

Appendix 5A: Characteristics of National Samples

Australia

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and very remote schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by state or territory (8)
- Implicit stratification by geographic location (metropolitan, provincial, remote), school type (Catholic, government, independent), and socioeconomic index (low socioeconomic status, high socioeconomic status)
- Prior to class sampling within schools, all indigenous students were grouped into a single classroom and were selected with certainty. The other classroom in the school was sampled using the standard procedure.
- Schools were oversampled at the state/territory level

Allocation of School Sample in Australia

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Australian Capital Territory	30	0	29	1	0	0	0
New South Wales	45	0	42	2	1	0	0
Northern Territory	15	0	15	0	0	0	0
Queensland	45	0	45	0	0	0	0
South Australia	41	0	41	0	0	0	0
Tasmania	27	0	27	0	0	0	0
Victoria	44	0	43	1	0	0	0
Western Australia	39	0	39	0	0	0	0
Total	286	0	281	4	1	0	0

Austria

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 3) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers
- Exclusion rates are higher than usual because of more non-native language speakers in classes. This higher proportion of non-native language speakers is probably due to the refugee crisis in Europe.

Sample Design

- Explicit stratification by region (9)
- No implicit stratification
- Sampled two classrooms per school whenever possible

Allocation of School Sample in Austria

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Burgenland	8	1	7	0	0	0	0
Kärnten	10	0	10	0	0	0	0
Niederösterreich	28	0	28	0	0	0	0
Oberösterreich	26	0	26	0	0	0	0
Salzburg	10	0	10	0	0	0	0
Steiermark	20	0	20	0	0	0	0
Tirol	12	0	12	0	0	0	0
Vorarlberg	8	0	8	0	0	0	0
Wien	30	1	29	0	0	0	0
Total	152	2	150	0	0	0	0

Azerbaijan

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and schools with English and Georgian instructional language
- No within-school exclusions
- Exclusion rates are biased downward due to exclusion of Armenian community schools in the Nagorno-Karabakh conflict zone and international schools for which no statistics were available

Sample Design

- Explicit stratification by language of instruction (Azerbaijani only, Russian or Russian/Azerbaijani), urbanization (urban, rural) within Azerbaijani only strata, and city (Baku, other) within urban stratum
- No implicit stratification
- Sampled two classrooms in schools with four or more classrooms

Allocation of School Sample in Azerbaijan

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Azerbaijani - Urban - Baku	24	0	24	0	0	0	0
Azerbaijani - Urban - Other cities	38	0	38	0	0	0	0
Azerbaijani - Rural	68	0	68	0	0	0	0
Russian or Russian/Azerbaijani	40	0	40	0	0	0	0
Total	170	0	170	0	0	0	0

Bahrain

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 10), special needs schools, students taught in French, and students taught in Japanese
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by governorate (5) and gender (girls, boys) within public schools
- No implicit stratification
- Sampled one classroom per school
- All schools were selected
- Schools or classes were used as variance estimation strata and classes or half classes were used to build jackknife replicates, when all classes within school were sampled

Allocation of School Sample in Bahrain

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public Muharraq - Girls	10	0	10	0	0	0	0
Public Muharraq - Boys	11	0	11	0	0	0	0
Public Capital - Girls	19	0	19	0	0	0	0
Public Capital - Boys	21	0	21	0	0	0	0
Public Northern - Girls	21	0	21	0	0	0	0
Public Northern - Boys	17	0	17	0	0	0	0
Public Southern - Girls	11	0	11	0	0	0	0
Public Southern - Boys	11	0	11	0	0	0	0
Private	63	1	61	0	0	1	0
Total	184	1	182	0	0	1	0

Belgium (Flemish)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5) and French schools
- Within-school exclusions consisted of students with intellectual disabilities and non-native language speakers

Sample Design

- Explicit stratification by region (6), socioeconomic status (4), school type (official, private), and a stratum of eligible special education schools
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 37)
- Field Test and Main Data Collection samples were selected separately. PIRLS Field Test sample was selected simultaneously with the TIMSS 2015 Main Data Collection sample to avoid overlap. PIRLS Main Data Collection sample was selected using the Chowdhury method to minimize overlap with both PIRLS Field Test sample and TIMSS 2015 Main Data Collection sample.

Allocation of School Sample in Belgium (Flemish)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Antwerpen - Official - Low SES	9	0	6	2	0	1	0
Antwerpen - Private - Low SES	8	0	4	3	1	0	0
Antwerpen - High SES	8	0	7	1	0	0	0
Antwerpen - Med-High SES	8	1	7	0	0	0	0
Antwerpen - Med-Low SES	8	0	7	0	0	1	0
Brussels Hoofdstedelijk Gewest - Low SES	8	0	6	1	0	1	0
Limburg - Higher SES	10	0	6	3	1	0	0
Limburg - Lower SES	10	0	5	3	0	2	0
Oost-Vlaanderen - High SES	8	0	7	0	0	1	0
Oost-Vlaanderen - Med-High SES	7	0	6	0	0	1	0
Oost-Vlaanderen - Med-Low SES	10	0	10	0	0	0	0
Oost-Vlaanderen - Low SES	8	0	5	3	0	0	0
Vlaams-Brabant - Higher SES	12	0	8	1	2	1	0
Vlaams-Brabant - Lower SES	12	0	12	0	0	0	0
West-Vlaanderen - High SES	8	0	8	0	0	0	0
West-Vlaanderen - Med-High SES	7	0	7	0	0	0	0
West-Vlaanderen - Lower SES	9	0	8	1	0	0	0
Special Education schools	10	2	5	1	1	1	0
Total	160	3	124	19	5	9	0

Belgium (French)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school network (public at state level, public at local level, private) and socioeconomic status (4)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 47)

