immigration (ST11Q04)	IMMIG (Index on immigrant background)	Mother born in country (ST11Q02)	Father born in country (ST11Q03)	Student born in country (ST11Q01)	Student's age of immigration (ST11Q04)	IMMIG (Index on immigrant background)	Mother born in country (ST11Q02)	Father born in country (ST11Q03)	Student born in country (ST11Q01)	Student's age of immigration (ST11Q04)	IMMIG (Index on immigrant background)	Mother born in country (ST11Q02)	Father born in country (ST11Q03)	Student born in country (ST11Q01)	Student's age of immigration (ST11Q04)	IMMIG (Index on immigrant background)
Argentina	1.7	2.9	1.8	25.3	2.1	0.1	0.2	0.1	3.7	0.1	0.1	0.5	0.5	2.1	0.5	0.0	0.1	0.1	3.2	0.1
Australia	1.4	2.2	1.8	2.2	2.2	0.4	0.2	0.1	0.4	0.2	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.5	0.0
Austria	0.8	1.2	0.6	3.3	0.8	4.4	5.3	2.5	2.3	5.1	2.4	3.0	1.1	0.8	2.7	6.6	7.9	4.7	7.4	8.7
Azerbaijan	5.9	6.1	3.7	11.8	6.4	0.0	0.0	0.2	1.0	0.0	0.2	0.2	0.3	1.1	0.1	0.0	0.0	0.2	0.8	0.0
Belgium	1.2	1.8	0.8	23.1	1.5	9.1	9.0	5.8	12.9	9.8	7.8	7.3	4.6	7.8	7.7	8.1	7.9	4.3	9.7	8.2
Brazil	0.5	4.3	2.1	0.0	2.1	1.4	0.1	0.2	5.2	1.0	1.4	0.1	0.2	10.0	0.8	1.2	0.1	0.2	5.5	0.7
Bulgaria	4.6	4.8	3.0	13.9	4.6	0.1	0.0	0.1	0.5	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.1	0.3	0.1
Canada	4.9	5.5	4.5	1.9	5.3	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.3	1.1	0.3	0.3	0.3	0.4	0.3	0.6
Chile	3.3	4.6	3.2	0.0	3.7	0.0	0.1	0.0	6.1	0.0	0.1	0.0	0.1	0.4	0.1	0.0	0.1	0.0	3.4	0.1
Chinese Taipei	1.4	1.5	1.6	11.2	1.9	0.0	0.0	0.1	2.1	0.1	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.1	0.3	0.2
Colombia	2.2	3.8	2.2	0.0	2.9	0.2	0.4	0.0	0.9	0.2	0.2	0.2	0.0	5.1	0.3	0.2	0.3	0.0	0.9	0.3
Croatia	1.3	1.8	0.8	17.1	1.6	0.1	0.1	0.2	0.1	0.4	0.1	0.2	0.1	0.0	0.3	0.2	0.3	0.3	0.4	0.6
Czech Republic	0.9	1.5	0.7	6.5	1.1	0.6	0.9	0.3	1.9	0.2	0.9	0.9	0.9	7.9	0.7	0.7	0.9	0.5	3.2	0.4
Denmark	0.7	1.1	0.8	2.6	0.8	3.5	4.2	2.0	2.0	4.7	2.9	3.8	1.8	3.3	4.2	4.3	5.1	1.9	1.0	5.5
Estonia	2.1	4.4	1.1	12.7	2.3	1.2	1.1	0.1	2.3	0.9	4.4	4.1	0.9	0.1	3.8	2.0	1.8	0.1	2.3	1.6
Finland	0.8	1.1	0.4	4.4	0.9	1.0	1.2	1.1	2.8	1.6	0.4	0.6	0.7	1.7	0.8	0.8	1.2	1.8	8.2	1.9
France	2.7	3.8	2.9	15.0	3.0	1.8	2.0	1.1	3.4	3.2	0.7	1.0	0.6	1.1	1.5	1.6	1.9	1.2	2.1	3.1
Germany	5.8	6.9	4.5	14.4	5.7	6.6	6.5	2.3	1.0	5.4	6.0	5.6	2.0	1.3	4.9	9.1	8.7	3.0	2.0	7.4
Greece	1.5	1.6	0.7	4.4	1.5	0.7	0.8	1.1	9.0	1.4	0.5	0.4	0.7	3.2	0.8	1.0	1.0	1.5	9.9	1.8
Hong Kong SAR	0.9	1.5	1.0	6.0	1.3	0.7	0.3	2.0	5.2	1.3	0.3	0.1	1.8	3.3	0.7	0.4	0.1	1.6	4.9	0.8
Hungary	0.9	1.3	0.7	13.8	0.9	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Iceland	2.2	2.5	1.6	3.4	2.4	0.7	0.4	0.0	0.7	1.0	0.7	0.6	0.2	4.4	1.4	0.8	0.5	0.0	2.3	1.2
Indonesia	1.6	1.7	1.1	22.9	1.9	0.3	0.1	0.1	0.3	0.2	0.5	0.4	0.3	0.6	0.5	0.4	0.2	0.2	0.5	0.3
Ireland	2.9	3.4	2.2	8.8	3.1	0.1	0.0	0.0	1.4	0.3	0.1	0.0	0.0	1.0	0.1	0.0	0.0	0.0	0.7	0.1
Israel	8.7	9.1	6.5	5.8	8.4	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.9	0.0	0.0	0.0	0.1	0.3	0.0
Italy	2.5	2.7	1.1	11.4	2.6	0.3	0.5	0.7	2.1	0.7	0.5	0.9	1.1	4.9	1.2	0.6	1.0	1.1	5.8	1.4
Japan	0.2	1.2	0.1	2.3	0.1	0.0	0.1	0.0	4.2	0.0	0.1	0.1	0.0	1.7	0.1	0.0	0.1	0.0	5.2	0.1
Jordan	3.8	3.8	2.2	5.4	3.9	2.3	2.4	1.1	0.8	1.4	2.4	2.7	1.4	0.5	1.4	2.0	2.5	0.9	0.3	1.2
Korea	1.3	1.5	0.4	6.5	1.2	0.0	0.0	0.2	9.0	0.0	0.1	0.0	0.1	7.6	0.1	0.0	0.0	0.1	21.7	0.0
Kyrgyzstan	5.6	6.4	4.2	19.2	6.1	1.1	1.8	0.1	0.1	1.0	0.2	1.0	0.0	0.0	0.3	0.8	1.6	0.1	0.1	0.6
Latvia	2.7	5.2	1.3	4.8	2.9	0.0	0.0	0.0	3.6	0.0	0.1	0.1	0.1	1.4	0.3	0.0	0.0	0.0	4.8	0.0
Liechtenstein	0.9	1.2	0.3	60.0	1.2	2.1	3.0	2.9	2.4	5.6	3.2	4.2	5.5	4.8	8.4	2.4	3.4	2.6	2.6	6.2
Lithuania	2.1	3.0	1.3	17.0	2.3	0.0	0.0	0.2	0.3	0.2	0.1	0.2	0.1	1.3	0.0	0.0	0.1	0.1	0.7	0.0
Luxembourg	1.4	2.2	1.0	6.6	1.7	5.2	6.6	2.9	0.9	6.3	7.6	8.9	3.2	1.8	8.7	8.6	10.0	3.2	1.3	9.4
Macao-China	1.1	1.5	1.6	3.4	1.9	0.2	0.4	0.3	0.5	0.0	0.4	0.9	0.1	0.0	0.2	0.2	0.6	0.8	0.5	0.0
Mexico	2.6	4.1	3.8	28.4	4.6	2.2	2.3	1.7	0.0	2.6	3.2	3.0	2.0	0.1	3.5	2.9	2.7	2.3	0.1	3.6
Montenegro	2.8	3.1	2.4	7.7	3.2	0.6	0.8	1.0	0.6	0.2	0.7	0.9	0.9	0.9	0.3	0.7	0.9	1.4	0.8	0.4
Netherlands	1.3	1.5	1.4	6.0	1.9	4.5	4.5	0.9	4.9	4.3	3.5	3.4	1.2	8.2	3.8	5.2	4.9	1.1	8.0	5.2
New Zealand	2.1	2.8	1.9	1.7	2.4	0.1	0.0	0.1	0.6	0.0	0.1	0.2	0.2	1.6	0.4	0.1	0.2	0.0	1.2	0.2
Norway	2.3	2.4	2.1	4.7	2.4	0.7	1.4	1.0	0.5	1.9	0.6	1.2	1.1	0.9	1.6	0.9	1.5	1.1	1.1	2.0
Poland	1.7	2.1	0.7	6.2	1.8	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	5.7	0.1	0.0	0.0	0.0	3.9	0.0
Portugal	0.9	1.4	1.1	4.6	1.2	0.6	0.9	0.9	0.0	1.8	0.6	0.8	1.0	0.0	1.9	0.8	1.0	1.0	0.0	2.3
Qatar	8.6	8.6	6.0	9.5	8.7	8.4	9.7	8.8	11.1	11.7	8.5	9.2	9.6	10.4	12.1	10.2	11.6	11.0	12.5	14.7
Romania	0.1	0.3	0.0	49.7	0.1	0.0	0.0	0.0	25.7	0.0	0.0	0.1	0.7	30.9	0.0	0.1	0.2	0.2	44.9	0.1
Russian Federation	1.3	3.5	0.8	7.7	1.4	0.1	0.1	0.0	1.5	0.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.2	0.2
Serbia	1.7	2.1	1.0	8.7	1.9	0.3	0.6	0.1	0.0	0.2	0.3	0.5	0.1	0.2	0.1	0.3	0.4	0.1	0.2	0.1
Slovak Republic	1.0	1.5	0.8	10.4	1.1	0.2	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.1
Slovenia	1.1	1.7	0.8	6.2	1.3	1.2	1.4	0.2	1.9	1.4	0.8	1.0	0.1	1.1	0.9	2.3	2.5	0.4	6.2	2.6
Spain	1.2	1.9	1.0	1.1	1.5	1.8	1.7	2.3	1.2	2.7	1.3	1.3	1.9	0.1	2.2	1.7	1.7	2.5	0.5	3.0
Sweden	1.3	1.6	1.6	2.7	1.7	2.2	3.5	2.1	0.7	3.4	1.6	1.7	1.9	4.9	2.6	2.7	3.8	2.6	1.6	4.4
Switzerland	1.2	1.2	0.9	6.7	1.4	7.5	7.7	6.3	0.6	10.3	5.8	6.3	6.1	0.1	9.3	8.4	8.8	6.8	0.2	11.7
Thailand	2.9	3.0	1.5	22.6	3.3	0.0	0.1	0.0	6.1	0.1	0.0	0.1	0.0	3.6	0.0	0.1	0.3	0.0	16.6	0.3
Tunisia	2.0	1.6	1.5	47.7	1.7	0.0	0.3	0.0	15.1	0.5	0.1	0.5	0.0	13.3	0.7	0.0	0.4	0.0	5.6	0.6
Turkey	2.3	2.3	0.8	3.9	2.5	0.3	0.1	0.1	2.9	0.2	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.0	0.2	0.1
United Kingdom	2.5	3.5	2.8	4.4	3.4	0.2	0.5	0.2	0.1	0.6	0.1	0.3	0.4	0.1	0.6	0.2	0.5	0.3	0.1	0.8
United States	2.4	3.6	2.1	8.5	3.2	1.1	1.1	1.0	0.1	1.4	—	—	—	—	—	2.2	2.3	1.5	0.0	2.7
Uruguay	3.4	4.5	3.6	11.5	4.3	0.1	0.0	0.1	0.4	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.5	0.0
Median	1.7	2.3	1.4	6.6	2.1	0.3	0.4	0.2	1.2	0.4	0.3	0.5	0.3	1.1	0.5	0.4	0.4	0.2	1.2	0.6
Interquartile range (IQR)	1.5	2.2	1.4	9.4	1.9	1.4	1.7	1.0	3.2	1.7	1.3	1.1	1.0	3.6	1.5	1.9	1.8	1.4	4.6	2.5
25th percentile	1.2	1.5	0.8	4.4	1.4	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.3	0.1
75th percentile	2.7	3.8	2.2	13.8	3.2	1.4	1.7	1.1	3.6	1.8	1.3	1.2	1.1	3.8	1.7	2.0	1.9	1.5	4.9	2.6

Key:  Moderate percentage missing value (5.0–15.0%)  High percentage missing value (> 15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  Low percentage explained variance (< 5.0%)

— Data not available

Source: Programme in International Student Achievement 2006.



Table A.9: Results for PIRLS 2006 items on language use at home

	Student questionnaire			Home questionnaire					
		Percent missing values	Percent explained variance ( $R^2$ )—reading achievement	Percent missing values			Percent explained variance ( $R^2$ )—reading achievement		
Country	Student's language (ASBGLNGH)	Student's language (ASBGLNGH)	Student's language (ASBGLNGH)	Language of children's books (ASBCHBL)	Father's language use (ASBHLAHF)	Mother's language use (ASBHLAHM)	Language of children's books (ASBCHBL)	Father's language use (ASBHLAHF)	Mother's language use (ASBHLAHM)
Austria	13.4	5.2	7.6	12.0	13.4	0.8	4.4	5.7	
Belgium (Flemish)	3.9	2.8	5.3	7.7	9.3	0.9	2.6	3.5	
Belgium (French)	11.7	2.0	12.1	19.0	19.6	0.0	2.9	1.8	
Bulgaria	5.2	0.0	6.4	11.7	10.7	0.8	5.5	5.8	
Chinese Taipei	5.3	0.6	5.0	20.8	21.1	0.0	5.2	3.6	
Denmark	2.9	0.9	7.7	9.5	9.8	0.0	0.4	0.5	
England	3.5	1.5	55.0	55.7	55.5	0.1	1.5	1.4	
France	9.0	0.1	10.2	15.8	14.7	0.3	0.4	0.9	
Georgia	16.2	0.8	4.1	17.9	15.3	0.6	0.0	0.8	
Germany	17.7	4.9	13.4	18.6	17.9	0.3	5.6	4.0	
Hong Kong SAR	3.9	0.3	5.6	8.8	8.7	0.0	0.0	0.2	
Hungary	2.2	0.3	11.1	15.6	13.2	0.3	0.2	0.1	
Iceland	4.3	0.3	26.0	25.0	25.4	0.0	0.6	0.3	
Indonesia	28.6	0.2	4.2	–	–	0.4	–	–	
Iran, Islamic Republic of	6.3	10.3	7.0	8.2	11.1	0.5	14.1	13.8	
Israel	16.4	1.2	40.8	42.4	43.5	0.1	0.1	0.0	
Italy	11.2	0.9	5.4	8.2	9.0	0.4	0.7	0.7	
Kuwait	33.2	0.0	28.2	37.1	39.3	0.0	0.3	0.4	
Latvia	5.8	0.6	7.5	14.1	10.3	0.2	1.1	1.4	
Lithuania	4.9	0.0	2.8	11.1	5.6	0.0	0.0	0.0	
Luxembourg	1.3	5.8	9.6	16.8	17.8	5.8	0.9	0.9	
Macedonia	16.5	1.3	5.5	13.1	15.6	0.0	0.2	0.3	
Moldova	5.7	0.6	5.4	8.6	4.7	0.1	0.0	0.1	
Morocco	10.6	1.5	9.8	16.2	17.7	2.3	0.9	1.5	
Netherlands	1.9	2.9	34.1	35.9	36.2	0.2	0.8	1.0	
New Zealand	5.0	1.8	37.9	39.5	41.4	1.0	1.6	1.4	
Norway	11.7	0.8	9.2	12.0	11.9	0.0	0.4	0.4	
Poland	4.1	0.9	4.9	7.5	5.9	0.0	0.1	0.0	
Qatar	16.4	0.0	33.9	34.5	41.7	0.0	0.5	0.4	
Romania	8.5	0.3	5.2	8.1	7.3	0.0	2.3	1.7	
Russian Federation	3.2	0.8	1.4	2.0	1.2	0.2	1.3	1.6	
Scotland	3.3	0.0	49.8	49.5	49.9	2.2	5.3	4.5	
Singapore	1.6	1.7	4.4	24.6	26.3	0.0	2.9	5.8	
Slovak Republic	4.7	2.3	4.4	7.2	7.1	0.1	0.8	0.7	
Slovenia	–	–	6.8	10.9	9.4	0.0	0.8	1.0	
South Africa	22.0	0.3	25.9	38.8	41.3	2.8	0.0	0.4	
Spain	7.2	0.2	39.2	42.7	42.7	0.2	0.8	1.0	
Sweden	2.8	1.6	6.8	10.1	13.6	0.5	0.1	0.2	
Trinidad and Tobago	5.9	1.1	14.8	19.6	18.7	0.0	0.0	0.0	
United States	7.1	0.8	1.8	1.8	2.3	–	–	–	
Median	5.8	0.8	7.6	15.6	14.7	0.2	0.8	0.9	
Interquartile range (IQR)	7.8	1.3	12.3	15.6	16.5	0.5	1.9	1.4	
25th percentile	3.9	0.3	5.2	9.2	9.4	0.0	0.2	0.3	
75th percentile	11.7	1.6	17.6	24.8	25.8	0.5	2.1	1.7	
Canada (Alberta)	4.9	0.4	22.8	21.6	22.3	0.2	0.7	0.6	
Canada (British Columbia)	5.4	0.0	26.3	26.2	26.3	0.1	0.1	0.1	
Canada (Nova Scotia)	6.7	0.6	12.2	10.8	11.6	0.8	0.3	0.6	
Canada (Ontario)	4.8	0.6	13.4	13.1	13.6	0.5	1.5	1.1	
Canada (Québec)	6.8	0.3	12.2	17.0	16.1	0.4	0.6	0.4	
Iceland (Grade 5)	3.4	0.4	34.7	34.6	34.7	0.3	0.7	0.5	
Norway (Grade 5)	6.0	0.4	11.2	14.0	15.0	0.4	0.1	0.0	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)

High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

– Data not available

Source: Progress in International Reading Literacy Study 2006.