Allocation of School Sample in Belgium (French)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public at state level - 1st and 2nd SES quartiles	8	0	8	0	0	0	0
Public at state level - 3rd and 4th SES quartiles	8	0	8	0	0	0	0
Public at local level - 1st SES quartile	18	0	18	0	0	0	0
Public at local level - 2nd SES quartile	16	0	15	1	0	0	0
Public at local level - 3rd SES quartile	20	0	20	0	0	0	0
Public at local level - 4th SES quartile	22	0	22	0	0	0	0
Private sectarian - 1st SES quartile	14	0	13	1	0	0	0
Private sectarian - 2nd SES quartile	14	0	13	1	0	0	0
Private sectarian - 3rd SES quartile	20	0	18	2	0	0	0
Private sectarian - 4th SES quartile	18	0	17	1	0	0	0
Total	158	0	152	6	0	0	0

Bulgaria

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (elementary, basic, general) and urbanization (capital, large cities, other)
- Implicit stratification by urbanization (city, village) within the basic schools found outside the larger cities
- Sampled two classrooms in large schools (measure of size > 69)
- The school sample was selected by controlling for the overlap with the TIMSS 2015 sample using the Chowdhury approach

Allocation of School Sample in Bulgaria

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Elementary - Capital and Large Cities	8	0	8	0	0	0	0
Elementary - Others	8	0	8	0	0	0	0
Basic - Capital	10	1	9	0	0	0	0
Basic - Large Cities	29	0	29	0	0	0	0
Basic - Others	44	0	44	0	0	0	0
General - Capital	14	0	14	0	0	0	0
General - Large Cities	17	0	17	0	0	0	0
General - Others	24	0	24	0	0	0	0
Total	154	1	153	0	0	0	0

Canada

Coverage and Exclusions

- Coverage is 96.9 percent. Coverage in Canada is restricted to students from the provinces of Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Ontario, Quebec, and Saskatchewan.
- School-level exclusions consisted of very small schools (measure of size < 4 in Manitoba and Saskatchewan; measure of size < 6 in Alberta, Newfoundland, and Ontario; measure of size < 9 in British Columbia; and measure of size < 10 in Quebec); special needs schools, First Nations, French first language (in Newfoundland); home schooled, institutional, and private schools as well as public special schools (in Manitoba); international schools, non-ministry, and special status schools (in Quebec); and distance learning and not funded schools (in British Columbia)
- For ePIRLS, coverage is 74 percent. Coverage in Canada is restricted to students from the provinces of British Columbia, Newfoundland, Ontario, and Quebec.
- For ePIRLS, school-level exclusions consisted of very small schools (measure of size < 4 in Manitoba and Saskatchewan, measure of size < 6 in Alberta, Newfoundland and Ontario, measure of size < 9 in British Columbia, and measure of size < 10 in Quebec); special needs schools, First Nations, French first language (in Newfoundland); international schools, non-ministry, and special status schools (in Quebec); and distance learning and not funded schools (in British Columbia)
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by province (8). Within the province of British Columbia, explicit stratification was done by school language (English, French) and school type within English schools (English only, immersion, dual track). Within the province of Alberta, explicit stratification was done by school system (French, English) and school type (immersion, regular). Within the province of Ontario, explicit stratification was done by school type (private, Catholic, public) and language (English, French) within Catholic and public schools. Within Quebec, explicit stratification was done by school type (public, private) and language (French, English). Within the province of New Brunswick, explicit stratification was done by school language (English, French)
- Implicit stratification by region (4) in public and Catholic explicit strata within Ontario

- Sampled two classrooms in large schools for Quebec and Ontario (measure of size > 80), as well as in Alberta French schools. All classrooms selected in British Columbia French schools.
- The PIRLS school sample was selected by controlling for the overlap with the TIMSS 2015 Grade 4 sample using the Chowdhury approach
- All French schools in British Columbia were selected
- For ePIRLS, only a subsample of PIRLS schools was randomly selected in Quebec. School weights were adjusted accordingly.
- In British Columbia French schools stratum, schools or classes were used as variance estimation strata and half classes were used as jackknife replicates

Allocation of School Sample in Canada - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Newfoundland	130	0	128	0	0	2	0
New Brunswick - English	136	6	130	0	0	0	0
New Brunswick - French	66	0	66	0	0	0	0
Quebec - English - Private	8	1	7	0	0	0	0
Quebec - English - Public	42	0	39	0	0	3	0
Quebec - French - Private	8	0	8	0	0	0	0
Quebec - French - Public	118	1	35	25	13	44	0
Ontario - Private	8	0	0	1	0	7	0
Ontario - English - Catholic	30	0	30	0	0	0	0
Ontario - English - Public	80	2	77	1	0	0	0
Ontario - French - Catholic & Public	80	0	79	0	0	1	0
Manitoba	8	1	7	0	0	0	0
Saskatchewan	8	0	6	2	0	0	0
British Columbia - English System - English	106	1	104	0	0	1	0
British Columbia - English System - Immersion	8	0	8	0	0	0	0
British Columbia - English System - Dual Track	18	1	17	0	0	0	0
British Columbia - French System	17	0	17	0	0	0	0
Alberta - English System - Private	6	1	4	1	0	0	2
Alberta - English System - Public	17	1	10	1	1	4	1
Alberta - English System - French Immersion - Private	6	1	3	1	0	1	1
Alberta - English System - French Immersion - Public	90	0	75	7	1	7	2
Alberta - French System - Public	24	0	22	0	0	2	0
Total	1014	16	872	39	15	72	6

Allocation of School Sample in Canada - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Newfoundland	130	0	127	0	0	3	0
Quebec - English - Private	2	0	2	0	0	0	0
Quebec - English - Public	2	0	2	0	0	0	0
Quebec - French - Private	2	0	2	0	0	0	0
Quebec - French - Public	24	0	8	4	1	11	0
Ontario - Private	8	0	0	1	0	7	0
Ontario - English - Catholic	30	0	30	0	0	0	0
Ontario - English - Public	80	2	75	1	0	2	0
Ontario - French - Catholic & Public	80	0	77	0	0	3	0
British Columbia - English System - English	106	1	102	0	0	3	0
British Columbia - English System - Immersion	8	0	8	0	0	0	0
British Columbia - English System - Dual Track	18	1	17	0	0	0	0
British Columbia - French System	17	0	17	0	0	0	0
Total	507	4	467	6	1	29	0

Chile

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and geographically inaccessible schools
- Within-school exclusions consisted of students with intellectual disabilities

Sample Design

- Explicit stratification by school type (public, private subsidized, private paid), urbanization (rural, urban) within public schools and school size (up to 40 students, 41-80 students, more than 80 students) within public and private subsidized schools
- No implicit stratification
- Sampled one classroom
- The school sample for PIRLS was selected by controlling for the overlap with the ICCS sample using the Chowdhury approach

Allocation of School Sample in Chile

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Urban - Up to 40 students	14	0	14	0	0	0	0
Public - Urban - 41 to 80 students	16	0	16	0	0	0	0
Public - Urban - 80 or more students	8	0	8	0	0	0	0
Public - Rural	9	0	9	0	0	0	0
Private subsidized - Up to 40 students	20	0	17	3	0	0	0
Private subsidized - 41 to 80 students	24	0	22	1	1	0	0
Private subsidized - 80 or more students	24	0	21	3	0	0	0
Private	39	0	32	7	0	0	0
Total	154	0	139	14	1	0	0

Chinese Taipei

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (north, middle, south, east and isolated islands). East and isolated islands were grouped together.
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 289)

Allocation of School Sample in Chinese Taipei - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
North	66	0	66	0	0	0	0
Middle	38	0	38	0	0	0	0
South	38	0	38	0	0	0	0
East & Isolated Islands	8	0	8	0	0	0	0
Total	150	0	150	0	0	0	0

Allocation of School Sample in Chinese Taipei - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
North	66	0	66	0	0	0	0
Middle	38	0	38	0	0	0	0
South	38	0	38	0	0	0	0
East & Isolated Islands	8	0	8	0	0	0	0
Total	150	0	150	0	0	0	0

Czech Republic

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 3), special needs schools, and Polish instructional language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (14)
- No implicit stratification
- Sampled two classrooms whenever possible

Allocation of School Sample in Czech Republic

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Praha	17	0	17	0	0	0	0
Středočeský	20	0	20	0	0	0	0
Jihočeský	9	0	9	0	0	0	0
Plzeňský	8	0	8	0	0	0	0
Karlovarský	8	0	8	0	0	0	0
Ústecký	12	0	12	0	0	0	0
Liberecký	8	0	8	0	0	0	0
Královéhradecký	8	0	8	0	0	0	0
Pardubický	8	0	8	0	0	0	0
Vysočina	8	0	8	0	0	0	0
Jihomoravský	17	0	17	0	0	0	0
Olomoucký	9	0	9	0	0	0	0
Zlínský	8	0	8	0	0	0	0
Moravskoslezský	17	0	17	0	0	0	0
Total	157	0	157	0	0	0	0

Denmark

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, daycare and rehabilitation home schools as well as German, English, and Rudolf Steiner schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private)
- No implicit stratification
- Sampled one classroom per school

Allocation of School Sample in Denmark - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public	171	7	154	8	0	2	0
Private	27	0	16	6	1	4	0
Total	198	7	170	14	1	6	0

Allocation of School Sample in Denmark - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public	171	7	124	5	0	35	0
Private	27	0	8	4	1	14	0
Total	198	7	132	9	1	49	0

Egypt

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 10), schools in Matrouh, and schools in North Sinai
- No within-school exclusions

Sample design

- Explicit stratification by region (Capital, North, South) and school type (government, private)
- Implicit stratification by urbanization (urban, rural) within government schools strata
- Sampled one classroom per school

Allocation of School Sample in Egypt

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Capital - Government	30	0	30	0	0	0	0
Capital - Private	10	0	10	0	0	0	0
North - Government	60	0	60	0	0	0	0
North - Private	8	0	8	0	0	0	0
South - Government	44	0	44	0	0	0	0
South - Private	8	0	8	0	0	0	0
Total	160	0	160	0	0	0	0

England

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 8), special needs schools, and pupil referral units
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (state-funded, private) and attainment level (5)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 99)
- The Field Test and Main Data Collection PIRLS samples were selected separately. The PIRLS Main Data Collection sample was selected by controlling for the overlap with the TIMSS 2015 samples and with the PIRLS Field Test sample using the Chowdhury approach.

Allocation of School Sample in England

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
State-funded - Low attainment level	26	0	25	1	0	0	0
State-funded - Low to Mid attainment level	34	0	34	0	0	0	0
State-funded - Mid and missing attainment level	34	0	33	1	0	0	0
State-funded - Mid to High attainment level	35	0	35	0	0	0	0
State-funded - High attainment level	30	0	30	0	0	0	0
Private	12	1	11	0	0	0	0
Total	171	1	168	2	0	0	0

Finland

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and schools with instructional languages other than Finnish or Swedish
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by major region (Helsinki and Uusimaa, southern, western, northern) and urbanization (urban and semi-urban, rural) within Finnish schools. Swedish speaking schools are in a separate explicit stratum.
- No implicit stratification
- Sampled two classrooms per school
- The PIRLS samples were selected by controlling for the overlap with the TIMSS 2015 Main Data Collection sample using the Chowdhury approach

Allocation of School Sample in Finland

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Helsinki & Uusimaa	40	0	39	0	0	1	0
Southern - Urban & Semi-Urban	26	3	22	1	0	0	0
Southern - Rural	8	2	6	0	0	0	0
Western - Urban & Semi-Urban	32	1	31	0	0	0	0
Western - Rural	8	0	8	0	0	0	0
Northern & Eastern - Urban & Semi-Urban	26	0	25	1	0	0	0
Northern & Eastern - Rural	10	1	9	0	0	0	0
Swedish speaking	9	0	9	0	0	0	0
Total	159	7	149	2	0	1	0

France

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 3), overseas territories, Reunion and Mayotte Islands, Guyana (Southern Hemisphere), private schools without contract, specialized schools, and French schools in foreign countries
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public-other, public-priority education zone, private)
- No implicit stratification
- Sampled two classrooms per school
- PIRLS 2016 samples and TIMSS 2015 samples were selected simultaneously to avoid overlap between the two studies