Table A.10: Results for TIMSS 2007 Grade 4 items on language use at home

		Percent missing values	Percent explained variance ( $R^2$ )—math achievement	Percent explained variance ( $R^2$ )—science achievement
	Country	Student's language (AS4GOLAN)	Student's language (AS4GOLAN)	Student's language (AS4GOLAN)
TIMSS 2007 Grade 4 participants	Algeria	5.2	0.1	0.2
	Armenia	2.9	0.0	0.1
	Australia	0.7	0.2	2.1
	Austria	0.5	3.8	8.5
	Chinese Taipei	1.3	5.4	5.8
	Colombia	2.6	2.6	2.2
	Czech Republic	0.5	0.1	0.0
	Denmark	3.2	2.0	3.3
	El Salvador	1.9	2.1	2.0
	England	0.5	0.5	1.1
	Georgia	1.9	0.9	1.0
	Germany	12.7	3.7	7.9
	Hong Kong SAR	0.8	7.8	8.7
	Hungary	0.6	0.4	0.4
	Iran, Islamic Republic of	0.9	7.1	8.8
	Italy	0.0	0.5	1.0
	Japan	1.0	2.4	2.5
	Kazakhstan	0.0	0.1	0.4
	Kuwait	7.5	0.0	0.0
	Latvia	0.9	0.5	1.8
	Lithuania	0.3	0.0	0.0
	Mongolia	6.3	2.0	2.2
	Morocco	7.0	0.7	0.0
	Netherlands	3.7	2.4	3.5
	New Zealand	1.0	1.6	3.8
	Norway	0.7	0.5	1.1
	Qatar	4.0	3.1	15.2
	Russian Federation	0.3	0.3	1.0
	Scotland	0.5	0.9	1.2
	Singapore	0.3	7.1	11.6
	Slovak Republic	1.1	3.2	4.7
	Slovenia	1.0	1.2	2.1
	Sweden	0.9	1.7	4.5
Tunisia	5.3	0.0	0.1	
Ukraine	0.8	1.5	1.3	
United States	1.8	2.9	6.7	
Yemen	7.3	1.7	1.4	
Median	1.0	1.5	2.0	
Interquartile range (IQR)	2.7	2.1	3.5	
25th percentile	0.6	0.4	1.0	
75th percentile	3.2	2.6	4.5	
TIMSS 2007 Grade 4 benchmark participants	Canada (Alberta)	1.1	0.0	2.3
	Canada (British Columbia)	1.7	0.0	1.9
	Canada (Ontario)	1.2	0.0	0.4
	Canada (Québec)	0.6	0.0	0.3
	United Arab Emirates (Dubai)	14.3	2.1	2.8
	United States (Massachusetts)	1.5	1.6	4.7
	United States (Minnesota)	1.3	5.9	7.6

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Trends in International Mathematics and Science Study 2007.

Table A.11: Results for TIMSS 2007 Grade 8 items on language used at home

		Percent missing values	Percent explained variance ( $R^2$ )—math achievement	Percent explained variance ( $R^2$ )—science achievement
Country	Student's language (BS4GOLAN)	Student's language (BS4GOLAN)	Student's language (BS4GOLAN)	Student's language (BS4GOLAN)
	Algeria	1.2	0.1	0.2
Armenia	1.4	0.1	0.0	
Australia	1.6	0.0	1.0	
Bahrain	0.5	0.5	0.3	
Bosnia and Herzegovina	0.3	0.0	0.0	
Botswana	1.8	0.4	0.2	
Bulgaria	0.9	2.4	3.8	
Chinese Taipei	0.3	5.3	5.2	
Colombia	0.1	0.5	0.6	
Cyprus	0.4	0.8	0.6	
Czech Republic	0.2	0.0	0.0	
Egypt	1.8	0.6	0.5	
El Salvador	0.6	0.6	0.6	
England	1.3	0.1	0.0	
Georgia	0.9	0.0	0.2	
Ghana	1.2	0.0	0.0	
Hong Kong SAR	0.6	6.5	6.6	
Hungary	0.1	0.1	0.3	
Indonesia	1.4	0.1	0.0	
Iran, Islamic Republic of	0.2	7.2	8.5	
Israel	1.9	0.2	0.1	
Italy	0.0	0.2	0.6	
Japan	0.8	1.5	1.5	
Jordan	1.3	0.1	0.1	
Korea, Republic of	0.1	1.4	1.8	
Kuwait	2.6	0.0	0.2	
Lebanon	2.5	0.2	1.4	
Lithuania	0.3	0.0	0.0	
Malaysia	0.1	4.3	0.0	
Malta	0.4	0.7	4.5	
Mongolia	4.6	0.2	0.4	
Morocco	5.5	1.1	1.0	
Norway	1.2	1.8	3.2	
Oman	1.2	0.1	0.3	
Palestinian National Authority	1.2	0.0	0.0	
Qatar	1.3	1.2	20.3	
Romania	0.5	0.5	0.3	
Russian Federation	0.2	0.1	0.3	
Saudi Arabia	1.6	0.1	0.0	
Scotland	0.9	1.1	1.6	
Serbia	0.2	0.7	0.7	
Singapore	0.2	4.9	9.1	
Slovenia	0.5	3.0	4.2	
Sweden	2.3	1.5	2.3	
Syria, Arab Republic of	1.2	0.2	0.1	
Thailand	0.3	5.0	5.3	
Tunisia	0.8	1.2	1.3	
Turkey	0.3	6.5	7.2	
Ukraine	0.2	0.3	0.1	
United States	1.4	2.4	3.7	
Median	0.9	0.5	0.6	
Interquartile range (IQR)	1.1	1.4	2.1	
25th percentile	0.3	0.1	0.1	
75th percentile	1.4	1.4	2.2	
Canada (British Columbia)	2.6	1.7	0.3	
Canada (Ontario)	2.4	0.1	0.7	
Canada (Québec)	2.5	0.0	0.3	
Spain (Basque Country)	5.1	0.0	0.0	
United Arab Emirates (Dubai)	12.7	0.9	0.0	
United States (Massachusetts)	0.8	4.5	6.1	
United States (Minnesota)	1.4	3.1	6.1	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Trends in International Mathematics and Science Study 2007.

Table A.12: Results for PISA 2006 items on language use at home

		Student questionnaire			
		Percent missing values	Percent explained variance ( $R^2$ )— math achievement	Percent explained variance ( $R^2$ )— reading achievement	Percent explained variance ( $R^2$ )— science achievement
Country	Language at home (ST12Q01)	Language at home (ST12Q01)	Language at home (ST12Q01)	Language at home (ST12Q01)	Language at home (ST12Q01)
	Argentina	1.8	0.4	0.9	0.5
Australia	1.8	0.0	0.4	0.4	
Austria	2.9	5.1	3.2	8.6	
Azerbaijan	3.0	0.6	1.8	1.0	
Belgium	8.3	0.3	0.6	0.6	
Brazil	1.1	0.2	0.1	0.1	
Bulgaria	2.7	6.0	6.3	7.6	
Canada	5.3	0.1	1.1	0.8	
Chile	3.3	0.0	0.0	0.0	
Chinese Taipei	4.2	4.4	5.3	4.4	
Colombia	1.1	0.0	0.0	0.0	
Croatia	1.0	0.5	0.6	0.4	
Czech Republic	2.3	0.4	1.0	0.5	
Denmark	5.1	3.8	3.5	3.9	
Estonia	1.3	0.1	0.2	0.1	
Finland	1.0	1.1	0.3	1.6	
France	3.4	2.7	1.5	2.3	
Germany	11.7	5.7	5.4	7.1	
Greece	4.6	1.3	1.8	2.8	
Hong Kong SAR	1.7	1.9	0.8	2.0	
Hungary	1.1	0.4	0.5	0.6	
Iceland	1.7	0.9	1.8	1.3	
Indonesia	1.4	1.0	2.3	1.3	
Ireland	2.4	0.7	0.6	1.1	
Israel	9.1	0.0	0.4	0.1	
Italy	12.8	1.1	2.7	1.8	
Japan	4.0	0.4	0.4	0.5	
Jordan	2.9	0.0	0.0	0.0	
Korea	1.1	0.1	0.1	0.0	
Kyrgyzstan	3.2	2.1	1.4	0.6	
Latvia	1.8	0.2	0.1	0.6	
Liechtenstein	5.9	10.2	12.9	12.1	
Lithuania	1.6	0.3	0.3	0.3	
Luxembourg	10.6	1.0	0.6	0.8	
Macao-China	1.8	0.0	0.1	0.1	
Mexico	0.9	1.8	3.3	2.5	
Montenegro	12.7	1.9	2.0	1.6	
Netherlands	1.8	3.0	3.4	4.1	
New Zealand	3.8	0.0	1.5	1.3	
Norway	3.1	1.4	2.0	2.2	
Poland	1.6	0.1	0.2	0.0	
Portugal	3.9	0.2	0.8	0.6	
Qatar	7.7	2.4	0.7	0.0	
Romania	0.0	0.1	0.2	0.1	
Russian Federation	0.4	1.3	4.8	3.5	
Serbia	0.5	0.0	0.1	0.0	
Slovak Republic	1.3	4.3	3.5	4.2	
Slovenia	1.6	1.8	1.5	3.1	
Spain	3.0	0.3	0.1	0.5	
Sweden	3.2	2.5	2.3	3.4	
Switzerland	5.9	7.8	8.3	10.0	
Thailand	2.4	2.4	2.4	2.7	
Tunisia	6.7	0.2	0.2	0.0	
Turkey	0.6	0.4	0.3	0.3	
United Kingdom	3.0	1.0	1.1	1.3	
United States	2.4	1.9	–	3.5	
Uruguay	4.9	0.2	0.2	0.1	
Median	2.7	0.7	0.9	0.8	
Interquartile range (IQR)	2.6	1.8	2.0	2.4	
25th percentile	1.6	0.2	0.3	0.3	
75th percentile	4.2	1.9	2.3	2.7	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)

High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Programme for International Student Assessment 2006.

Table A.13: Results for PIRLS 2006 items on parental education

		Home questionnaire					
		Percent missing values			Percent explained variance (R <sup>2</sup> )—reading achievement		
Country		Father's education (ASBHLEDF)	Mother's education (ASBHLEDM)	Highest parental education (ASDHEDUP)	Father's education (ASBHLEDF)	Mother's education (ASBHLEDM)	Highest parental education (ASDHEDUP)
PIRLS 2006 participants	Austria	9.2	7.8	6.6	5.6	7.8	7.9
	Belgium (Flemish)	10.2	10.0	9.0	12.3	12.7	13.9
	Belgium (French)	18.4	16.7	15.2	12.1	13.5	11.9
	Bulgaria	9.3	7.2	5.1	12.1	11.0	11.4
	Chinese Taipei	7.3	7.0	4.7	12.9	11.1	13.7
	Denmark	17.6	18.8	16.3	5.1	5.9	6.4
	England	57.2	57.1	56.2	9.8	11.7	12.0
	France	15.6	13.5	13.6	10.2	14.0	14.1
	Georgia	19.4	12.7	8.0	9.0	7.8	8.1
	Germany	27.3	25.3	23.2	10.7	10.7	13.6
	Hong Kong SAR	8.1	7.4	3.8	2.4	2.2	3.0
	Hungary	18.7	16.1	14.0	17.8	20.1	23.7
	Iceland	25.4	25.4	24.8	6.3	7.6	7.6
	Indonesia	13.3	21.0	5.8	11.2	11.1	11.9
	Iran, Islamic Republic of	6.0	8.6	4.1	16.7	18.4	20.1
	Israel	44.6	45.0	42.6	16.4	20.1	19.4
	Italy	8.6	8.6	6.3	4.1	6.4	6.6
	Kuwait	32.5	34.1	27.8	7.4	6.2	6.9
	Latvia	15.9	11.4	9.9	5.4	6.9	5.2
	Lithuania	11.7	5.0	4.5	10.3	11.6	12.7
	Luxembourg	18.1	16.1	17.5	11.3	8.4	13.1
	Macedonia	18.3	19.2	14.8	13.3	20.9	19.2
	Moldova	8.6	5.5	4.7	5.1	5.6	5.5
	Morocco	13.9	17.5	13.3	7.5	6.7	7.1
	Netherlands	40.1	39.7	38.9	9.7	10.0	9.7
	New Zealand	39.0	37.8	36.9	8.6	7.1	9.4
	Norway	12.3	11.6	10.3	6.0	9.0	8.2
	Poland	5.5	4.3	2.9	10.3	11.7	14.6
	Qatar	36.5	39.2	35.2	7.9	4.8	7.6
	Romania	9.3	7.4	5.7	15.8	17.4	18.6
	Russian Federation	3.6	2.9	2.9	7.7	9.4	9.4
	Scotland	54.4	56.0	53.1	15.4	13.5	16.6
	Singapore	6.7	6.2	4.2	10.9	10.7	15.6
	Slovak Republic	8.5	7.4	5.7	8.8	13.5	14.2
Slovenia	10.0	7.8	6.6	7.8	8.3	9.0	
South Africa	49.1	47.0	38.7	22.9	19.7	19.3	
Spain	44.0	42.7	41.2	7.6	9.7	11.2	
Sweden	18.2	19.2	15.8	9.1	9.6	9.8	
Trinidad and Tobago	28.2	30.0	22.7	11.3	13.2	12.4	
United States	–	–	–	–	–	–	
PIRLS 2006 benchmark participants	Median	15.9	16.1	13.3	9.8	10.7	11.9
	Interquartile range (IQR)	18.5	20.1	18.3	4.6	5.7	6.1
	25th percentile	9.3	7.6	5.7	7.6	7.7	8.0
	75th percentile	27.7	27.7	24.0	12.1	13.4	14.1
	Canada (Alberta)	22.2	22.8	22.7	5.4	4.0	4.0
	Canada (British Columbia)	25.7	26.2	26.0	4.4	3.0	3.8
	Canada (Nova Scotia)	12.3	12.0	11.7	7.3	6.6	7.5
	Canada (Ontario)	13.5	13.8	13.7	4.0	3.7	4.4
	Canada (Québec)	18.2	17.9	15.4	7.0	6.7	7.3
Iceland (Grade 5)	35.6	35.4	34.4	6.4	6.8	5.9	
Norway (Grade 5)	16.1	15.8	13.4	7.8	6.3	8.1	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Progress in International Reading Literacy Study 2006.

Table A.14: Results for TIMSS 2007 Grade 8 items on parental education

	Country	Percent missing values			Percent explained variance ( $R^2$ )—math achievement			Percent explained variance ( $R^2$ )—science achievement		
		Mother's education (BS4GMFED)	Father's education (BS4GFMED)	Highest parental education (BSDGEDUP)	Mother's education (BS4GMFED)	Father's education (BS4GFMED)	Highest parental education (BSDGEDUP)	Mother's education (BS4GMFED)	Father's education (BS4GFMED)	Highest parental education (BSDGEDUP)
TIMSS 2007 Grade 8 participants	Algeria	1.5	1.6	1.2	0.2	0.6	0.4	0.5	0.8	0.9
	Armenia	4.3	3.7	2.6	0.1	0.5	0.2	0.0	0.0	0.0
	Australia	37.5	41.7	30.9	9.0	12.4	11.4	11.0	13.2	13.7
	Bahrain	3.1	3.0	2.1	5.3	5.7	5.8	3.2	3.0	3.6
	Bosnia and Herzegovina	1.2	2.0	0.8	8.0	6.3	7.9	9.9	7.2	9.7
	Botswana	5.8	5.4	4.7	1.3	1.2	0.2	1.3	1.0	0.1
	Bulgaria	13.0	16.5	10.4	10.7	10.4	10.4	3.9	3.5	4.5
	Chinese Taipei	12.3	13.9	9.1	7.6	9.7	10.0	9.0	11.2	11.6
	Colombia	9.7	17.3	6.1	8.4	7.6	8.9	8.8	8.0	9.1
	Cyprus	1.4	1.3	1.0	5.2	6.0	6.4	6.7	6.8	7.4
	Czech Republic	16.3	22.0	13.2	4.8	8.3	7.2	5.4	8.5	8.2
	Egypt	2.9	3.2	2.1	1.7	2.4	2.7	1.0	1.5	1.8
	El Salvador	2.9	3.0	1.9	7.2	8.2	8.7	7.8	9.9	9.9
	England	-	-	-	-	-	-	-	-	-
	Georgia	4.0	4.6	2.7	3.2	1.7	2.2	3.8	1.4	2.5
	Ghana	5.6	5.3	3.8	0.6	2.9	1.8	0.8	4.0	2.4
	Hong Kong SAR	18.5	25.6	16.1	2.1	2.7	2.7	1.0	1.8	1.8
	Hungary	9.2	10.9	6.4	15.7	13.0	16.8	14.1	12.3	15.4
	Indonesia	14.9	16.1	10.4	8.7	8.8	8.6	7.8	7.4	7.9
	Iran, Islamic Republic of	2.8	2.5	1.9	13.0	12.8	13.0	13.7	13.4	14.1
	Israel	34.4	35.9	28.6	11.9	11.3	11.3	11.4	11.4	11.2
	Italy	13.3	14.6	10.0	4.8	4.2	6.0	5.6	4.7	6.6
	Japan	27.2	33.0	22.8	7.2	14.1	12.1	5.6	10.9	9.5
	Jordan	13.4	15.2	8.8	4.8	5.7	7.3	5.0	6.0	7.6
	Korea, Republic of	13.8	15.2	10.0	5.7	8.4	7.4	4.7	7.5	6.5
	Kuwait	6.7	5.7	3.7	2.0	2.4	3.7	0.9	1.2	2.3
	Lebanon	6.7	6.9	5.7	11.6	11.1	10.7	16.5	16.2	17.4
	Lithuania	29.8	38.7	25.6	10.9	9.9	10.1	9.2	7.1	8.9
	Malaysia	0.5	0.8	0.2	4.6	5.6	6.0	5.0	6.7	6.6
	Malta	3.2	2.9	2.5	3.0	4.1	5.0	6.8	9.9	10.4
	Mongolia	5.9	12.4	5.3	12.1	6.2	10.4	8.9	4.8	7.8
	Morocco	10.1	8.5	7.0	2.5	4.0	3.8	1.3	2.8	2.3
	Norway	53.4	55.3	47.6	6.5	5.0	7.9	8.4	6.4	9.7
	Oman	3.7	4.1	2.5	0.0	0.8	0.5	0.0	1.1	0.6
	Palestinian National Authority	4.0	3.5	2.5	2.3	2.9	3.7	2.6	2.7	3.4
	Qatar	15.5	16.1	10.4	5.3	6.8	6.5	2.2	3.7	3.1
	Romania	23.4	28.2	19.1	10.2	10.1	11.9	8.0	8.2	10.0
	Russian Federation	15.0	27.4	11.5	10.0	8.8	9.6	7.5	7.0	7.6
	Saudi Arabia	2.8	3.0	1.9	4.6	6.7	5.7	3.1	4.9	4.5
	Scotland	-	-	-	-	-	-	-	-	-
	Serbia	8.2	10.1	5.3	9.1	8.9	10.3	7.6	6.9	8.4
	Singapore	0.8	0.7	0.6	7.9	10.8	9.7	10.9	14.2	13.3
	Slovenia	31.2	33.3	26.3	8.0	5.6	7.7	9.5	7.0	9.0
	Sweden	58.5	58.2	52.0	5.0	5.6	5.9	4.2	4.8	5.8
	Syria, Arab Republic of	4.4	4.5	3.0	2.0	2.4	2.6	1.1	1.3	1.6
Thailand	23.0	25.0	18.3	10.6	13.2	11.7	10.2	12.6	11.6	
Tunisia	15.2	16.9	8.5	7.4	7.5	6.6	3.9	4.1	3.7	
Turkey	4.4	4.2	2.3	13.0	15.9	17.2	11.2	14.5	15.6	
Ukraine	4.3	5.4	3.3	12.9	11.7	12.1	11.2	10.5	10.9	
United States	24.1	30.5	19.3	7.6	10.3	9.0	8.3	10.7	10.0	
Median	8.7	10.5	5.9	6.9	6.7	7.5	6.2	6.9	7.7	
Interquartile range (IQR)	11.8	19.2	9.4	6.2	6.1	5.6	6.0	6.7	6.6	
25th percentile	3.9	3.6	2.5	3.1	4.1	4.7	3.0	3.4	3.4	
75th percentile	15.7	22.8	11.9	9.3	10.1	10.3	9.0	10.1	10.0	
TIMSS 2007 Grade 8 benchmark participants	Canada (British Columbia)	4.7	4.5	4.2	4.6	8.3	6.4	3.1	3.9	4.3
	Canada (Ontario)	3.4	3.4	2.9	6.8	5.3	6.4	7.3	4.7	6.2
	Canada (Québec)	3.6	3.9	3.3	5.8	6.2	6.4	6.0	5.0	6.7
	Spain (Basque Country)	-	-	-	-	-	-	-	-	-
	United Arab Emirates (Dubai)	13.6	13.1	12.0	19.5	19.6	19.9	16.8	16.0	16.4
	United States (Massachusetts)	0.9	1.2	0.8	11.1	14.0	12.7	10.2	15.5	12.1
United States (Minnesota)	1.1	1.3	1.1	8.4	10.7	8.5	8.0	8.8	8.1	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

Source: Trends in International Mathematics and Science Study 2007.

Table A.15: Results for PISA 2006 items on parental education

	Student questionnaire												Home questionnaire											
	Percent missing values			Percent explained variance (R <sup>2</sup> )—math achievement			Percent explained variance (R <sup>2</sup> )—reading achievement			Percent explained variance (R <sup>2</sup> )—science achievement			Percent missing values			Percent explained variance (R <sup>2</sup> )—math achievement			Percent explained variance (R <sup>2</sup> )—reading achievement			Percent explained variance (R <sup>2</sup> )—science achievement		
	Mother's education (MISCED)	Father's education (FISCED)	Highest parental education (HISCED)	Mother's education (MISCED)	Father's education (FISCED)	Highest parental education (HISCED)	Mother's education (MISCED)	Father's education (FISCED)	Highest parental education (HISCED)	Mother's education (MISCED)	Father's education (FISCED)	Highest parental education (HISCED)	Mother's education (PQMISCED)	Father's education (PQFISCED)	Highest parental education (PQHISCED)	Mother's education (PQMISCED)	Father's education (PQFISCED)	Highest parental education (PQHISCED)	Mother's education (PQMISCED)	Father's education (PQFISCED)	Highest parental education (PQHISCED)	Mother's education (PQMISCED)	Father's education (PQFISCED)	Highest parental education (PQHISCED)
Argentina	2.6	6.3	1.6	9.1	7.2	9.9	5.6	4.9	5.9	9.9	7.5	10.5	-	-	-	-	-	-	-	-	-	-	-	-
Australia	3.6	7.1	2.5	4.2	7.0	6.5	4.1	6.5	6.3	4.7	6.2	6.6	-	-	-	-	-	-	-	-	-	-	-	-
Austria	1.4	3.2	0.7	4.6	9.0	4.4	4.4	8.8	3.9	5.8	9.1	6.1	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	1.8	3.7	0.9	0.4	1.7	0.2	2.6	1.9	4.1	3.1	3.1	3.6	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	5.8	9.1	4.4	8.3	9.3	8.4	6.8	8.8	7.1	9.5	10.1	9.3	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	1.4	4.3	0.9	9.8	10.4	9.2	6.3	8.2	6.2	8.7	10.4	7.9	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	3.7	5.6	2.7	12.6	9.4	11.4	11.9	11.2	11.7	13.5	9.7	11.9	9.1	10.9	7.9	20.5	18.9	20.6	19.9	18.7	20.0	22.6	19.9	22.3
Canada	5.1	7.3	4.3	2.6	2.8	3.2	3.3	3.1	4.2	3.5	3.4	4.0	-	-	-	-	-	-	-	-	-	-	-	-
Chile	3.8	8.0	3.1	16.3	12.9	16.5	11.5	11.1	12.0	14.6	12.1	15.4	-	-	-	-	-	-	-	-	-	-	-	-
Chinese Taipei	0.9	1.4	0.3	7.3	8.3	8.8	7.5	8.1	9.0	8.0	8.6	9.4	-	-	-	-	-	-	-	-	-	-	-	-
Colombia	1.4	6.8	0.4	6.5	7.1	7.2	3.8	5.1	5.0	4.9	6.1	5.6	17.3	21.9	14.2	8.5	7.6	8.6	5.5	6.7	6.8	6.2	6.4	6.6
Croatia	1.2	2.8	0.4	4.4	5.7	4.1	4.1	5.7	3.3	5.3	6.8	4.6	8.5	9.6	6.5	7.5	9.9	10.2	5.3	7.3	8.0	7.8	9.6	10.0
Czech Republic	2.1	4.8	1.4	7.0	3.8	5.9	3.3	2.5	2.9	5.2	3.9	5.1	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	3.4	6.8	2.2	4.9	5.0	5.9	4.9	4.1	5.7	6.4	5.3	7.4	40.7	42.3	39.6	4.6	5.0	5.3	3.1	3.2	3.5	5.0	4.6	5.4
Estonia	0.7	8.1	0.4	4.2	7.1	3.2	2.6	6.2	1.5	3.3	5.7	2.4	-	-	-	-	-	-	-	-	-	-	-	-
Finland	2.2	4.2	1.1	3.4	3.8	3.9	3.2	3.2	3.8	3.4	3.4	3.9	-	-	-	-	-	-	-	-	-	-	-	-
France	6.9	11.7	5.8	10.1	10.6	8.7	7.7	8.0	6.2	10.5	9.8	8.8	-	-	-	-	-	-	-	-	-	-	-	-
Germany	7.5	11.8	6.2	8.7	9.4	8.2	7.4	6.4	7.7	9.0	8.9	9.2	24.7	24.8	21.8	5.6	4.2	5.6	5.4	3.7	5.3	6.7	4.4	6.4
Greece	0.5	1.2	0.3	8.0	8.5	10.0	6.6	8.0	6.1	8.3	9.4	9.6	-	-	-	-	-	-	-	-	-	-	-	-
Hong Kong SAR	1.2	2.5	1.0	3.0	3.8	4.2	2.4	2.7	3.3	3.3	3.6	4.6	4.8	7.0	3.9	2.5	4.1	4.1	1.8	2.8	3.0	2.5	3.3	3.7
Hungary	1.7	3.2	0.7	18.7	16.1	18.7	14.5	11.6	14.2	16.7	14.6	17.0	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	3.0	4.2	2.1	7.3	2.5	6.8	4.9	2.0	4.8	6.4	2.5	5.8	38.9	38.1	36.9	6.7	6.7	8.0	6.0	5.1	7.0	6.5	6.7	7.9
Indonesia	0.6	1.2	0.3	4.8	5.6	5.0	4.6	6.2	5.2	5.5	6.2	5.5	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	3.6	5.6	2.7	6.3	5.3	7.1	4.7	4.6	6.2	5.8	4.7	6.8	-	-	-	-	-	-	-	-	-	-	-	-
Israel	8.2	12.1	7.2	7.7	5.2	6.7	4.4	3.2	3.8	6.8	5.3	6.3	-	-	-	-	-	-	-	-	-	-	-	-
Italy	1.5	2.5	0.9	3.4	3.5	3.9	3.1	3.2	3.3	4.1	4.2	4.7	21.6	21.4	18.1	6.2	6.3	6.3	4.2	3.5	3.7	4.7	4.8	4.8
Japan	4.4	8.2	2.9	5.8	7.4	8.9	3.1	6.4	6.7	4.8	6.8	7.7	-	-	-	-	-	-	-	-	-	-	-	-
Jordan	1.3	1.4	0.5	8.6	10.1	10.1	6.4	7.9	7.8	7.4	8.8	8.4	-	-	-	-	-	-	-	-	-	-	-	-
Korea	1.3	2.0	0.5	4.7	5.6	5.4	2.4	3.1	2.8	3.5	4.3	4.2	4.7	5.0	2.3	7.0	9.6	8.5	4.0	6.8	5.6	4.9	7.3	6.1
Kyrgyzstan	1.5	4.5	0.8	2.6	2.7	2.9	2.8	2.5	2.6	2.4	1.9	1.9	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	1.7	9.7	1.0	4.8	5.3	4.3	2.8	4.6	2.7	3.4	4.8	2.8	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	2.4	2.7	2.4	4.7	9.6	10.1	6.2	10.4	10.5	8.3	12.8	13.7	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	1.4	6.2	0.9	8.4	5.8	8.7	5.7	4.2	5.9	6.3	4.7	6.7	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	9.0	11.6	6.8	7.2	15.2	8.6	9.1	16.3	11.2	10.9	17.8	12.8	33.9	34.0	29.7	6.7	6.8	8.7	6.3	7.2	8.8	8.3	8.6	10.8
Macao-China	1.1	2.1	0.8	0.3	0.1	1.2	0.4	0.2	0.9	0.5	0.1	1.5	3.5	4.6	2.6	0.7	1.0	1.2	0.7	0.6	0.8	0.9	1.0	1.2
Mexico	1.1	3.8	0.6	9.4	6.4	11.0	8.0	6.9	10.2	9.2	6.4	11.0	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	1.7	3.1	1.1	4.1	4.1	3.8	3.0	3.3	3.1	3.6	4.3	3.6	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	3.1	5.3	2.1	4.5	5.7	5.8	3.6	6.8	5.1	4.8	7.1	6.7	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	10.3	14.2	7.9	3.4	4.4	5.5	3.3	5.3	5.1	4.0	5.6	5.9	35.7	35.6	32.6	5.4	8.7	8.6	5.9	6.0	7.8	6.4	7.2	9.1
Norway	5.4	7.9	4.2	2.2	1.9	2.4	1.6	1.6	1.8	2.5	2.3	2.7	-	-	-	-	-	-	-	-	-	-	-	-
Poland	2.2	4.9	1.4	11.3	6.4	10.7	9.0	6.0	9.1	11.5	6.7	11.7	1.9	4.7	1.1	12.8	9.3	13.7	11.6	9.0	12.8	13.3	10.6	14.7
Portugal	2.2	4.5	1.5	9.0	10.4	8.7	9.5	10.9	9.4	9.5	10.8	9.2	18.0	19.0	15.9	9.0	7.4	8.9	8.4	6.9	8.6	9.1	7.1	8.9
Qatar	6.0	6.5	5.2	3.2	5.8	4.3	1.4	3.4	2.2	1.7	3.9	2.6	41.3	40.5	39.8	11.9	12.7	13.5	7.1	9.3	9.3	10.9	13.1	13.5
Romania	0.5	1.5	0.1	4.7	4.2	3.7	2.5	2.4	1.8	5.6	4.8	4.3	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	1.0	8.3	0.6	2.6	2.5	2.9	2.5	2.7	2.7	2.6	3.6	3.3	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	0.6	1.8	0.3	4.2	3.9	3.9	5.4	4.0	4.3	5.1	4.2	4.5	-	-	-	-	-	-	-	-	-	-	-	-
Slovak Republic	0.7	3.6	0.3	11.7	9.8	11.8	9.2	7.3	8.9	12.4	9.9	11.6	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	1.7	3.0	0.8	10.0	8.4	11.0	7.4	7.9	8.8	9.2	7.7	10.3	-	-	-	-	-	-	-	-	-	-	-	-
Spain	2.5	4.5	1.8	6.7	6.0	7.8	5.5	4.4	6.7	7.7	6.8	9.0	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	5.0	7.0	3.8	2.7	2.1	2.9	1.8	1.9	2.5	2.6	2.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	2.7	3.9	1.7	5.0	6.5	8.2	5.4	6.8	8.5	6.5	8.3	9.6	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	0.7	2.1	0.5	8.5	9.5	10.0	6.8	8.0	8.4	8.6	9.7	10.3	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	4.2	1.2	0.6	6.1	8.8	7.6	2.9	3.5	2.9	3.7	4.5	4.2	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	1.7	1.1	0.4	10.3	11.5	11.1	5.9	7.6	6.9	9.3	11.3	10.6	14.5	10.9	9.7	2.4	2.3	3.0	2.2	2.2	2.9	3.0	2.7	3.7
United Kingdom	10.1	15.6	8.7	2.5	5.6	3.9	2.8	3.6	3.7	3.2	4.8	4.3	-	-	-	-	-	-	-	-	-	-	-	-
United States	1.6	6.3	1.1	8.7	9.6	9.6	-	-	-	8.7	9.2	9.5	-	-	-	-	-	-	-	-	-	-	-	-
Uruguay	2.7	6.6	1.6	11.9	8.6	11.3	7.9	5.6	7.6	10.5	7.6	10.6	-	-	-	-	-	-	-	-	-	-	-	-
Median	2.1	4.5	1.1	6.1	6.4	7.1	4.6	5.4	5.4	5.8	6.2	6.7	17.6	20.2	15.0	6.7	7.1	8.5	5.4	6.3	6.9	6.5	6.9	7.2
Interquartile range (IQR)	2.3	4.4	2.2	4.5	5.2	5.6	3.8	4.7	4.4	5.4	4.8	5.3	26.8	25.5	24.6	3.4	4.6	3.8	2.7	3.8	4.9	3.6	4.3	4.9
25th percentile	1.3	2.8	0.6	4.2	4.2	4.1	3.0	3.2	3.3	3.6	4.3	4.3	7.5	8.9	5.9	5.2	4.8	5.5	3.8	3.4	3.7	4.9	4.5	5.3
75th percentile	3.7	7.1	2.7	8.7	9.3	9.6	6.8	7.9	7.7	9.0	9.1	9.6	34.4	34.4	30.4	8.6	9.4	9.2	6.5	7.2	8.6	8.5	8.9	10.2

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)

High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)

– Data not available

Source: Programme for International Student Assessment 2006.