Allocation of School Sample in France

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public-other	100	2	98	0	0	0	0
Public-priority education zone	44	1	42	1	0	0	0
Private	22	0	21	1	0	0	0
Total	166	3	161	2	0	0	0

Georgia

Coverage and Exclusions

- Coverage is 95.9 percent. Coverage in Georgia is restricted to students taught in Georgian and Azerbaijani.
- School-level exclusions consisted of very small schools (measure of size < 3) and foreign instructional language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by language taught in school (Georgian, Azerbaijani), teacher certification (certified, non-certified), urbanization (urban, rural), and school type (public, private)
- No implicit stratification
- Sampled two classrooms in Georgian schools with certified teachers
- The Field Test and Main Data Collection PIRLS samples were selected sequentially. The PIRLS Main Data Collection sample was selected by controlling for the overlap with the PIRLS Field Test sample using the Chowdhury approach.
- Oversampled Azerbaijani schools as well as public schools with certified teachers in order to get better estimates
- Class group option was used in bilingual schools as well as in schools with certified teachers

Allocation of School Sample in Georgia - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Georgian - Certified - Urban - Public	71	0	71	0	0	0	0
Georgian - Certified - Rural - Public	16	0	16	0	0	0	0
Georgian - Certified - Private	8	0	8	0	0	0	0
Georgian - Non-certified - Urban - Public	33	0	33	0	0	0	0
Georgian - Non-certified - Rural - Public	35	0	34	1	0	0	0
Georgian - Non-certified - Private	8	0	6	0	1	1	0
Azeri	30	0	30	0	0	0	0
Total	201	0	198	1	1	1	0

Allocation of School Sample in Georgia - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Georgian - Certified - Urban - Public	71	0	70	0	0	1	0
Georgian - Certified - Rural - Public	16	0	16	0	0	0	0
Georgian - Certified - Private	8	0	8	0	0	0	0
Georgian - Non-certified - Urban - Public	33	0	33	0	0	0	0
Georgian - Non-certified - Rural - Public	35	0	34	1	0	0	0
Georgian - Non-certified - Private	8	0	6	0	1	1	0
Azeri	30	0	30	0	0	0	0
Total	201	0	197	1	1	2	0

Germany

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by percentage of immigrants in school (very low, low, medium, high). A separate stratum was created for the special needs schools (SEN).
- No implicit stratification
- Sampled one classroom per school

Allocation of School Sample in Germany

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Regular - Very low	62	1	57	2	1	1	0
Regular - Low	94	0	94	0	0	0	0
Regular - Medium	28	0	27	1	0	0	0
Regular - High	16	0	16	0	0	0	0
Special needs schools	10	0	10	0	0	0	0
Total	210	1	204	3	1	1	0

Hong Kong SAR

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and international schools
- Within-school exclusions consisted of students with intellectual disabilities and non-native language speakers

Sample Design

- Explicit stratification by school gender (single gender, co-educational) and school type (4) within co-educational strata
- No implicit stratification
- Sampled two classrooms in large co-educational aided schools with six or more classrooms

Allocation of School Sample in Hong Kong SAR

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Single gender	8	0	6	1	1	0	0
Co-educational - Aided	120	1	89	15	5	10	0
Co-educational - Direct subsidy	8	0	7	0	0	1	0
Co-educational - Government	8	0	8	0	0	0	0
Co-educational - Private	8	0	4	2	0	2	0
Total	152	1	114	18	6	13	0

Hungary

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and students taught in foreign language
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by community type (capital and county town, town, rural area) and national assessment reading score (low, medium, high, missing)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 55)

Allocation of School Sample in Hungary

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Capital and County Town - Low or Medium score	16	0	16	0	0	0	0
Capital and County Town - High score	30	0	29	1	0	0	0
Capital and County Town - Missing score	8	1	6	1	0	0	0
Town - Low score	14	0	14	0	0	0	0
Town - Medium score	20	1	19	0	0	0	0
Town - High score	14	1	12	1	0	0	0
Town - Missing score	12	0	12	0	0	0	0
Rural Area - Low score	14	0	14	0	0	0	0
Rural Area - Medium score	10	0	10	0	0	0	0
Rural Area - High score	8	0	8	0	0	0	0
Rural Area - Missing score	8	2	6	0	0	0	0
Total	154	5	146	3	0	0	0

Iran, Islamic Rep. of

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and geographically inaccessible schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private), gender (mixed, other), region group (1, 2, 3), province or grouped provinces (6), and gender (boys, girls) within “other” gender public schools
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 119)
- The Field Test and Main Data Collection PIRLS samples were selected separately
- PIRLS and PIRLS Literacy booklets were rotated within classes

Allocation of School Sample in Iran, Islamic Rep. of

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	16	0	16	0	0	0	0
Public - Mixed - Region group 1	10	0	10	0	0	0	0
Public - Mixed - Region group 2	8	0	8	0	0	0	0
Public - Mixed - Region group 3	8	1	7	0	0	0	0
Public - Other - Region group 1 - All others provinces - Boys	12	0	12	0	0	0	0
Public - Other - Region group 1 - All others provinces - Girls	12	0	12	0	0	0	0
Public - Other - Region group 1 - Khozestan - Boys	14	0	14	0	0	0	0
Public - Other - Region group 1 - Khozestan - Girls	14	0	14	0	0	0	0
Public - Other - Region group 2 - All others provinces - Boys	10	0	10	0	0	0	0
Public - Other - Region group 2 - All others provinces - Girls	10	0	10	0	0	0	0
Public - Other - Region group 2 - Razavi Khorasan - Boys	14	0	14	0	0	0	0
Public - Other - Region group 2 - Razavi Khorasan - Girls	14	0	14	0	0	0	0
Public - Other - Region group 2 - Tehran Province - Boys	14	0	14	0	0	0	0
Public - Other - Region group 2 - Tehran Province - Girls	14	0	14	0	0	0	0