Table A.16: Results for PIRLS 2006 items on parental occupation

Country	Home questionnaire							
	Percent missing values							
	Father's employment (ASBHEMPF)	Mother's employment (ASBHEMPM)	Parents' employment (ASDHPEMP)	Father's main job (ASBHMJF)	Mother's main job (ASBHMJM)	Highest parental occupation (ASDHOCPP)	Family's financial situation (ASBHWELL)	
Austria	10.6	9.6	11.6	14.1	12.6	8.8	6.8	
Belgium (Flemish)	7.1	6.5	8.9	9.0	9.5	6.3	7.6	
Belgium (French)	16.2	16.7	20.0	20.8	20.4	15.9	13.9	
Bulgaria	10.4	7.7	11.8	12.6	10.5	6.7	4.5	
Chinese Taipei	8.3	8.7	9.6	9.1	10.2	5.4	3.5	
Denmark	9.2	8.1	9.2	11.4	10.0	7.9	7.5	
England	55.6	54.8	56.5	56.6	56.1	54.7	54.7	
France	14.5	12.3	15.6	17.8	16.3	12.2	–	
Georgia	20.2	16.4	26.3	22.4	16.8	8.0	3.2	
Germany	18.4	18.2	22.0	20.6	20.0	16.6	15.9	
Hong Kong SAR	8.9	10.7	9.6	9.6	11.1	4.1	3.1	
Hungary	16.4	14.3	17.1	18.8	16.2	13.0	11.0	
Iceland	25.9	25.7	26.5	25.7	25.6	24.8	25.2	
Indonesia	24.0	41.7	33.1	25.9	39.5	15.9	5.5	
Iran, Islamic Republic of	11.0	31.7	30.8	14.2	24.1	8.3	2.0	
Israel	44.8	47.5	46.1	48.0	49.0	44.0	39.6	
Italy	9.9	16.8	14.5	11.3	20.2	7.9	6.8	
Kuwait	33.8	46.9	36.2	45.9	46.5	36.4	27.2	
Latvia	15.4	9.6	13.1	17.1	11.1	8.2	7.6	
Lithuania	13.3	5.4	10.9	15.9	8.6	5.3	4.6	
Luxembourg	14.4	14.7	15.4	16.8	17.2	12.0	11.2	
Macedonia	15.4	21.9	25.7	21.4	25.0	15.2	6.2	
Moldova	10.5	6.9	15.1	9.2	7.6	4.8	4.7	
Morocco	12.5	28.4	32.9	10.4	18.0	7.5	5.2	
Netherlands	34.9	35.7	37.3	36.4	35.9	33.9	34.3	
New Zealand	40.0	39.2	40.8	42.6	41.6	38.8	36.5	
Norway	9.9	8.8	10.6	11.2	11.6	8.6	8.0	
Poland	7.5	7.4	8.2	9.6	10.1	4.6	2.7	
Qatar	36.6	45.9	45.9	40.7	47.9	36.9	29.7	
Romania	8.0	8.7	11.9	10.8	10.3	5.4	4.0	
Russian Federation	2.5	1.4	6.4	2.6	1.7	1.3	1.5	
Scotland	50.0	49.5	52.1	51.3	50.6	49.1	48.9	
Singapore	6.0	8.3	8.0	8.9	9.8	4.4	2.8	
Slovak Republic	8.3	6.2	9.5	10.4	9.0	5.7	5.8	
Slovenia	10.3	7.9	8.1	14.2	13.5	9.7	6.7	
South Africa	51.1	49.7	53.1	56.9	54.5	46.4	–	
Spain	43.1	43.4	44.5	45.9	45.3	41.7	39.2	
Sweden	10.1	9.2	10.4	13.6	11.6	9.0	9.1	
Trinidad and Tobago	23.4	26.9	21.9	30.9	31.4	21.7	15.5	
United States	–	–	–	–	–	–	–	
Median	14.4	14.7	15.6	16.8	16.8	9.0	7.5	
Interquartile range (IQR)	15.0	25.2	22.5	17.4	23.2	16.8	11.3	
25th percentile	9.9	8.5	10.5	11.0	10.4	6.5	4.6	
75th Percentile	25.0	33.7	33.0	28.4	33.6	23.3	15.9	
Canada (Alberta)	21.7	22.1	21.9	23.1	23.1	21.2	21.6	
Canada (British Columbia)	25.9	26.1	26.7	27.1	27.3	25.3	25.2	
Canada (Nova Scotia)	11.5	11.4	12.8	14.0	13.5	11.6	11.5	
Canada (Ontario)	13.9	13.9	14.1	15.1	16.2	13.2	13.9	
Canada (Québec)	13.9	12.8	13.8	17.0	15.3	13.0	11.2	
Iceland (Grade 5)	36.2	35.2	36.2	36.0	35.6	34.6	35.1	
Norway (Grade 5)	13.0	12.6	13.1	15.0	14.4	11.4	11.9	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (< 5.0%)  
 – Data not available

Source: Progress in International Reading Literacy Study 2006.





Table A.18: Results for the PIRLS 2006 Home Educational Resources (HER) Scale

	Country	Percent missing values	Percent explained variance (R <sup>2</sup> )—reading achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation			
					Books in the home (ASBBOOK)	Children's books (ASBCHBK)	Home possession items (ASBGT1-4)	Highest parental education (ASDHEDUP)
PIRLS 2006 participants	Austria	5.2	6.9	0.60	0.48	0.53	0.19	0.38
	Belgium (Flemish)	4.3	7.9	0.57	0.43	0.46	0.19	0.38
	Belgium (French)	15.4	5.9	0.61	0.48	0.52	0.17	0.41
	Bulgaria	5.1	8.3	0.78	0.65	0.68	0.50	0.64
	Chinese Taipei	4.1	9.7	0.66	0.55	0.59	0.23	0.47
	Denmark	6.8	5.5	0.55	0.44	0.47	0.19	0.33
	England	53.9	9.1	0.61	0.51	0.49	0.22	0.39
	France	10.7	10.4	0.65	0.51	0.59	0.25	0.45
	Georgia	4.8	2.5	0.67	0.53	0.54	0.28	0.51
	Germany	17.4	7.8	0.65	0.52	0.57	0.23	0.47
	Hong Kong SAR	5.0	3.5	0.68	0.55	0.62	0.22	0.51
	Hungary	10.6	16.7	0.72	0.58	0.65	0.31	0.59
	Iceland	25.2	7.4	0.46	0.34	0.34	0.12	0.28
	Indonesia	5.9	4.5	0.45	0.23	0.27	0.25	0.34
	Iran, Islamic Republic of	4.1	17.3	0.79	0.71	0.71	0.53	0.62
	Israel	41.1	9.7	0.57	0.34	0.51	0.20	0.43
	Italy	4.3	5.7	0.62	0.46	0.50	0.27	0.45
	Kuwait	40.6	1.7	0.37	0.22	0.26	0.11	0.22
	Latvia	6.3	2.3	0.57	0.44	0.54	0.20	0.34
	Lithuania	2.6	6.0	0.67	0.55	0.60	0.25	0.48
	Luxembourg	7.9	9.0	0.68	0.59	0.63	0.23	0.50
	Macedonia	10.9	9.3	0.63	0.52	0.49	0.27	0.43
	Moldova	3.9	5.0	0.60	0.48	0.48	0.27	0.36
	Morocco	8.9	3.3	0.66	0.49	0.48	0.47	0.52
	Netherlands	33.2	7.9	0.60	0.48	0.52	0.13	0.42
	New Zealand	36.2	6.5	0.53	0.40	0.43	0.22	0.28
	Norway	13.6	6.6	0.53	0.40	0.42	0.20	0.32
	Poland	3.7	12.4	0.65	0.49	0.53	0.33	0.48
	Qatar	33.4	2.7	0.38	0.18	0.32	0.13	0.23
	Romania	4.0	14.5	0.74	0.62	0.62	0.43	0.55
	Russian Federation	0.9	7.5	0.61	0.51	0.51	0.23	0.38
	Scotland	48.4	9.5	0.60	0.48	0.50	0.18	0.42
	Singapore	2.7	14.9	0.62	0.50	0.54	0.26	0.40
Slovak Republic	3.3	7.1	0.70	0.58	0.61	0.34	0.48	
Slovenia	5.7	5.0	0.61	0.46	0.54	0.13	0.44	
South Africa	26.1	8.6	0.57	0.37	0.41	0.37	0.38	
Spain	39.2	8.5	0.62	0.44	0.55	0.24	0.45	
Sweden	7.8	10.2	0.54	0.43	0.44	0.13	0.35	
Trinidad and Tobago	15.2	4.9	0.53	0.37	0.37	0.28	0.33	
United States	–	–	–	–	–	–	–	
PIRLS 2006 benchmark participants	Median	7.8	7.5	0.61	0.48	0.52	0.23	0.42
	Interquartile range (IQR)	17.0	4.2	0.09	0.09	0.12	0.08	0.12
	25th percentile	4.3	5.2	0.57	0.43	0.47	0.19	0.36
	75th percentile	21.3	9.4	0.66	0.53	0.58	0.27	0.48
	Canada (Alberta)	22.1	5.7	0.48	0.38	0.40	0.15	0.21
	Canada (British Columbia)	25.8	5.9	0.51	0.41	0.44	0.15	0.24
	Canada (Nova Scotia)	12.6	7.6	0.50	0.37	0.38	0.23	0.27
Canada (Ontario)	13.1	5.6	0.50	0.41	0.40	0.16	0.24	
Canada (Québec)	13.9	5.6	0.55	0.45	0.44	0.20	0.29	
Iceland (Grade 5)	34.0	7.3	0.50	0.40	0.38	0.18	0.28	
Norway (Grade 5)	13.5	7.4	0.60	0.53	0.48	0.24	0.39	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

– Data not available

Source: Progress in International Reading Literacy Study 2006.

Table A.19: Results for the PIRLS 2006 Early Home Literacy Activities (EHLA) Scale

	Country	Percent missing values	Percent explained variance ( $r^2$ )—reading achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation					
					Reading books (ASBHA01)	Telling stories (ASBHA02)	Singing songs (ASBHA03)	Playing with ABC-tools (ASBHA04)	Playing word games (ASBHA07)	Reading aloud (ASBHA09)
PIRLS 2006 participants	Austria	5.6	5.0	0.64	0.39	0.41	0.33	0.33	0.44	0.36
	Belgium (Flemish)	3.9	4.1	0.67	0.39	0.38	0.34	0.38	0.49	0.39
	Belgium (French)	11.5	3.7	0.64	0.39	0.41	0.26	0.36	0.46	0.33
	Bulgaria	4.6	3.4	0.79	0.62	0.60	0.36	0.57	0.58	0.52
	Chinese Taipei	6.0	5.7	0.74	0.51	0.53	0.39	0.48	0.48	0.50
	Denmark	6.5	2.4	0.66	0.41	0.40	0.36	0.34	0.49	0.33
	England	53.9	3.9	0.72	0.45	0.42	0.44	0.42	0.53	0.46
	France	9.4	2.8	0.63	0.39	0.39	0.28	0.38	0.43	0.33
	Georgia	8.8	1.6	0.70	0.50	0.35	0.35	0.50	0.49	0.46
	Germany	13.8	1.3	0.61	0.30	0.37	0.32	0.32	0.43	0.34
	Hong Kong SAR	5.4	1.6	0.73	0.53	0.55	0.44	0.39	0.51	0.41
	Hungary	10.7	2.3	0.63	0.38	0.38	0.32	0.39	0.42	0.29
	Iceland	24.3	3.4	0.69	0.38	0.45	0.36	0.42	0.52	0.40
	Indonesia	4.6	2.7	0.73	0.47	0.43	0.41	0.55	0.54	0.43
	Iran, Islamic Republic of	4.5	7.2	0.74	0.51	0.45	0.44	0.47	0.55	0.47
	Israel	38.1	0.1	0.70	0.40	0.47	0.36	0.49	0.48	0.42
	Italy	6.9	1.9	0.60	0.27	0.37	0.27	0.36	0.41	0.35
	Kuwait	28.0	2.3	0.66	0.45	0.41	0.16	0.47	0.49	0.40
	Latvia	6.8	2.2	0.62	0.39	0.40	0.30	0.36	0.40	0.28
	Lithuania	4.3	1.9	0.64	0.39	0.39	0.29	0.41	0.43	0.33
	Luxembourg	8.6	4.6	0.69	0.45	0.44	0.34	0.42	0.50	0.40
	Macedonia	8.4	2.3	0.69	0.43	0.43	0.38	0.46	0.45	0.41
	Moldova	3.5	3.5	0.69	0.51	0.48	0.32	0.47	0.36	0.42
	Morocco	4.8	3.3	0.73	0.53	0.46	0.35	0.51	0.44	0.53
	Netherlands	33.2	1.8	0.66	0.30	0.35	0.34	0.42	0.50	0.44
	New Zealand	35.5	5.5	0.77	0.52	0.53	0.44	0.49	0.58	0.51
	Norway	7.6	1.7	0.65	0.35	0.38	0.32	0.42	0.44	0.37
	Poland	3.6	3.4	0.63	0.37	0.36	0.30	0.42	0.41	0.34
	Qatar	33.0	1.4	0.62	0.34	0.42	0.16	0.41	0.44	0.37
	Romania	3.6	13.6	0.78	0.56	0.59	0.39	0.58	0.58	0.48
	Russian Federation	1.8	4.0	0.68	0.47	0.41	0.33	0.44	0.47	0.36
	Scotland	48.4	5.4	0.72	0.46	0.45	0.40	0.45	0.53	0.48
	Singapore	2.8	4.3	0.79	0.58	0.59	0.49	0.54	0.52	0.56
Slovak Republic	3.4	2.5	0.61	0.36	0.37	0.24	0.35	0.42	0.34	
Slovenia	6.0	2.6	0.67	0.38	0.43	0.36	0.38	0.48	0.39	
South Africa	16.1	2.2	0.59	0.31	0.27	0.22	0.38	0.39	0.39	
Spain	38.5	3.6	0.64	0.35	0.42	0.36	0.39	0.42	0.28	
Sweden	6.7	1.9	0.69	0.36	0.40	0.38	0.46	0.53	0.39	
Trinidad and Tobago	13.2	6.8	0.73	0.52	0.52	0.39	0.45	0.49	0.45	
United States	-	-	-	-	-	-	-	-	-	
Median	6.9	2.8	0.68	0.40	0.42	0.35	0.42	0.48	0.40	
Interquartile range (IQR)	10.4	2.0	0.09	0.13	0.07	0.07	0.09	0.08	0.11	
25th percentile	4.6	2.0	0.64	0.37	0.39	0.31	0.38	0.43	0.34	
75th percentile	14.9	4.0	0.73	0.50	0.46	0.38	0.47	0.51	0.45	
Canada (Alberta)	20.6	4.1	0.74	0.47	0.48	0.43	0.49	0.53	0.49	
Canada (British Columbia)	23.9	2.7	0.75	0.46	0.48	0.49	0.45	0.52	0.53	
Canada (Nova Scotia)	9.8	3.0	0.73	0.46	0.48	0.40	0.45	0.52	0.51	
Canada (Ontario)	11.4	2.2	0.73	0.47	0.49	0.42	0.46	0.48	0.48	
Canada (Québec)	10.4	2.8	0.68	0.45	0.45	0.34	0.43	0.45	0.38	
Iceland (Grade 5)	33.9	4.9	0.70	0.43	0.45	0.36	0.45	0.51	0.41	
Norway (Grade 5)	10.2	2.5	0.64	0.33	0.38	0.26	0.42	0.46	0.37	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)

High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

— Data not available

Source: Progress in International Reading Literacy Study 2006.

Table A.20: Results for the PISA 2006 Home Possessions (HOMEPOS) Scale

Country	Percent missing values	Percent explained variance ( $R^2$ )—math achievement	Percent explained variance ( $R^2$ )—reading achievement	Percent explained variance ( $R^2$ )—science achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation																	
						Study desk (ST13Q01)	Own room (ST13Q02)	Quiet place to study (ST13Q03)	Computer (ST13Q04)	Educational software (ST13Q05)	Internet (ST13Q06)	Own calculator (ST13Q07)	Classic literature (ST13Q08)	Books of poetry (ST13Q09)	Works of art (ST13Q10)	Books for school work (ST13Q11)	Dictionary (ST13Q12)	Dishwasher (ST13Q13)	DVD/VCR player (ST13Q14)	Cellphone (ST14Q01)	Television (ST14Q02)	Cars (ST14Q03)	Bathrooms (ST14Q04)
Argentina	1.0	17.7	12.8	16.9	0.80	0.28	0.26	0.23	0.49	0.54	0.26	0.41	0.23	0.35	0.23	0.18	0.18	0.46	0.43	0.53	0.61	0.46	0.53
Australia	0.5	4.4	4.9	4.3	0.65	0.28	0.12	0.25	0.32	0.32	0.15	0.37	0.35	0.29	0.30	0.21	0.33	0.16	0.27	0.14	0.40	0.25	0.30
Austria	0.2	9.6	7.9	9.6	0.65	0.15	0.18	0.16	0.28	0.36	0.12	0.44	0.33	0.30	0.25	0.07	0.25	0.15	0.18	0.15	0.44	0.23	0.37
Azerbaijan	0.3	0.1	4.2	2.3	0.79	0.13	0.36	0.18	0.47	0.46	0.31	0.34	0.27	0.27	0.31	0.42	0.35	0.44	0.53	0.45	0.46	0.38	0.41
Belgium	0.2	11.7	10.4	11.6	0.64	0.16	0.18	0.16	0.25	0.33	0.09	0.37	0.32	0.32	0.24	0.14	0.32	0.10	0.22	0.10	0.46	0.36	0.33
Brazil	0.6	18.6	13.9	16.9	0.81	0.46	0.22	0.22	0.44	0.57	0.21	0.30	0.13	0.31	0.22	0.17	0.26	0.50	0.58	0.59	0.62	0.53	0.43
Bulgaria	2.1	17.2	16.7	17.8	0.77	0.41	0.21	0.20	0.44	0.49	0.22	0.39	0.38	0.24	0.34	0.45	0.26	0.30	0.39	0.40	0.52	0.38	0.47
Canada	3.6	3.2	5.3	3.0	0.67	0.23	0.15	0.21	0.33	0.26	0.13	0.35	0.35	0.33	0.26	0.16	0.30	0.10	0.35	0.17	0.38	0.31	0.34
Chile	2.1	18.6	13.7	17.4	0.82	0.46	0.22	0.25	0.48	0.55	0.19	0.44	0.30	0.33	0.21	0.17	0.16	0.40	0.41	0.52	0.61	0.48	0.53
Chinese Taipei	0.1	7.7	6.9	6.1	0.69	0.25	0.16	0.24	0.34	0.26	0.24	0.44	0.42	0.40	0.41	0.19	0.17	0.28	0.21	0.17	0.36	0.28	0.42
Colombia	0.3	12.6	10.9	11.1	0.83	0.43	0.28	0.27	0.52	0.47	0.28	0.41	0.36	0.38	0.33	0.19	0.31	0.48	0.53	0.55	0.57	0.36	0.57
Croatia	0.1	6.9	6.8	7.6	0.72	0.15	0.16	0.14	0.32	0.45	0.08	0.39	0.40	0.36	0.14	0.20	0.36	0.23	0.22	0.24	0.48	0.33	0.44
Czech Republic	0.2	9.0	7.7	9.3	0.69	0.13	0.20	0.16	0.31	0.40	0.09	0.34	0.33	0.28	0.25	0.22	0.34	0.19	0.23	0.17	0.46	0.32	0.32
Denmark	0.6	8.4	5.1	8.1	0.64	0.24	0.15	0.18	0.19	0.26	0.12	0.46	0.37	0.33	0.29	0.16	0.28	0.09	0.23	0.15	0.40	0.24	0.37
Estonia	0.2	5.8	2.9	4.2	0.69	0.16	0.21	0.17	0.34	0.41	0.08	0.35	0.28	0.27	0.27	0.21	0.29	0.29	0.23	0.30	0.47	0.33	0.27
Finland	0.1	4.9	2.6	3.3	0.63	0.13	0.14	0.11	0.23	0.30	0.14	0.41	0.37	0.30	0.27	0.24	0.26	0.14	0.23	0.12	0.33	0.22	0.30
France	1.4	14.2	11.2	13.3	0.68	0.15	0.20	0.15	0.29	0.42	0.10	0.39	0.35	0.38	0.24	0.12	0.38	0.16	0.29	0.05	0.52	0.31	0.39
Germany	3.2	11.7	9.6	10.4	0.68	0.14	0.20	0.20	0.30	0.36	0.13	0.41	0.33	0.29	0.23	0.19	0.29	0.10	0.23	0.14	0.46	0.33	0.40
Greece	0.1	7.9	4.3	6.9	0.68	0.17	0.18	0.12	0.33	0.45	0.15	0.29	0.34	0.30	0.15	0.16	0.35	0.18	0.17	0.21	0.48	0.30	0.35
Hong Kong SAR	0.3	4.9	5.9	4.9	0.72	0.25	0.25	0.26	0.29	0.21	0.13	0.44	0.38	0.35	0.37	0.06	0.13	0.24	0.24	0.27	0.39	0.30	0.46
Hungary	0.4	12.5	11.2	12.1	0.74	0.17	0.22	0.18	0.38	0.48	0.12	0.40	0.40	0.32	0.29	0.27	0.23	0.20	0.32	0.22	0.49	0.42	0.45
Iceland	1.0	0.9	0.3	0.6	0.59	0.19	0.12	0.16	0.29	0.20	0.12	0.39	0.36	0.22	0.29	0.18	0.21	0.08	0.21	0.19	0.32	0.27	0.24
Indonesia <sup>1</sup>	0.0	8.6	10.0	8.5	0.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	1.6	8.1	7.7	7.7	0.66	0.30	0.16	0.21	0.38	0.41	0.10	0.40	0.36	0.35	0.27	0.15	0.29	0.12	0.17	0.05	0.39	0.24	0.41
Israel	4.0	6.9	4.7	6.8	0.75	0.23	0.32	0.27	0.43	0.44	0.22	0.37	0.33	0.38	0.32	0.19	0.42	0.31	0.32	0.32	0.51	0.43	0.28
Italy	0.4	6.2	5.0	7.1	0.68	0.20	0.18	0.19	0.31	0.41	0.10	0.39	0.34	0.31	0.22	0.13	0.33	0.15	0.17	0.18	0.43	0.31	0.39
Japan	0.0	4.1	3.0	3.3	0.65	0.18	0.25	0.24	0.25	0.40	0.16	0.34	0.31	0.30	0.22	0.10	0.26	0.15	0.21	0.21	0.43	0.17	0.30
Jordan	0.2	7.9	8.5	7.6	0.82	0.51	0.42	0.32	0.46	0.49	0.34	0.32	0.27	0.21	0.29	0.35	0.25	0.49	0.53	0.45	0.59	0.47	0.41
Korea	0.1	12.3	7.4	8.3	0.73	0.20	0.27	0.32	0.34	0.24	0.20	0.43	0.36	0.39	0.35	0.17	0.29	0.34	0.26	0.16	0.28	0.36	0.44
Kyrgyzstan	0.2	7.7	6.9	5.7	0.77	0.26	0.29	0.16	0.29	0.29	0.20	0.30	0.37	0.19	0.18	0.38	0.12	0.40	0.53	0.39	0.42	0.40	0.46
Latvia	0.3	9.5	7.2	7.2	0.70	0.10	0.22	0.14	0.45	0.42	0.10	0.29	0.26	0.25	0.18	0.24	0.23	0.27	0.30	0.34	0.51	0.39	0.32
Liechtenstein	0.3	8.4	6.8	7.9	0.63	0.00	0.22	0.06	0.24	0.20	0.06	0.42	0.42	0.27	0.22	0.17	0.22	0.00	0.26	0.08	0.34	0.40	0.39
Lithuania	0.1	13.1	11.3	11.9	0.75	0.20	0.21	0.19	0.38	0.46	0.10	0.42	0.41	0.33	0.27	0.30	0.18	0.35	0.31	0.39	0.50	0.39	0.44
Luxembourg	0.3	10.2	11.5	11.4	0.68	0.19	0.28	0.21	0.30	0.43	0.16	0.44	0.37	0.41	0.23	0.18	0.27	0.20	0.24	0.11	0.47	0.34	0.42
Macao-China	0.1	2.3	2.1	1.9	0.72	0.24	0.29	0.25	0.26	0.29	0.23	0.36	0.29	0.35	0.28	0.09	0.18	0.32	0.29	0.36	0.40	0.36	0.30
Mexico	0.2	12.9	11.2	13.3	0.85	0.31	0.35	0.25	0.53	0.57	0.11	0.43	0.31	0.42	0.32	0.11	0.23	0.48	0.63	0.62	0.65	0.56	0.50
Montenegro	0.8	4.3	1.8	2.6	0.75	0.16	0.21	0.20	0.45	0.56	0.07	0.32	0.34	0.33	0.33	0.22	0.44	0.32	0.33	0.39	0.57	0.37	0.46
Netherlands	0.1	11.0	8.3	10.5	0.63	0.18	0.10	0.15	0.23	0.21	0.07	0.42	0.34	0.34	0.34	0.15	0.20	0.12	0.15	0.06	0.41	0.20	0.36
New Zealand	0.8	9.6	9.3	10.4	0.72	0.30	0.20	0.24	0.37	0.43	0.15	0.36	0.35	0.30	0.27	0.20	0.41	0.19	0.32	0.17	0.44	0.28	0.40
Norway	2.0	3.3	3.1	3.1	0.64	0.23	0.21	0.26	0.27	0.28	0.24	0.43	0.41	0.30	0.35	0.29	0.28	0.22	0.27	0.21	0.37	0.20	0.31
Poland	0.2	8.8	8.4	7.9	0.76	0.22	0.27	0.19	0.47	0.48	0.12	0.35	0.41	0.34	0.23	0.22	0.30	0.37	0.37	0.32	0.54	0.35	0.43
Portugal	0.2	14.7	16.2	14.0	0.78	0.19	0.17	0.13	0.41	0.54	0.12	0.49	0.42	0.44	0.25	0.15	0.51	0.32	0.33	0.30	0.58	0.40	0.53
Qatar	4.5	1.4	0.2	0.2	0.78	0.38	0.31	0.27	0.37	0.44	0.28	0.36	0.35	0.32	0.32	0.34	0.31	0.43	0.33	0.44	0.57	0.40	0.36
Romania	0.0	13.8	8.0	11.9	0.82	0.31	0.32	0.25	0.46	0.55	0.56	0.32	0.25	0.30	0.30	0.30	0.25	0.45	0.49	0.47	0.62	0.47	0.50
Russian Federation	0.1	5.3	5.7	4.6	0.72	0.18	0.19	0.19	0.44	0.39	0.19	0.30	0.29	0.24	0.23	0.28	0.04	0.35	0.47	0.46	0.47	0.32	0.39
Serbia	0.2	9.0	9.7	8.5	0.75	0.22	0.18	0.19	0.42	0.51	0.11	0.39	0.36	0.36	0.20	0.32	0.32	0.34	0.34	0.33	0.50	0.35	0.42
Slovak Republic	0.0	12.2	8.8	11.2	0.72	0.29	0.19	0.22	0.36	0.39	0.21	0.30	0.29	0.28	0.37	0.33	0.21	0.26	0.33	0.24	0.48	0.38	0.36
Slovenia	0.4	6.9	6.5	7.0	0.66	0.12	0.16	0.12	0.27	0.34	0.10	0.42	0.42	0.29	0.18	0.22	0.26	0.20	0.21	0.17	0.40	0.29	0.35
Spain	0.3	8.0	5.6	7.3	0.68	0.11	0.13	0.12	0.27	0.41	0.13	0.34	0.32	0.33	0.20	0.10	0.31	0.15	0.24	0.20	0.47	0.30	0.42
Sweden	0.7	5.7	3.1	4.1	0.66	0.24	0.19	0.21	0.29	0.24	0.20	0.44	0.36	0.29	0.35	0.25	0.32	0.12	0.19	0.18	0.36	0.25	0.36
Switzerland	0.1	5.3	4.8	5.6	0.62	0.14	0.18	0.14	0.24	0.26	0.06	0.35	0.27	0.26	0.24	0.20	0.25	0.20	0.25	0.16	0.40	0.21	0.30
Thailand	0.1	11.5	14.3	13.4	0.82	0.41	0.28	0.30	0.49	0.62	0.32	0.20	0.19	0.20	0.20	0.34	0.00	0.28	0.60	0.62	0.63	0.51	0.44
Tunisia	0.3	12.9	9.1	8.7	0.86	0.53	0.39	0.37	0.49	0.51	0.42	0.38	0.34	0.35	0.40	0.36	0.34	0.52	0.54	0.55	0.62	0.53	0.52
Turkey	0.0	13.3	11.9	13.4	0.82	0.43	0.45	0.33	0.49	0.48	0.28	0.37	0.29	0.36	0.34	0.29	0.51	0.39	0.51	0.52	0.57	0.41	0.49
United Kingdom	1.3	8.5	7.3	8.2	0.67	0.31	0.15	0.24	0.34	0.36	0.17	0.41	0.42	0.34	0.27	0.22	0.30	0.18	0.24	0.09	0.4		