Allocation of School Sample in Iran, Islamic Rep. of (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Other - Region group 3 - All others provinces - Boys	10	0	10	0	0	0	0
Public - Other - Region group 3 - All others provinces - Girls	10	0	10	0	0	0	0
Public - Other - Region group 3 - Esfahan - Boys	14	1	13	0	0	0	0
Public - Other - Region group 3 - Esfahan - Girls	14	0	14	0	0	0	0
Public - Other - Region group 3 - Fars - Boys	14	1	13	0	0	0	0
Public - Other - Region group 3 - Fars - Girls	14	0	14	0	0	0	0
Public - Other - Region group 3 - Tehran City - Boys	14	0	14	0	0	0	0
Public - Other - Region group 3 - Tehran City - Girls	14	0	14	0	0	0	0
Total	274	3	271	0	0	0	0

Ireland

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and non-aided private schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school level socioeconomic status DEIS (non-DEIS, rural, urban band 1, urban band 2), school type (ordinary, Gaeltacht, Gaelscoil), and gender (boys, girls, mixed)
- No implicit stratification
- Sampled two classrooms per school
- For ePIRLS, students were subsampled within classes and students weights were adjusted accordingly

Allocation of School Sample in Ireland - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Gaelscoil	10	0	10	0	0	0	0
Gaeltacht	8	0	8	0	0	0	0
Non-DEIS - Ordinary - Boys	12	1	11	0	0	0	0
Non-DEIS - Ordinary - Girls	12	0	12	0	0	0	0
Non-DEIS - Ordinary - Mixed	80	0	80	0	0	0	0
Rural - Ordinary	8	1	7	0	0	0	0
Urban Band 1 - Ordinary	10	0	10	0	0	0	0
Urban Band 2 - Ordinary	10	0	10	0	0	0	0
Total	150	2	148	0	0	0	0

Allocation of School Sample in Ireland - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Gaelscoil	10	0	10	0	0	0	0
Gaeltacht	8	0	8	0	0	0	0
Non-DEIS - Ordinary - Boys	12	1	11	0	0	0	0
Non-DEIS - Ordinary - Girls	12	0	12	0	0	0	0
Non-DEIS - Ordinary - Mixed	80	0	80	0	0	0	0
Rural - Ordinary	8	1	6	0	0	1	0
Urban Band 1 - Ordinary	10	0	10	0	0	0	0
Urban Band 2 - Ordinary	10	0	10	0	0	0	0
Total	150	2	147	0	0	1	0

Israel

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, schools teaching in English or French, and Ultra-Orthodox schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school sector (Hebrew-Secular, Hebrew-Religious, Arabic), socioeconomic status (high, medium, low) and subgroups within Arab sector (Arab, Bedouin, Druze)
- No implicit stratification
- Sampled one classroom per school

Allocation of School Sample in Israel - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Hebrew-Secular - High SES	42	0	41	0	0	1	0
Hebrew-Secular - Medium SES	26	0	25	1	0	0	0
Hebrew-Secular - Low SES	10	0	10	0	0	0	0
Hebrew-Religious - High SES	10	0	9	1	0	0	0
Hebrew-Religious - Medium SES	16	0	16	0	0	0	0
Hebrew-Religious - Low SES	8	0	8	0	0	0	0
Arabic-Arab - Medium SES	10	0	10	0	0	0	0
Arabic-Arab - Low SES	18	0	18	0	0	0	0
Arabic-Bedouin	12	0	12	0	0	0	0
Arabic-Druze	8	0	8	0	0	0	0
Total	160	0	157	2	0	1	0

Allocation of School Sample in Israel - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Hebrew-Secular - High SES	42	0	41	0	0	1	0
Hebrew-Secular - Medium SES	26	0	25	1	0	0	0
Hebrew-Secular - Low SES	10	0	10	0	0	0	0
Hebrew-Religious - High SES	10	0	9	1	0	0	0
Hebrew-Religious - Medium SES	16	0	15	0	0	1	0
Hebrew-Religious - Low SES	8	0	7	0	0	1	0
Arabic-Arab - Medium SES	10	0	10	0	0	0	0
Arabic-Arab - Low SES	18	0	18	0	0	0	0
Arabic-Bedouin	12	0	12	0	0	0	0
Arabic-Druze	8	0	8	0	0	0	0
Total	160	0	155	2	0	3	0

Italy

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of Slovenian, Ladin, and German instructional language schools
- Within-school exclusions consisted of students with functional disabilities and non-native language speakers

Sample Design

- Explicit stratification by school type (private, public) and region (center, south and islands, north east, north west, south) within public schools
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 109)
- The Field Test and Main Data Collection PIRLS samples were selected separately. The PIRLS Main Data Collection sample was selected by controlling for the overlap with the TIMSS 2015 and PIRLS Field Test samples using the Chowdhury approach.

Allocation of School Sample in Italy - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	10	0	8	2	0	0	0
Public - Center	28	0	24	4	0	0	0
Public - South and Islands	22	0	20	2	0	0	0
Public - North East	26	0	21	4	0	1	0
Public - North West	36	0	34	2	0	0	0
Public - South	28	0	27	1	0	0	0
Total	150	0	134	15	0	1	0

Allocation of School Sample in Italy - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	10	0	8	2	0	0	0
Public - Center	28	0	24	4	0	0	0
Public - South and Islands	22	0	19	2	0	1	0
Public - North East	26	0	21	4	0	1	0
Public - North West	36	0	34	2	0	0	0
Public - South	28	0	27	1	0	0	0
Total	150	0	133	15	0	2	0

Kazakhstan

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and languages other than Kazakh and Russian
- No within-school exclusions

Sample Design

- Explicit stratification by region (4), language (Kazakh, Russian, both languages) and urbanization (urban, rural)
- No implicit stratification
- Sampled two classrooms in schools with both Kazakh and Russian languages of instruction
- Class group option was used in bilingual schools

Allocation of School Sample in Kazakhstan

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Region A - Kazakh - Urban	10	0	10	0	0	0	0
Region A - Kazakh - Rural	18	1	17	0	0	0	0
Region A - Russian	8	0	7	1	0	0	0
Region A - Both Kazakh and Russian	12	0	12	0	0	0	0
Region B - Kazakh - Urban	8	0	8	0	0	0	0
Region B - Kazakh - Rural	10	0	10	0	0	0	0
Region B - Both Kazakh and Russian - Urban	8	0	8	0	0	0	0
Region B - Both Kazakh and Russian - Rural	10	0	10	0	0	0	0
Region B and C - Russian/Other	14	0	14	0	0	0	0
Region C - Kazakh - Urban	12	0	12	0	0	0	0
Region C - Kazakh - Rural	8	1	7	0	0	0	0
Region C - Both Kazakh and Russian - Urban	16	0	16	0	0	0	0
Region C - Both Kazakh and Russian - Rural	8	0	8	0	0	0	0
Region D - Kazakh - Urban	8	0	8	0	0	0	0
Region D - Kazakh - Rural	8	0	8	0	0	0	0
Region D - Russian	8	0	8	0	0	0	0
Region D - Both Kazakh and Russian	8	0	8	0	0	0	0
Total	174	2	171	1	0	0	0

Kuwait

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and minority language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private), region (6), and gender (male, female) within public schools, and language (Arabic, foreign, bilingual) within private schools
- No implicit stratification
- Sampled two classrooms in private bilingual schools
- The PIRLS samples were selected simultaneously with the TIMSS Main Data Collection to avoid overlap
- All private bilingual were sampled for PIRLS

Allocation of School Sample in Kuwait

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Asema – Female	10	1	9	0	0	0	0
Public - Asema – Male	11	0	11	0	0	0	0
Public - Hawally – Female	8	0	8	0	0	0	0
Public - Hawally - Male	8	0	8	0	0	0	0
Public - Farwaniya - Female	11	0	11	0	0	0	0
Public - Farwaniya - Male	12	0	12	0	0	0	0
Public - Ahmadi - Female	12	0	12	0	0	0	0
Public - Ahmadi - Male	13	1	12	0	0	0	0
Public - Jahra - Female	10	0	10	0	0	0	0
Public - Jahra - Male	10	0	10	0	0	0	0
Public - Mubarak Alkabeer - Female	7	0	7	0	0	0	1
Public - Mubarak Alkabeer - Male	6	0	6	0	0	0	1
Private - Arabic	18	2	16	0	0	0	0
Private - Foreign	29	0	27	0	0	2	0
Private - Bilingual	20	0	18	0	0	2	0
Total	185	4	177	0	0	4	2

Latvia

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and schools with instructional language other than Latvian or Russian
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school level (Grade 4 only, Grade 4 and 8), urbanization (Riga, city, town and rural area), language (Latvian, Russian), and school type (gymnasium-secondary, basic-beginners) within town and rural area Latvian schools
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 59)
- Did not participate in the Field Test. The PIRLS Main data Collection sample was selected simultaneously with the 2016 ICCS Main Data Collection sample to avoid overlap.
- Class group option was used in bilingual schools

Allocation of School Sample in Latvia

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only - Riga	6	1	5	0	0	0	0
Grade 4 only - City	8	0	8	0	0	0	0
Grade 4 only - Town-Rural	8	0	8	0	0	0	0
Grade 4 & Grade 8 - Riga - Latvian	22	0	22	0	0	0	0
Grade 4 & Grade 8 - Riga - Russian	24	0	21	1	0	2	0
Grade 4 & Grade 8 - City - Latvian	10	0	10	0	0	0	0
Grade 4 & Grade 8 - City - Russian	12	0	11	1	0	0	0
Grade 4 & Grade 8 - Town-Rural - Latvian - Gymnasium-Secondary	34	0	31	1	0	2	0
Grade 4 & Grade 8 - Town-Rural - Latvian - Basic-Beginners	24	0	23	0	1	0	0
Grade 4 & Grade 8 - Town-Rural - Russian	8	0	7	1	0	0	0
Total	156	1	146	4	1	4	0

Lithuania

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and other language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by language (Lithuanian, Russian, Polish, mixed) and urbanization within Lithuanian schools (4)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 99) and in bilingual schools
- The Field Test and Main data Collection PIRLS samples were selected sequentially
- Class group option was used in bilingual schools

Allocation of School Sample in Lithuania

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Lithuanian - Capital	22	0	22	0	0	0	0
Lithuanian - Other Major City	33	0	33	0	0	0	0
Lithuanian - City	52	0	52	0	0	0	0
Lithuanian - Small City or Village	29	0	29	0	0	0	0
Russian	20	0	20	0	0	0	0
Polish	19	0	19	0	0	0	1
Mixed	20	0	20	0	0	0	0
Total	195	0	195	0	0	0	1

Macao SAR

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of international schools
- Within-school exclusions consisted of students with functional disabilities and non-native language speakers

Sample Design

- All schools were sampled and therefore no explicit or implicit stratification were used
- All classrooms selected within school
- Classes were used as variance estimation strata and half classes were used to build jackknife replicates
- Did not participate in the Field Test

Allocation of School Sample in Macao SAR

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Macao SAR	57	0	57	0	0	0	0
Total	57	0	57	0	0	0	0

Malta

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and foreign instructional language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (state, church, independent)
- No implicit stratification
- All classrooms were sampled
- All schools and all Grade 4 (Year 5) students were selected
- Classes were used as variance estimation strata and half classes were used to build jackknife replicates. All classrooms selected within schools.