Table A.21: Results for the PISA 2006 Home Educational Resources (HEDRES) Scale

	Country	Percent missing values	Percent explained variance ( $R^2$ )—maths achievement	Percent explained variance ( $R^2$ )—reading achievement	Percent explained variance ( $R^2$ )—science achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation						
							Study desk (ST13Q01)	Quiet place to study (ST13Q03)	Computer for school work (ST13Q04)	Educational software (ST13Q05)	Own calculator (ST13Q07)	Books to help for school work (ST13Q11)	Dictionary (ST13Q12)
PISA 2006 participants	Argentina	1.5	14.4	11.9	14.9	0.59	0.28	0.24	0.47	0.48	0.25	0.25	0.21
	Australia	0.9	4.4	4.7	3.9	0.60	0.38	0.34	0.31	0.39	0.25	0.36	0.32
	Austria	0.6	2.8	3.6	2.8	0.41	0.22	0.19	0.23	0.28	0.15	0.28	0.12
	Azerbaijan	2.1	0.6	6.6	5.7	0.57	0.19	0.20	0.30	0.32	0.29	0.35	0.41
	Belgium	0.4	6.8	7.8	6.8	0.47	0.24	0.23	0.30	0.28	0.16	0.27	0.24
	Brazil	1.0	14.4	11.2	14.4	0.58	0.39	0.25	0.46	0.42	0.19	0.20	0.18
	Bulgaria	2.4	16.0	18.2	16.7	0.66	0.45	0.24	0.46	0.43	0.24	0.35	0.43
	Canada	3.7	2.3	4.1	2.1	0.53	0.33	0.29	0.23	0.33	0.19	0.35	0.24
	Chile	2.1	12.8	9.2	11.8	0.60	0.43	0.26	0.47	0.44	0.18	0.22	0.19
	Chinese Taipei	0.2	7.1	6.9	5.7	0.55	0.25	0.28	0.29	0.33	0.28	0.36	0.22
	Colombia	1.1	12.5	10.8	10.7	0.64	0.40	0.30	0.50	0.50	0.28	0.30	0.21
	Croatia	0.6	5.9	7.6	6.0	0.44	0.16	0.18	0.34	0.30	0.12	0.16	0.18
	Czech Republic	0.5	8.0	7.2	8.5	0.51	0.19	0.17	0.43	0.38	0.15	0.24	0.26
	Denmark	0.6	2.0	1.4	1.2	0.43	0.23	0.23	0.22	0.22	0.15	0.27	0.21
	Estonia	0.3	3.7	1.8	1.9	0.45	0.18	0.16	0.31	0.32	0.11	0.20	0.19
	Finland	0.2	1.5	0.7	0.6	0.44	0.21	0.18	0.18	0.21	0.22	0.30	0.22
	France	1.5	6.9	7.4	7.1	0.46	0.22	0.23	0.32	0.30	0.18	0.27	0.17
	Germany	3.4	6.6	8.0	5.7	0.47	0.21	0.23	0.28	0.30	0.24	0.29	0.24
	Greece	0.2	10.7	9.4	11.3	0.42	0.20	0.14	0.29	0.29	0.16	0.13	0.20
	Hong Kong-China	0.4	2.8	5.7	3.4	0.47	0.28	0.27	0.18	0.31	0.15	0.31	0.08
	Hungary	0.5	11.3	10.8	11.7	0.50	0.19	0.17	0.37	0.32	0.18	0.27	0.27
	Iceland	1.0	2.8	1.3	2.3	0.44	0.22	0.26	0.22	0.25	0.16	0.28	0.22
	Indonesia	0.1	7.5	8.0	8.2	0.55	0.29	0.29	0.32	0.26	0.29	0.25	0.26
	Ireland	1.8	4.1	5.6	4.7	0.56	0.34	0.28	0.33	0.39	0.16	0.34	0.23
	Israel	4.4	4.5	5.7	5.1	0.62	0.26	0.33	0.47	0.48	0.27	0.29	0.26
	Italy	0.5	5.9	5.1	6.5	0.47	0.24	0.24	0.34	0.28	0.18	0.24	0.18
	Japan	0.1	2.1	2.5	2.4	0.46	0.22	0.22	0.31	0.23	0.18	0.25	0.18
	Jordan	0.9	10.1	11.0	10.1	0.71	0.46	0.36	0.50	0.48	0.38	0.34	0.40
	Korea	0.1	7.0	5.6	5.4	0.50	0.24	0.29	0.19	0.33	0.26	0.33	0.16
	Kyrgyzstan	2.0	6.2	6.1	6.0	0.47	0.25	0.18	0.22	0.23	0.18	0.21	0.29
	Latvia	0.5	8.5	6.1	6.1	0.51	0.14	0.13	0.51	0.51	0.10	0.12	0.19
	Liechtenstein	0.6	1.0	0.9	0.8	0.33	0.04	0.14	0.16	0.23	0.03	0.25	0.21
	Lithuania	0.2	12.5	10.3	11.8	0.50	0.22	0.16	0.36	0.37	0.13	0.24	0.26
	Luxembourg	0.6	3.1	2.6	2.3	0.49	0.26	0.30	0.30	0.28	0.20	0.30	0.23
	Macao-China	0.1	4.8	5.0	4.9	0.50	0.24	0.28	0.25	0.29	0.24	0.31	0.13
	Mexico	1.0	11.1	10.5	12.0	0.60	0.32	0.26	0.50	0.51	0.11	0.29	0.13
	Montenegro	0.9	6.8	6.2	7.1	0.52	0.17	0.20	0.41	0.43	0.13	0.26	0.22
	Netherlands	0.1	7.7	6.8	6.8	0.42	0.26	0.24	0.25	0.26	0.13	0.22	0.18
	New Zealand	1.1	5.6	6.6	5.7	0.57	0.34	0.28	0.33	0.37	0.19	0.32	0.28
	Norway	2.2	3.6	4.7	3.5	0.57	0.33	0.35	0.35	0.23	0.34	0.37	0.37
	Poland	0.3	6.5	7.5	6.0	0.60	0.25	0.24	0.53	0.55	0.19	0.26	0.25
	Portugal	0.2	8.3	9.4	8.0	0.51	0.21	0.18	0.41	0.42	0.15	0.25	0.20
	Qatar	5.5	8.3	5.8	6.4	0.70	0.44	0.34	0.44	0.42	0.39	0.42	0.45
	Romania	0.5	15.2	9.2	13.0	0.69	0.32	0.26	0.64	0.41	0.59	0.30	0.29
	Russian Federation	0.4	7.5	7.3	7.1	0.56	0.23	0.18	0.46	0.49	0.22	0.24	0.23
Serbia	0.4	8.3	9.4	7.7	0.54	0.25	0.21	0.42	0.38	0.18	0.22	0.29	
Slovak Republic	0.1	16.0	12.5	14.2	0.62	0.34	0.26	0.50	0.37	0.26	0.38	0.36	
Slovenia	0.4	3.5	4.7	3.2	0.42	0.20	0.15	0.27	0.27	0.16	0.24	0.21	
Spain	0.4	5.5	5.4	4.7	0.45	0.17	0.18	0.32	0.32	0.17	0.23	0.16	
Sweden	0.9	3.5	3.0	2.4	0.53	0.31	0.29	0.22	0.25	0.27	0.33	0.28	
Switzerland	0.3	1.5	1.8	1.5	0.42	0.19	0.22	0.20	0.22	0.14	0.28	0.26	
Thailand	0.3	11.6	16.7	15.2	0.63	0.39	0.29	0.43	0.41	0.29	0.22	0.33	
Tunisia	0.7	16.9	12.8	12.7	0.72	0.52	0.40	0.45	0.42	0.44	0.43	0.39	
Turkey	0.2	13.0	10.4	12.2	0.66	0.41	0.34	0.49	0.46	0.28	0.33	0.33	
United Kingdom	1.5	5.0	5.1	4.4	0.58	0.35	0.30	0.28	0.37	0.26	0.34	0.27	
United States	0.8	5.4	—	5.4	0.65	0.41	0.34	0.40	0.47	0.28	0.34	0.31	
Uruguay	1.3	11.6	9.1	11.6	0.58	0.37	0.22	0.48	0.44	0.22	0.15	0.21	
Median	0.6	6.8	6.7	6.0	0.53	0.25	0.24	0.33	0.33	0.19	0.28	0.23	
Interquartile range (IQR)	0.8	7.0	4.4	6.8	0.13	0.13	0.10	0.18	0.14	0.10	0.09	0.09	
25th percentile	0.3	3.7	5.0	3.9	0.47	0.21	0.19	0.28	0.28	0.16	0.24	0.19	
75th percentile	1.1	10.7	9.4	10.7	0.60	0.34	0.29	0.46	0.42	0.26	0.33	0.28	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

— Data not available

Source: Programme for International Student Assessment 2006.

Table A.23: Results for the PISA 2006 Family Wealth (WEALTH) Scale

	Country	Percent missing values	Percent explained variance (R <sup>2</sup> )—math achievement	Percent explained variance (R <sup>2</sup> )—reading achievement	Percent explained variance (R <sup>2</sup> )—science achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation				
							preWEALTH* (ST13Q02, 06, 13–17)	Cellphones (ST14Q01)	Televisions (ST14Q02)	Computers (ST14Q03)	Cars (ST14Q04)
PISA 2006 participants	Argentina	1.0	15.2	9.4	12.7	0.74	0.63	0.46	0.57	0.57	0.49
	Australia	0.5	0.3	0.3	0.1	0.56	0.38	0.38	0.33	0.33	0.32
	Austria	0.2	2.6	0.8	2.0	0.56	0.40	0.25	0.34	0.38	0.32
	Azerbaijan	0.5	0.1	1.3	0.3	0.71	0.63	0.58	0.53	0.58	0.49
	Belgium	0.2	4.3	2.7	3.3	0.59	0.44	0.27	0.28	0.43	0.40
	Brazil	0.7	19.2	12.3	16.2	0.77	0.67	0.59	0.63	0.62	0.55
	Bulgaria	2.2	6.8	5.2	6.7	0.67	0.54	0.37	0.45	0.52	0.47
	Canada	3.6	0.7	0.9	0.3	0.62	0.40	0.45	0.31	0.34	0.40
	Chile	2.1	15.0	10.8	13.2	0.73	0.63	0.43	0.54	0.60	0.50
	Chinese Taipei	0.2	0.5	0.1	0.1	0.54	0.30	0.26	0.32	0.38	0.34
	Colombia	0.3	10.5	8.7	9.1	0.72	0.62	0.54	0.59	0.54	0.38
	Croatia	0.1	2.0	0.8	1.7	0.55	0.45	0.22	0.30	0.43	0.40
	Czech Republic	0.3	2.8	1.5	2.3	0.55	0.46	0.23	0.26	0.43	0.39
	Denmark	0.6	1.2	0.0	0.7	0.60	0.41	0.36	0.33	0.44	0.34
	Estonia	0.2	1.6	0.2	0.8	0.61	0.48	0.24	0.38	0.49	0.41
	Finland	0.1	0.5	0.2	0.1	0.55	0.43	0.29	0.32	0.34	0.32
	France	1.4	4.4	2.2	3.3	0.61	0.48	0.32	0.23	0.49	0.38
	Germany	3.2	3.4	1.9	2.8	0.61	0.46	0.32	0.31	0.43	0.40
	Greece	0.1	2.1	0.2	0.9	0.56	0.47	0.21	0.31	0.45	0.37
	Hong Kong SAR	0.3	1.7	1.1	1.1	0.56	0.44	0.24	0.36	0.39	0.31
	Hungary	0.4	4.2	2.6	3.2	0.61	0.52	0.29	0.29	0.45	0.48
	Iceland	1.0	0.7	1.5	1.1	0.53	0.33	0.24	0.31	0.36	0.33
	Indonesia <sup>1</sup>	0.0	8.5	10.8	8.1	0.76	0.35	0.19	0.20	0.33	0.30
	Ireland	1.6	2.1	1.2	1.0	0.47	0.58	0.33	0.49	0.52	0.46
	Israel	4.1	2.4	0.8	2.1	0.68	0.42	0.16	0.27	0.37	0.37
	Italy	0.4	1.7	0.7	1.6	0.51	0.38	0.27	0.31	0.37	0.25
	Japan	0.0	0.9	0.2	0.3	0.52	0.64	0.53	0.48	0.59	0.53
	Jordan	0.2	5.3	5.2	4.6	0.72	0.42	0.29	0.25	0.30	0.40
	Korea	0.1	4.7	1.4	2.1	0.52	0.58	0.58	0.39	0.42	0.46
	Kyrgyzstan	0.4	3.3	2.4	1.3	0.66	0.53	0.30	0.40	0.50	0.46
	Latvia	0.3	4.4	2.0	2.5	0.65	0.38	0.40	0.32	0.34	0.42
	Liechtenstein	0.3	2.5	1.6	1.7	0.61	0.52	0.31	0.43	0.50	0.47
	Lithuania	0.1	5.7	3.3	4.3	0.64	0.44	0.29	0.29	0.43	0.37
	Luxembourg	0.4	3.0	3.2	3.5	0.59	0.52	0.34	0.46	0.39	0.43
	Macao-China	0.1	0.2	0.1	0.0	0.64	0.73	0.65	0.67	0.62	0.60
	Mexico	0.4	11.1	9.7	11.2	0.81	0.54	0.32	0.43	0.55	0.47
	Montenegro	0.8	0.2	0.3	0.0	0.65	0.44	0.24	0.25	0.42	0.28
	Netherlands	0.1	1.9	1.2	1.7	0.55	0.47	0.39	0.31	0.39	0.38
	New Zealand	0.8	4.3	3.2	4.3	0.60	0.35	0.30	0.39	0.38	0.33
	Norway	2.0	0.0	0.2	0.1	0.57	0.53	0.38	0.38	0.52	0.41
	Poland	0.2	3.8	2.4	2.9	0.64	0.55	0.36	0.38	0.53	0.44
	Portugal	0.2	8.8	9.5	8.0	0.64	0.49	0.40	0.56	0.58	0.53
	Qatar	4.5	0.0	0.4	0.6	0.69	0.59	0.47	0.49	0.58	0.50
	Romania	0.1	6.9	2.9	5.4	0.70	0.43	0.41	0.43	0.46	0.39
	Russian Federation	0.1	1.8	1.6	1.2	0.64	0.50	0.33	0.39	0.49	0.43
Serbia	0.2	3.1	2.5	2.4	0.63	0.45	0.28	0.30	0.44	0.45	
Slovak Republic	0.0	3.8	1.7	3.3	0.58	0.38	0.21	0.30	0.39	0.37	
Slovenia	0.4	0.3	0.0	0.3	0.55	0.44	0.29	0.31	0.41	0.33	
Spain	0.4	1.9	0.7	1.1	0.56	0.40	0.26	0.35	0.36	0.38	
Sweden	0.7	0.7	0.0	0.1	0.57	0.40	0.30	0.36	0.36	0.32	
Switzerland	0.1	0.8	0.3	0.5	0.58	0.71	0.63	0.66	0.65	0.56	
Thailand	0.2	9.0	9.5	9.3	0.80	0.69	0.54	0.59	0.62	0.58	
Tunisia	0.3	8.7	5.2	4.8	0.74	0.64	0.50	0.55	0.57	0.45	
Turkey	0.0	8.8	6.1	7.5	0.72	0.48	0.35	0.29	0.39	0.39	
United Kingdom	1.3	1.4	0.5	1.0	0.60	0.48	0.45	0.27	0.49	0.41	
United States	0.6	7.6	–	5.8	0.64	0.65	0.48	0.55	0.60	0.47	
Uruguay	0.9	10.8	5.3	8.2	0.73	0.68	0.68	0.67	0.67	0.69	
Median	0.3	2.8	1.6	2.1	0.61	0.48	0.33	0.36	0.44	0.40	
Interquartile range (IQR)	0.7	4.6	2.8	3.9	0.12	0.15	0.17	0.17	0.16	0.10	
25th percentile	0.2	1.2	0.5	0.8	0.56	0.42	0.27	0.31	0.39	0.37	
75th percentile	0.8	5.7	3.3	4.6	0.68	0.58	0.45	0.48	0.54	0.47	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

– Data not available

Notes: The Cronbach alpha coefficients for the Family Wealth and Home Possessions Scales were computed following the information provided in the PISA 2006 technical report. However, numbers may not match the ones reported in that publication (OECD, 2009, pp. 317–318).

<sup>1</sup> Indonesia does not use the variable ST13Q13. It is therefore not included in the scale.

\* preWEALTH is derived from Items 2, 6, and 13–17 of Question 13.

Source: Programme for International Student Assessment 2006.

Table A.23: Results for the PISA 2006 Family Wealth (WEALTH) Scale

	Country	Percent missing values	Percent explained variance (R <sup>2</sup> )—math achievement	Percent explained variance (R <sup>2</sup> )—reading achievement	Percent explained variance (R <sup>2</sup> )—science achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation				
							preWEALTH* (ST13Q02, 06, 13–17)	Cellphones (ST14Q01)	Televisions (ST14Q02)	Computers (ST14Q03)	Cars (ST14Q04)
PISA 2006 participants	Argentina	1.0	15.2	9.4	12.7	0.74	0.63	0.46	0.57	0.57	0.49
	Australia	0.5	0.3	0.3	0.1	0.56	0.38	0.38	0.33	0.33	0.32
	Austria	0.2	2.6	0.8	2.0	0.56	0.40	0.25	0.34	0.38	0.32
	Azerbaijan	0.5	0.1	1.3	0.3	0.71	0.63	0.58	0.53	0.58	0.49
	Belgium	0.2	4.3	2.7	3.3	0.59	0.44	0.27	0.28	0.43	0.40
	Brazil	0.7	19.2	12.3	16.2	0.77	0.67	0.59	0.63	0.62	0.55
	Bulgaria	2.2	6.8	5.2	6.7	0.67	0.54	0.37	0.45	0.52	0.47
	Canada	3.6	0.7	0.9	0.3	0.62	0.40	0.45	0.31	0.34	0.40
	Chile	2.1	15.0	10.8	13.2	0.73	0.63	0.43	0.54	0.60	0.50
	Chinese Taipei	0.2	0.5	0.1	0.1	0.54	0.30	0.26	0.32	0.38	0.34
	Colombia	0.3	10.5	8.7	9.1	0.72	0.62	0.54	0.59	0.54	0.38
	Croatia	0.1	2.0	0.8	1.7	0.55	0.45	0.22	0.30	0.43	0.40
	Czech Republic	0.3	2.8	1.5	2.3	0.55	0.46	0.23	0.26	0.43	0.39
	Denmark	0.6	1.2	0.0	0.7	0.60	0.41	0.36	0.33	0.44	0.34
	Estonia	0.2	1.6	0.2	0.8	0.61	0.48	0.24	0.38	0.49	0.41
	Finland	0.1	0.5	0.2	0.1	0.55	0.43	0.29	0.32	0.34	0.32
	France	1.4	4.4	2.2	3.3	0.61	0.48	0.32	0.23	0.49	0.38
	Germany	3.2	3.4	1.9	2.8	0.61	0.46	0.32	0.31	0.43	0.40
	Greece	0.1	2.1	0.2	0.9	0.56	0.47	0.21	0.31	0.45	0.37
	Hong Kong SAR	0.3	1.7	1.1	1.1	0.56	0.44	0.24	0.36	0.39	0.31
	Hungary	0.4	4.2	2.6	3.2	0.61	0.52	0.29	0.29	0.45	0.48
	Iceland	1.0	0.7	1.5	1.1	0.53	0.33	0.24	0.31	0.36	0.33
	Indonesia <sup>1</sup>	0.0	8.5	10.8	8.1	0.76	0.35	0.19	0.20	0.33	0.30
	Ireland	1.6	2.1	1.2	1.0	0.47	0.58	0.33	0.49	0.52	0.46
	Israel	4.1	2.4	0.8	2.1	0.68	0.42	0.16	0.27	0.37	0.37
	Italy	0.4	1.7	0.7	1.6	0.51	0.38	0.27	0.31	0.37	0.25
	Japan	0.0	0.9	0.2	0.3	0.52	0.64	0.53	0.48	0.59	0.53
	Jordan	0.2	5.3	5.2	4.6	0.72	0.42	0.29	0.25	0.30	0.40
	Korea	0.1	4.7	1.4	2.1	0.52	0.58	0.58	0.39	0.42	0.46
	Kyrgyzstan	0.4	3.3	2.4	1.3	0.66	0.53	0.30	0.40	0.50	0.46
	Latvia	0.3	4.4	2.0	2.5	0.65	0.38	0.40	0.32	0.34	0.42
	Liechtenstein	0.3	2.5	1.6	1.7	0.61	0.52	0.31	0.43	0.50	0.47
	Lithuania	0.1	5.7	3.3	4.3	0.64	0.44	0.29	0.29	0.43	0.37
	Luxembourg	0.4	3.0	3.2	3.5	0.59	0.52	0.34	0.46	0.39	0.43
	Macao-China	0.1	0.2	0.1	0.0	0.64	0.73	0.65	0.67	0.62	0.60
	Mexico	0.4	11.1	9.7	11.2	0.81	0.54	0.32	0.43	0.55	0.47
	Montenegro	0.8	0.2	0.3	0.0	0.65	0.44	0.24	0.25	0.42	0.28
	Netherlands	0.1	1.9	1.2	1.7	0.55	0.47	0.39	0.31	0.39	0.38
	New Zealand	0.8	4.3	3.2	4.3	0.60	0.35	0.30	0.39	0.38	0.33
	Norway	2.0	0.0	0.2	0.1	0.57	0.53	0.38	0.38	0.52	0.41
	Poland	0.2	3.8	2.4	2.9	0.64	0.55	0.36	0.38	0.53	0.44
	Portugal	0.2	8.8	9.5	8.0	0.64	0.49	0.40	0.56	0.58	0.53
	Qatar	4.5	0.0	0.4	0.6	0.69	0.59	0.47	0.49	0.58	0.50
	Romania	0.1	6.9	2.9	5.4	0.70	0.43	0.41	0.43	0.46	0.39
	Russian Federation	0.1	1.8	1.6	1.2	0.64	0.50	0.33	0.39	0.49	0.43
Serbia	0.2	3.1	2.5	2.4	0.63	0.45	0.28	0.30	0.44	0.45	
Slovak Republic	0.0	3.8	1.7	3.3	0.58	0.38	0.21	0.30	0.39	0.37	
Slovenia	0.4	0.3	0.0	0.3	0.55	0.44	0.29	0.31	0.41	0.33	
Spain	0.4	1.9	0.7	1.1	0.56	0.40	0.26	0.35	0.36	0.38	
Sweden	0.7	0.7	0.0	0.1	0.57	0.40	0.30	0.36	0.36	0.32	
Switzerland	0.1	0.8	0.3	0.5	0.58	0.71	0.63	0.66	0.65	0.56	
Thailand	0.2	9.0	9.5	9.3	0.80	0.69	0.54	0.59	0.62	0.58	
Tunisia	0.3	8.7	5.2	4.8	0.74	0.64	0.50	0.55	0.57	0.45	
Turkey	0.0	8.8	6.1	7.5	0.72	0.48	0.35	0.29	0.39	0.39	
United Kingdom	1.3	1.4	0.5	1.0	0.60	0.48	0.45	0.27	0.49	0.41	
United States	0.6	7.6	–	5.8	0.64	0.65	0.48	0.55	0.60	0.47	
Uruguay	0.9	10.8	5.3	8.2	0.73	0.68	0.68	0.67	0.67	0.69	
Median	0.3	2.8	1.6	2.1	0.61	0.48	0.33	0.36	0.44	0.40	
Interquartile range (IQR)	0.7	4.6	2.8	3.9	0.12	0.15	0.17	0.17	0.16	0.10	
25th percentile	0.2	1.2	0.5	0.8	0.56	0.42	0.27	0.31	0.39	0.37	
75th percentile	0.8	5.7	3.3	4.6	0.68	0.58	0.45	0.48	0.54	0.47	

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

– Data not available

Notes: The Cronbach alpha coefficients for the Family Wealth and Home Possessions Scales were computed following the information provided in the PISA 2006 technical report. However, numbers may not match the ones reported in that publication (OECD, 2009, pp. 317–318).

<sup>1</sup> Indonesia does not use the variable ST13Q13. It is therefore not included in the scale.

\* preWEALTH is derived from Items 2, 6, and 13–17 of Question 13.

Source: Programme for International Student Assessment 2006.

Table A.24: Results for the PISA 2006 Index of Economic, Social, and Cultural Status (ESCS)

Country	Percent missing values	Percent explained variance (R <sup>2</sup> )—math achievement	Percent explained variance (R <sup>2</sup> )—reading achievement	Percent explained variance (R <sup>2</sup> )—science achievement	Full scale reliabilities—Cronbach's alpha	Item-total correlation		
						Classic literature (ST13Q08)	Books of poetry (ST13Q09)	Works of art (ST13Q10)
Argentina	1.2	19.3	13.5	19.5	0.69	0.49	0.49	0.46
Australia	1.1	11.5	11.8	11.3	0.59	0.32	0.46	0.43
Austria	0.3	13.6	12.9	15.4	0.64	0.38	0.51	0.47
Azerbaijan	0.6	0.3	7.2	4.7	0.70	0.41	0.58	0.56
Belgium	1.0	17.9	16.0	19.4	0.68	0.39	0.54	0.50
Brazil	0.7	18.6	13.7	17.1	0.73	0.52	0.56	0.54
Bulgaria	2.4	22.8	22.7	24.1	0.74	0.46	0.59	0.56
Canada	3.7	7.9	9.5	8.2	0.60	0.31	0.47	0.44
Chile	2.2	25.4	18.6	23.3	0.80	0.59	0.65	0.62
Chinese Taipei	0.3	12.9	13.0	12.5	0.61	0.33	0.46	0.43
Colombia	0.4	13.5	10.3	11.4	0.73	0.50	0.56	0.53
Croatia	0.2	11.2	10.2	12.3	0.69	0.43	0.56	0.52
Czech Republic	0.6	16.1	12.5	15.6	0.65	0.40	0.55	0.50
Denmark	0.7	13.0	10.7	14.1	0.63	0.36	0.48	0.44
Estonia	0.2	12.0	7.7	9.3	0.63	0.39	0.51	0.45
Finland	0.3	10.0	7.7	8.3	0.52	0.26	0.39	0.36
France	2.3	21.3	16.4	21.2	0.67	0.41	0.52	0.48
Germany	4.0	19.5	15.9	19.0	0.64	0.39	0.48	0.43
Greece	0.2	15.5	10.7	15.0	0.71	0.43	0.59	0.57
Hong Kong SAR	0.7	6.8	6.3	6.9	0.72	0.48	0.57	0.54
Hungary	0.4	23.4	19.4	21.4	0.74	0.44	0.59	0.58
Iceland	1.2	8.0	4.9	6.7	0.57	0.24	0.46	0.45
Indonesia	0.1	10.1	10.8	10.2	0.73	0.48	0.57	0.55
Ireland	1.9	13.6	12.3	12.7	0.67	0.41	0.52	0.48
Israel	5.2	11.9	8.2	10.9	0.60	0.35	0.42	0.36
Italy	0.4	8.8	7.5	10.0	0.71	0.44	0.58	0.55
Japan	1.5	9.4	7.3	7.4	0.53	0.26	0.37	0.35
Jordan	0.4	12.9	11.3	11.2	0.73	0.44	0.56	0.54
Korea	0.1	11.0	6.6	8.1	0.66	0.39	0.47	0.45
Kyrgyzstan	0.4	11.1	9.8	8.2	0.57	0.31	0.41	0.37
Latvia	0.7	11.6	9.4	9.7	0.66	0.41	0.50	0.46
Liechtenstein	0.6	17.8	18.1	20.4	0.63	0.31	0.53	0.51
Lithuania	0.4	17.3	14.0	15.2	0.68	0.45	0.53	0.48
Luxembourg	1.7	17.8	20.6	21.7	0.69	0.45	0.57	0.54
Macao-China	0.3	2.2	1.8	2.2	0.65	0.42	0.46	0.42
Mexico	0.3	15.9	14.5	16.8	0.80	0.58	0.64	0.62
Montenegro	0.9	8.4	6.0	7.5	0.66	0.39	0.51	0.47
Netherlands	0.8	15.5	13.7	16.7	0.68	0.44	0.52	0.47
New Zealand	2.1	14.8	14.9	16.4	0.59	0.33	0.44	0.40
Norway	2.1	8.3	7.8	8.3	0.55	0.29	0.43	0.40
Poland	0.4	14.6	13.3	14.5	0.73	0.46	0.68	0.67
Portugal	0.4	16.6	17.9	16.6	0.77	0.56	0.66	0.64
Qatar	4.8	4.7	2.1	2.3	0.60	0.20	0.48	0.50
Romania	0.1	17.4	11.0	16.6	0.69	0.52	0.51	0.42
Russian Federation	0.2	8.4	8.3	8.1	0.59	0.36	0.52	0.48
Serbia	0.3	12.6	14.0	13.2	0.71	0.42	0.61	0.59
Slovak Republic	0.2	19.4	14.9	19.2	0.72	0.46	0.62	0.58
Slovenia	0.5	17.0	15.1	16.7	0.71	0.41	0.60	0.58
Spain	0.5	12.9	10.5	13.9	0.69	0.41	0.59	0.57
Sweden	1.1	11.6	8.5	10.6	0.57	0.33	0.40	0.35
Switzerland	0.4	13.4	14.0	15.7	0.62	0.34	0.48	0.46
Thailand	0.4	14.6	14.7	15.9	0.78	0.58	0.62	0.60
Tunisia	0.3	15.8	8.5	9.5	0.79	0.59	0.65	0.62
Turkey	0.2	16.8	13.1	16.5	0.72	0.49	0.55	0.53
United Kingdom	3.1	14.1	12.2	13.9	0.60	0.36	0.43	0.38
United States	0.8	18.2	—	17.9	0.67	0.40	0.51	0.48
Uruguay	0.9	18.8	13.5	18.3	0.74	0.54	0.55	0.51
Median	0.6	13.6	12.0	13.9	0.68	0.41	0.52	0.48
Interquartile range (IQR)	0.8	6.2	5.7	7.2	0.10	0.11	0.11	0.11
25th percentile	0.3	11.1	8.4	9.5	0.62	0.36	0.48	0.44
75th percentile	1.2	17.3	14.1	16.7	0.72	0.46	0.58	0.55

Key:  Moderate percentage missing value (5.0–15.0%)  
 Moderate percentage explained variance (5.0–9.9%)  
 Moderate reliability (0.65–0.74)  
 Moderate item-total correlation (0.30–0.50)  
 High percentage missing value (> 15.0%)  
 Low percentage explained variance (<5.0%)  
 Low reliability (< 0.65)  
 Low item-total correlation (< 0.30)

— Data not available

Source: Programme for International Student Assessment 2006.



**Table B.1: Correlation analysis results for the PIRLS 2006 scales**

	Country	HER (Home Educational Resources)	EHLA (Early Home Literacy Activities)
PIRLS 2006 participants	Austria	0.26	0.22
	Belgium (Flemish)	0.28	0.20
	Belgium (French)	0.24	0.19
	Bulgaria	0.29	0.18
	Chinese Taipei	0.31	0.24
	Denmark	0.23	0.15
	England	0.30	0.20
	France	0.32	0.17
	Georgia	0.16	0.12
	Germany	0.28	0.11
	Hong Kong SAR	0.19	0.13
	Hungary	0.41	0.15
	Iceland	0.27	0.18
	Indonesia	0.21	0.16
	Iran, Islamic Republic of	0.42	0.27
	Israel	0.31	0.02
	Italy	0.24	0.14
	Kuwait	0.13	0.15
	Latvia	0.15	0.15
	Lithuania	0.24	0.14
	Luxembourg	0.30	0.22
	Macedonia	0.31	0.15
	Moldova	0.22	0.19
	Morocco	0.18	0.18
	Netherlands	0.28	0.13
	New Zealand	0.26	0.24
	Norway	0.26	0.13
	Poland	0.35	0.19
	Qatar	0.16	0.12
	Romania	0.38	0.37
	Russian Federation	0.27	0.20
	Scotland	0.32	0.14
	Singapore	0.31	0.23
Slovak Republic	0.39	0.21	
Slovenia	0.27	0.16	
South Africa	0.29	0.15	
Spain	0.29	0.19	
Sweden	0.22	0.16	
Trinidad and Tobago	0.22	0.26	
United States	–	–	
PIRLS 2006 benchmark participants	Median	0.27	0.17
	Interquartile range (IQR)	0.08	0.06
	25th percentile	0.23	0.14
	75th percentile	0.31	0.20
	Canada (Alberta)	0.24	0.20
Canada (British Columbia)	0.24	0.16	
Canada (Nova Scotia)	0.28	0.17	
Canada (Ontario)	0.24	0.15	
Canada (Québec)	0.24	0.17	
Iceland (Grade 5)	0.27	0.22	
Norway (Grade 5)	0.27	0.16	

Key:  Moderate percentage missing value (0.2–0.3%)

Low correlation (< 0.2)

– Data not available

Source: Progress in International Reading Literacy Study 2006.