Allocation of School Sample in Malta

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Church	25	0	25	0	0	0	0
Independent	8	0	8	0	0	0	2
State	62	0	62	0	0	0	0
Total	95	0	95	0	0	0	2

Morocco

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 6)
- No within-school exclusions

Sample Design

- Explicit stratification by school type (private, public) and region (16)
- No implicit stratification
- The Field Test and Main Data Collection PIRLS samples were selected separately. The PIRLS Main Data Collection sample was selected by controlling for the overlap with the TIMSS 2015 samples and with the PIRLS Field Test sample using the Chowdhury approach.
- Oversampling of private schools and public within each region. All public schools were sampled in the region of Oued eddahab Lagouira. In these census strata, two classrooms were selected per school, and schools or classes were used as variance estimation strata and classes or half classes were used to build jackknife replicates. Sampled one classroom per school in other strata.
- PIRLS and PIRLS Literacy booklets were rotated within classes

Allocation of School Sample in Morocco

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private - Grand Casablanca	12	0	12	0	0	0	0
Private - All Other Regions	28	0	28	0	0	0	0
Public - Chaouia Ouardigha	20	0	20	0	0	0	0
Public - Doukkala Abda	20	0	20	0	0	0	0
Public - Fes Boulmane	20	0	20	0	0	0	0
Public - Gharb Chrarada Beni Hssein	20	0	20	0	0	0	0
Public - Goulmim Smara	20	0	20	0	0	0	0
Public - Grand Casablanca	20	0	20	0	0	0	0
Public - Laayoune Boujdour Sakia Hamra	20	0	20	0	0	0	0
Public - Marrakech Tansift Haouz	20	0	20	0	0	0	0
Public - Meknes Tafilalt	20	0	20	0	0	0	0
Public - Oued eddhab Lagouira	21	1	20	0	0	0	0
Public - Rabat Salé Zemmour Zaer	20	0	20	0	0	0	0
Public - Région Est	20	0	20	0	0	0	0
Public - Souss Massa Draa	20	0	20	0	0	0	0
Public - Tadla Azilal	20	0	20	0	0	0	0
Public - Tanger Tetouan	20	0	20	0	0	0	0
Public - Taza Hoceima Taounate	20	0	20	0	0	0	0
Total	361	1	360	0	0	0	0

Netherlands

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 6) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities and non-native language speakers

Sample Design

- Explicit stratification by combinations of TIMSS and PIRLS socioeconomic status (5) and urbanization (5)
- No implicit stratification
- All classrooms were sampled
- PIRLS 2016 samples and TIMSS 2015 samples were selected simultaneously to avoid overlap

Allocation of School Sample in Netherlands

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
TIMSS & PIRLS High Mean SES - Very High Population Density	8	0	3	3	0	2	0
TIMSS & PIRLS High Mean SES - High Population Density	14	0	9	4	1	0	0
TIMSS & PIRLS High Mean SES - Moderate Population Density	16	0	11	3	0	2	0
TIMSS & PIRLS High Mean SES - Low Population Density	16	0	13	1	0	2	0
TIMSS & PIRLS High Mean SES - Very Low Population Density	16	0	14	1	1	0	0
TIMSS High & PIRLS Medium Mean SES - High to Very High Density	10	0	5	1	1	3	0
TIMSS High & PIRLS Medium Mean SES - Low to Moderate Density	14	0	9	1	3	1	0
TIMSS & PIRLS Medium Mean SES - High to Very High Density	10	0	7	3	0	0	0
TIMSS & PIRLS Medium Mean SES - Low to Moderate Density	12	1	11	0	0	0	0
TIMSS Medium & PIRLS Low Mean SES - High to Very High Density	14	1	10	2	0	1	0
TIMSS Medium & PIRLS Low Mean SES - Low to Moderate Density	10	0	8	1	0	1	0
TIMSS & PIRLS Low Mean SES	10	0	1	2	3	4	0
Total	150	2	101	22	9	16	0

New Zealand

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, Westmount closed Brethren campus, and correspondence school
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (4), socioeconomic status level (4), and urbanization (2)
- No implicit stratification
- Sampled two classrooms per school
- The PIRLS school samples were selected by controlling for the overlap with the TIMSS 2015 Grade 4 and Grade 8 samples using the Chowdhury approach

Allocation of School Sample in New Zealand

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Maori-Medium	10	0	4	1	1	4	0
English-Medium - High Immersion	10	0	8	1	0	1	0
Bilingual schools	8	0	5	0	1	2	0
English-Medium (other) - Independent	8	0	7	0	0	1	0
English-Medium (other) - Low SES	24	0	19	3	1	1	0
English-Medium (other) - Moderately low SES - Major urban centers	24	0	20	3	1	0	0
English-Medium (other) - Moderately low SES - Smaller centers	14	0	12	1	0	1	0
English-Medium (other) - Moderately high SES - Major urban centers	33	0	31	2	0	0	0
English-Medium (other) - Moderately high SES - Smaller centers	16	0	15	1	0	0	0
English-Medium (other) - High SES - Major urban centers	43	0	39	3	1	0	0
English-Medium (other) - High SES - Smaller centers	8	0	7	1	0	0	0
Total	198	0	167	16	5	10	0

Northern Ireland

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 6) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (5) and deprivation (5)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 58)
- PIRLS 2016 sample and TIMSS 2015 samples were drawn simultaneously to avoid overlap

Allocation of School Sample in Northern Ireland

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Belfast - Lower Deprivation Level	10	0	9	1	0	0	0
Belfast - Highest Deprivation Level	12	0	10	0	0	2	0
Western - Lower Deprivation Level	10	0	10	0	0	0	0
Western - Moderate to High Deprivation Level	10	0	5	1	0	4	0
Western - Highest Deprivation Level	8	0	6	0	0	2	0
North Eastern - Lowest Deprivation Level	8	0	6	0	0	2	0
North Eastern - Low to Moderate Deprivation Level	12	0	11	1	0	0	0
North Eastern - Higher Deprivation Level	14	0	12	1	0	1	0
South Eastern - Lowest Deprivation Level	12	1	9	0	0	2	0
South Eastern - Low to Moderate Deprivation Level	8	0	7	0	0	1	0
South Eastern - Higher Deprivation Level	14	0	13	0	0	1	0
Southern - Lower Deprivation Level	12	0	10	0	0	2	0
Southern - Moderate Deprivation Level	12	0	11	0	0	1	0
Southern - Higher Deprivation Level	12	0	11	0	0	1	0
Total	154	1	130	4	0	19	0