Table B.2: Correlation analysis results for the PISA 2006 items

Country	Student questionnaire									Parent questionnaire											
	Math achievement			Reading achievement			Science achievement			Math achievement				Reading achievement				Science achievement			
	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)	PA15Q01 (Household income)	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)	PA15Q01 (Household income)	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)	PA15Q01 (Household income)	BFMJ (Occupational status father)	BMMJ (Occupational status mother)	HISEI (Highest occupational status parents)
Argentina	0.27	0.33	0.33	0.26	0.27	0.30	0.27	0.33	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Australia	0.28	0.25	0.30	0.27	0.25	0.30	0.27	0.25	0.30	-	-	-	-	-	-	-	-	-	-	-	-
Austria	0.29	0.31	0.32	0.28	0.32	0.33	0.31	0.32	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Azerbaijan	0.04	0.18	0.06	0.21	0.24	0.25	0.17	0.26	0.19	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	0.32	0.31	0.37	0.30	0.30	0.35	0.34	0.32	0.38	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	0.35	0.37	0.36	0.33	0.32	0.33	0.36	0.37	0.36	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	0.34	0.37	0.40	0.36	0.35	0.40	0.35	0.38	0.42	0.38	0.33	0.36	0.39	0.39	0.36	0.34	0.39	0.37	0.34	0.37	0.41
Canada	0.26	0.20	0.26	0.23	0.20	0.26	0.24	0.21	0.27	-	-	-	-	-	-	-	-	-	-	-	-
Chile	0.43	0.39	0.45	0.35	0.36	0.39	0.39	0.38	0.42	-	-	-	-	-	-	-	-	-	-	-	-
Chinese Taipei	0.24	0.19	0.25	0.25	0.21	0.27	0.25	0.21	0.26	-	-	-	-	-	-	-	-	-	-	-	-
Colombia	0.27	0.29	0.30	0.21	0.23	0.24	0.25	0.26	0.27	0.24	0.28	0.32	0.31	0.22	0.24	0.28	0.26	0.22	0.28	0.31	0.30
Croatia	0.27	0.28	0.33	0.25	0.28	0.31	0.26	0.30	0.34	0.31	0.27	0.28	0.32	0.31	0.25	0.27	0.30	0.33	0.26	0.31	0.34
Czech Republic	0.30	0.35	0.38	0.31	0.31	0.36	0.32	0.34	0.38	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	0.26	0.24	0.29	0.24	0.24	0.28	0.26	0.25	0.30	0.17	0.25	0.23	0.26	0.13	0.21	0.20	0.23	0.15	0.23	0.22	0.25
Estonia	0.30	0.32	0.35	0.25	0.29	0.31	0.28	0.28	0.31	-	-	-	-	-	-	-	-	-	-	-	-
Finland	0.22	0.24	0.26	0.20	0.21	0.24	0.20	0.23	0.24	-	-	-	-	-	-	-	-	-	-	-	-
France	0.36	0.34	0.41	0.33	0.28	0.36	0.37	0.32	0.41	-	-	-	-	-	-	-	-	-	-	-	-
Germany	0.32	0.32	0.38	0.28	0.23	0.33	0.32	0.29	0.37	0.35	0.33	0.31	0.38	0.30	0.28	0.22	0.31	0.34	0.32	0.28	0.36
Greece	0.33	0.32	0.34	0.30	0.30	0.33	0.33	0.33	0.35	-	-	-	-	-	-	-	-	-	-	-	-
Hong Kong SAR	0.18	0.18	0.20	0.16	0.15	0.18	0.17	0.16	0.19	0.20	0.20	0.21	0.21	0.17	0.17	0.17	0.19	0.18	0.18	0.19	0.20
Hungary	0.35	0.35	0.39	0.32	0.30	0.36	0.32	0.33	0.37	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	0.22	0.20	0.25	0.16	0.17	0.20	0.20	0.20	0.23	0.16	0.22	0.21	0.25	0.13	0.16	0.20	0.21	0.16	0.19	0.20	0.22
Indonesia	0.23	0.33	0.26	0.24	0.33	0.26	0.23	0.31	0.25	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	0.24	0.31	0.31	0.26	0.27	0.29	0.23	0.28	0.29	-	-	-	-	-	-	-	-	-	-	-	-
Israel	0.27	0.24	0.31	0.23	0.20	0.27	0.24	0.23	0.28	-	-	-	-	-	-	-	-	-	-	-	-
Italy	0.23	0.22	0.27	0.21	0.21	0.25	0.24	0.22	0.28	-	0.23	0.22	0.27	-	0.23	0.22	0.27	-	0.24	0.23	0.29
Japan	0.23	0.13	0.20	0.22	0.10	0.18	0.21	0.09	0.17	-	-	-	-	-	-	-	-	-	-	-	-
Jordan	0.29	0.17	0.31	0.28	0.10	0.28	0.28	0.15	0.29	-	-	-	-	-	-	-	-	-	-	-	-
Korea	0.16	0.18	0.18	0.14	0.15	0.15	0.14	0.17	0.17	0.31	0.21	0.20	0.23	0.24	0.18	0.19	0.21	0.25	0.19	0.18	0.20
Kyrgyzstan	0.22	0.25	0.28	0.19	0.22	0.26	0.18	0.20	0.24	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	0.21	0.26	0.28	0.23	0.25	0.28	0.22	0.26	0.29	-	-	-	-	-	-	-	-	-	-	-	-
Liechtenstein	0.29	0.29	0.33	0.31	0.29	0.35	0.32	0.31	0.35	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	0.27	0.29	0.33	0.26	0.26	0.31	0.28	0.27	0.32	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	0.39	0.40	0.41	0.40	0.39	0.42	0.40	0.42	0.43	0.41	0.34	0.36	0.37	0.42	0.37	0.36	0.38	0.43	0.37	0.39	0.40
Macao-China	0.07	0.06	0.09	0.04	0.08	0.08	0.07	0.06	0.09	0.12	0.08	0.09	0.10	0.09	0.06	0.09	0.09	0.10	0.08	0.08	0.10
Mexico	0.29	0.31	0.33	0.28	0.31	0.32	0.32	0.32	0.35	-	-	-	-	-	-	-	-	-	-	-	-
Montenegro	0.23	0.23	0.27	0.23	0.21	0.27	0.25	0.25	0.29	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	0.33	0.27	0.35	0.33	0.28	0.35	0.36	0.29	0.38	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	0.28	0.24	0.32	0.28	0.26	0.33	0.29	0.26	0.34	0.25	0.29	0.22	0.31	0.26	0.27	0.26	0.31	0.26	0.28	0.24	0.31
Norway	0.28	0.23	0.29	0.26	0.22	0.29	0.27	0.22	0.28	-	-	-	-	-	-	-	-	-	-	-	-
Poland	0.26	0.28	0.32	0.27	0.27	0.31	0.28	0.29	0.33	0.25	0.29	0.29	0.34	0.21	0.30	0.28	0.34	0.24	0.31	0.30	0.35
Portugal	0.35	0.35	0.38	0.36	0.36	0.39	0.35	0.36	0.38	0.40	0.35	0.35	0.38	0.38	0.35	0.34	0.38	0.40	0.35	0.35	0.38
Qatar	0.18	0.04	0.19	0.15	0.05	0.17	0.17	0.05	0.18	0.30	0.22	0.11	0.23	0.24	0.24	0.15	0.25	0.21	0.24	0.12	0.24
Romania	0.34	0.35	0.40	0.29	0.28	0.34	0.33	0.34	0.40	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	0.23	0.22	0.25	0.23	0.19	0.24	0.24	0.20	0.25	-	-	-	-	-	-	-	-	-	-	-	-
Serbia	0.28	0.27	0.33	0.31	0.30	0.35	0.30	0.29	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Slovak Republic	0.32	0.31	0.36	0.28	0.28	0.33	0.33	0.32	0.38	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	0.32	0.34	0.38	0.32	0.30	0.36	0.33	0.33	0.38	-	-	-	-	-	-	-	-	-	-	-	-
Spain	0.27	0.28	0.30	0.26	0.23	0.28	0.29	0.30	0.32	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	0.28	0.27	0.32	0.27	0.21	0.28	0.29	0.25	0.32	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	0.29	0.21	0.31	0.31	0.23	0.34	0.32	0.24	0.35	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	0.32	0.32	0.33	0.31	0.30	0.33	0.33	0.31	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	0.40	0.45	0.41	0.30	0.33	0.30	0.31	0.37	0.32	-	-	-	-	-	-	-	-	-	-	-	-
Turkey	0.30	0.48	0.32	0.28	0.36	0.29	0.29	0.45	0.31	0.25	0.31	0.43	0.33	0.17	0.29	0.32	0.30	0.24	0.29	0.42	0.31
United Kingdom	0.32	0.28	0.35	0.32	0.22	0.32	0.33	0.26	0.35	-	-	-	-	-	-	-	-	-	-	-	-
United States	0.33	0.23	0.34	-	-	-	0.32	0.24	0.34	-	-	-	-	-	-	-	-	-	-	-	-
Uruguay	0.27	0.35	0.35	0.27	0.31	0.33	0.30	0.35	0.37	-	-	-	-	-	-	-	-	-	-	-	-
Median	0.28	0.28	0.32	0.27	0.26	0.30	0.29	0.28	0.32	0.25	0.27	0.26	0.31	0.24	0.24	0.24	0.28	0.24	0.27	0.26	0.31
Interquartile range (IQR)	0.08	0.10	0.07	0.08	0.09	0.07	0.08	0.09	0.08	0.11	0.09	0.11	0.11	0.13	0.08	0.10	0.09	0.14	0.09	0.13	0.12
25th percentile	0.24	0.23	0.28	0.23	0.21	0.26	0.24	0.23	0.28	0.22	0.22	0.21	0.24	0.17	0.21	0.20	0.23	0.20	0.22	0.19	0.23
75th percentile	0.32	0.33	0.35	0.31	0.30	0.33	0.32	0.32	0.36	0.33	0.31	0.32	0.35	0.30	0.29	0.29	0.32	0.33	0.31	0.32	0.35

Key:  Moderate percentage missing value (0.2–0.3%) Low correlation (< 0.2)

— Data not available

Table B.3: Correlation analysis results for the PISA 2006 scales

	Country	Mathematics achievement					Reading achievement					Science achievement				
		HOMEPOS (Home possessions)	HEDRES (Home educational resources)	CULTPOSS (Cultural possessions)	WEALTH (Family wealth)	ESCS (Index of Economic, Social, and Cultural Status)	HOMEPOS (Home possessions)	HEDRES (Home educational resources)	CULTPOSS (Cultural possessions)	WEALTH (Family wealth)	ESCS (Index of Economic, Social, and Cultural Status)	HOMEPOS (Home possessions)	HEDRES (Home educational resources)	CULTPOSS (Cultural possessions)	WEALTH (Family wealth)	ESCS (Index of Economic, Social, and Cultural Status)
TIMSS 2007 Grade 4 participants	Argentina	0.42	0.38	0.18	0.39	0.44	0.36	0.35	0.19	0.31	0.37	0.41	0.39	0.23	0.36	0.44
	Australia	0.21	0.21	0.20	0.06	0.34	0.22	0.22	0.24	0.05	0.34	0.21	0.20	0.23	0.03	0.34
	Austria	0.31	0.17	0.25	0.16	0.37	0.28	0.19	0.31	0.09	0.36	0.31	0.17	0.27	0.14	0.39
	Azerbaijan	0.04	0.08	0.05	-0.02	0.06	0.20	0.26	0.11	0.11	0.27	0.15	0.24	0.08	0.05	0.22
	Belgium	0.34	0.26	0.28	0.21	0.42	0.32	0.28	0.30	0.16	0.40	0.34	0.26	0.31	0.18	0.44
	Brazil	0.43	0.38	0.10	0.44	0.43	0.37	0.34	0.15	0.35	0.37	0.41	0.38	0.11	0.40	0.41
	Bulgaria	0.42	0.40	0.34	0.26	0.48	0.41	0.43	0.39	0.23	0.48	0.42	0.41	0.36	0.26	0.49
	Canada	0.18	0.15	0.16	0.08	0.28	0.23	0.20	0.23	0.10	0.31	0.17	0.14	0.19	0.06	0.29
	Chile	0.43	0.36	0.25	0.39	0.50	0.37	0.30	0.23	0.33	0.43	0.42	0.34	0.27	0.36	0.48
	Chinese Taipei	0.28	0.27	0.32	0.07	0.36	0.26	0.26	0.37	0.02	0.36	0.25	0.24	0.34	0.03	0.35
	Colombia	0.36	0.35	0.17	0.32	0.37	0.33	0.33	0.17	0.29	0.32	0.33	0.33	0.15	0.30	0.34
	Croatia	0.26	0.24	0.25	0.14	0.33	0.26	0.28	0.33	0.09	0.32	0.28	0.25	0.30	0.13	0.35
	Czech Republic	0.30	0.28	0.24	0.17	0.40	0.28	0.27	0.28	0.12	0.35	0.30	0.29	0.27	0.15	0.39
	Denmark	0.29	0.14	0.28	0.11	0.36	0.23	0.12	0.31	0.01	0.33	0.28	0.11	0.31	0.08	0.38
	Estonia	0.24	0.19	0.19	0.13	0.35	0.17	0.13	0.20	0.05	0.28	0.21	0.14	0.19	0.09	0.31
	Finland	0.22	0.12	0.23	0.07	0.32	0.16	0.08	0.30	-0.04	0.28	0.18	0.08	0.25	0.02	0.29
	France	0.38	0.26	0.36	0.21	0.46	0.33	0.27	0.38	0.15	0.41	0.37	0.27	0.38	0.18	0.46
	Germany	0.34	0.26	0.27	0.18	0.44	0.31	0.28	0.29	0.14	0.40	0.32	0.24	0.27	0.17	0.44
	Greece	0.28	0.33	0.19	0.14	0.39	0.21	0.31	0.21	0.04	0.33	0.26	0.34	0.22	0.10	0.39
	Hong Kong-China	0.22	0.17	0.17	0.13	0.26	0.24	0.24	0.22	0.11	0.25	0.22	0.18	0.20	0.11	0.26
	Hungary	0.35	0.34	0.31	0.20	0.48	0.33	0.33	0.37	0.16	0.44	0.35	0.34	0.35	0.18	0.46
	Iceland	0.09	0.17	0.21	-0.08	0.28	0.06	0.11	0.24	-0.12	0.22	0.08	0.15	0.22	-0.11	0.26
	Indonesia	0.29	0.27	0.04	0.29	0.32	0.32	0.28	0.04	0.33	0.33	0.29	0.29	0.04	0.28	0.32
	Ireland	0.28	0.20	0.22	0.14	0.37	0.28	0.24	0.26	0.11	0.35	0.28	0.22	0.27	0.10	0.36
	Israel	0.26	0.21	0.23	0.16	0.35	0.22	0.24	0.25	0.09	0.29	0.26	0.23	0.28	0.14	0.33
	Italy	0.25	0.24	0.21	0.13	0.30	0.22	0.23	0.23	0.09	0.27	0.27	0.25	0.24	0.13	0.32
	Japan	0.20	0.14	0.21	0.09	0.31	0.17	0.16	0.25	0.04	0.27	0.18	0.16	0.23	0.05	0.27
	Jordan	0.28	0.32	0.12	0.23	0.36	0.29	0.33	0.16	0.23	0.34	0.28	0.32	0.13	0.21	0.34
	Korea	0.35	0.27	0.31	0.22	0.33	0.27	0.24	0.31	0.12	0.26	0.29	0.23	0.29	0.15	0.29
	Kyrgyzstan	0.28	0.25	0.17	0.18	0.33	0.26	0.25	0.18	0.16	0.31	0.24	0.24	0.20	0.12	0.29
	Latvia	0.31	0.29	0.19	0.21	0.34	0.27	0.25	0.27	0.14	0.31	0.27	0.25	0.23	0.16	0.31
	Liechtenstein	0.29	0.09	0.27	0.16	0.42	0.26	0.10	0.31	0.13	0.43	0.28	0.09	0.32	0.13	0.45
	Lithuania	0.36	0.35	0.30	0.24	0.42	0.34	0.32	0.38	0.18	0.37	0.34	0.34	0.32	0.21	0.39
	Luxembourg	0.32	0.17	0.31	0.17	0.42	0.34	0.16	0.34	0.18	0.45	0.34	0.15	0.33	0.19	0.47
	Macao-China	0.15	0.22	0.17	0.05	0.15	0.15	0.22	0.20	0.03	0.13	0.14	0.22	0.18	0.02	0.15
	Mexico	0.36	0.33	0.22	0.33	0.40	0.33	0.32	0.21	0.31	0.38	0.36	0.35	0.23	0.34	0.41
	Montenegro	0.21	0.26	0.29	0.05	0.29	0.13	0.25	0.32	-0.05	0.24	0.16	0.27	0.30	-0.01	0.27
	Netherlands	0.33	0.28	0.26	0.14	0.39	0.29	0.26	0.24	0.11	0.37	0.32	0.26	0.26	0.13	0.41
	New Zealand	0.31	0.24	0.21	0.21	0.38	0.31	0.26	0.24	0.18	0.39	0.32	0.24	0.23	0.21	0.41
	Norway	0.18	0.19	0.28	-0.01	0.29	0.18	0.22	0.32	-0.05	0.28	0.18	0.19	0.29	-0.02	0.29
Poland	0.30	0.26	0.25	0.19	0.38	0.29	0.27	0.32	0.15	0.36	0.28	0.25	0.26	0.17	0.38	
Portugal	0.38	0.29	0.30	0.30	0.41	0.40	0.31	0.34	0.31	0.42	0.37	0.28	0.31	0.28	0.41	
Qatar	0.12	0.29	0.12	0.01	0.22	0.04	0.24	0.09	-0.06	0.14	0.04	0.25	0.10	-0.08	0.15	
Romania	0.37	0.39	0.29	0.26	0.42	0.28	0.30	0.29	0.17	0.33	0.34	0.36	0.30	0.23	0.41	
Russian Federation	0.23	0.27	0.16	0.13	0.29	0.24	0.27	0.19	0.13	0.29	0.21	0.27	0.15	0.11	0.29	
Serbia	0.30	0.29	0.29	0.18	0.35	0.31	0.31	0.37	0.16	0.37	0.29	0.28	0.31	0.16	0.36	
Slovak Republic	0.35	0.40	0.21	0.19	0.44	0.30	0.35	0.25	0.13	0.39	0.33	0.38	0.22	0.18	0.44	
Slovenia	0.26	0.19	0.31	0.06	0.41	0.25	0.22	0.36	0.02	0.39	0.27	0.18	0.33	0.06	0.41	
Spain	0.28	0.23	0.25	0.14	0.36	0.24	0.23	0.26	0.08	0.32	0.27	0.22	0.29	0.11	0.37	
Sweden	0.24	0.19	0.23	0.08	0.34	0.18	0.17	0.27	-0.02	0.29	0.20	0.16	0.25	0.04	0.32	
Switzerland	0.23	0.12	0.17	0.09	0.37	0.22	0.13	0.23	0.05	0.37	0.24	0.12	0.22	0.07	0.40	
Thailand	0.34	0.34	0.05	0.30	0.38	0.38	0.41	0.10	0.31	0.38	0.37	0.39	0.08	0.31	0.40	
Tunisia	0.36	0.41	0.22	0.30	0.40	0.30	0.36	0.22	0.23	0.29	0.29	0.36	0.22	0.22	0.31	
Turkey	0.37	0.36	0.21	0.30	0.41	0.35	0.32	0.28	0.25	0.36	0.37	0.35	0.26	0.27	0.41	
United Kingdom	0.29	0.22	0.25	0.12	0.38	0.27	0.23	0.28	0.07	0.35	0.29	0.21	0.27	0.10	0.37	
United States	0.36	0.23	0.23	0.28	0.43	-	-	-	-	-	0.35	0.23	0.26	0.24	0.42	
Uruguay	0.38	0.34	0.24	0.33	0.43	0.31	0.30	0.24	0.23	0.37	0.37	0.34	0.28	0.29	0.43	
Median	0.29	0.26	0.23	0.17	0.37	0.28	0.26	0.25	0.12	0.35	0.28	0.25	0.26	0.14	0.37	
Interquartile range (IQR)	0.11	0.14	0.09	0.13	0.08	0.09	0.08	0.10	0.13	0.09	0.10	0.13	0.08	0.13	0.10	
25th percentile	0.24	0.19	0.19	0.11	0.33	0.22	0.22	0.22	0.05	0.29	0.24	0.20	0.22	0.08	0.31	
75th percentile	0.35	0.33	0.28	0.24	0.42	0.32	0.31	0.31	0.18	0.38	0.34	0.33	0.30	0.21	0.41	

Key:  Moderate percentage missing value (0.2–0.3%)

Low correlation (< 0.2)

– Data not available

Source: Programme for International Student Assessment 2006.