Norway (5)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and instructional language other than Bokmål and Nynorsk
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by “Grade 5”/“Grade 4 and Grade 5” schools and language within “Grade 4 and Grade 5” stratum (Bokmål, Nynorsk)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 45)
- The PIRLS school samples were selected by controlling for the overlap with the TIMSS 2015 sample using the Chowdhury approach

Allocation of School Sample in Norway (5) - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 5	7	1	6	0	0	0	0
Grade 4 & Grade 5 - Bokmål	126	0	119	5	0	2	0
Grade 4 & Grade 5 - Nynorsk	20	0	20	0	0	0	0
Total	153	1	145	5	0	2	0

Allocation of School Sample in Norway (5) - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 5	7	1	6	0	0	0	0
Grade 4 & Grade 5 - Bokmål	126	0	114	4	0	8	0
Grade 4 & Grade 5 - Nynorsk	20	0	18	0	0	2	0
Total	153	1	138	4	0	10	0

Oman

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (government, private, international) and governorate (11) within government schools
- No implicit stratification
- In census strata and schools selected with certainty, schools or classes were used as variance estimation strata and classes or half classes were used to build jackknife replicates. Two classrooms selected within these schools. Sampled one classroom per school in other schools.

Allocation of School Sample in Oman

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Muscat Governorate	28	0	28	0	0	0	0
Ash Sharqiyah North Governorate	26	1	25	0	0	0	0
Ash Sharqiyah South Governorate	26	0	26	0	0	0	0
Ad Dakhliyah Governorate	26	0	26	0	0	0	0
Adh Dhahirah Governorate	26	0	26	0	0	0	0
Al Batinah North Governorate	30	0	30	0	0	0	0
Al Batinah South Governorate	26	0	26	0	0	0	0
Al Buraimi Governorate	15	0	15	0	0	0	0
Musandam Governorate	7	0	7	0	0	0	0
Al Wusta Governorate	20	0	20	0	0	0	0
Dhofar Governorate	26	0	26	0	0	0	0
Private Schools	26	0	24	1	0	1	0
International Schools	26	0	26	0	0	0	0
Total	308	1	305	1	0	1	0

Poland

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and instructional language other than Polish
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by urbanization (4) and school performance level (5)
- No implicit stratification
- Sampled two classrooms per school

Allocation of School Sample in Poland

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Village - Low Performance	14	0	14	0	0	0	0
Village - Medium-Low Performance	10	0	10	0	0	0	0
Village - Medium Performance	10	0	10	0	0	0	0
Village - Medium-High Performance	10	0	10	0	0	0	0
Village - High Performance	12	0	12	0	0	0	0
Town (Up to 20 thousand inhabitants) - Medium-Low Performance	8	0	8	0	0	0	0
Town (Up to 20 thousand inhabitants) - Medium-High Performance	10	1	8	1	0	0	0
City (20 to 100 thousand inhabitants) - Low Performance	10	0	9	1	0	0	0
City (20 to 100 thousand inhabitants) - Medium-Low Performance	8	0	7	0	0	1	0
City (20 to 100 thousand inhabitants) - Medium-High Performance	8	0	8	0	0	0	0
City (20 to 100 thousand inhabitants) - High Performance	10	0	9	1	0	0	0
City (Above 100 thousand inhabitants) - Low Performance	10	0	10	0	0	0	0
City (Above 100 thousand inhabitants) - Medium-Low Performance	10	0	9	1	0	0	0

Allocation of School Sample in Poland (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
City (Above 100 thousand inhabitants) - Medium-High Performance	10	0	9	1	0	0	0
City (Above 100 thousand inhabitants) - High Performance	10	0	8	2	0	0	0
Total	150	1	141	7	0	1	0

Portugal

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 6), special needs schools, and minority language schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private) and region (7) within public schools
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 149)
- The PIRLS samples were selected by controlling for the overlap with the TIMSS 2015 sample using the Chowdhury approach
- Probability proportional to (school) size systematic sampling was used in the 3 largest explicit strata, and systematic sampling selection with equal probabilities was used in all other strata

Allocation of School Sample in Portugal - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private - Lisboa	8	0	7	1	0	0	0
Private - All Other Regions	11	0	10	1	0	0	1
Public - Alentejo	30	0	27	2	0	1	0
Public - Algarve	8	0	8	0	0	0	0
Public - Centro	48	0	48	0	0	0	0
Public - Lisboa	36	0	35	1	0	0	0
Public - Norte	64	0	61	1	0	2	0
Public - R. A. Açores	8	0	7	1	0	0	0
Public - R. A. Madeira	8	0	8	0	0	0	0
Total	221	0	211	7	0	3	1

Allocation of School Sample in Portugal - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private - Lisboa	8	0	7	1	0	0	0
Private - All Other Regions	11	0	10	1	0	0	1
Public - Alentejo	30	0	27	2	0	1	0
Public - Algarve	8	0	8	0	0	0	0
Public - Centro	48	0	48	0	0	0	0
Public - Lisboa	36	0	35	1	0	0	0
Public - Norte	64	0	61	1	0	2	0
Public - R. A. Açores	8	0	7	1	0	0	0
Public - R. A. Madeira	8	0	8	0	0	0	0
Total	221	0	211	7	0	3	1

Qatar

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, and instructional language other than English and Arabic
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (independent, community, private) and gender (boys, girls) within independent schools
- No implicit stratification
- Sampled two classrooms per school
- Census of schools
- Schools or classrooms or half classrooms were used to build jackknife replicates for variance estimation

Allocation of School Sample in Qatar

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Independent - Boys	46	0	46	0	0	0	0
Independent - Girls	49	0	49	0	0	0	0
Community	17	0	17	0	0	0	0
Private	106	2	104	0	0	0	0
Total	218	2	216	0	0	0	0

Russian Federation

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (42)
- No implicit stratification
- Sampled two classrooms in large schools in Moscow City (measure of size > 270), one classroom otherwise
- An extra sampling stage (regions) was required prior to sampling schools. 28 of 69 regions were selected with probability proportional to the region size and 14 bigger regions were selected with certainty. While each certainty region itself is an explicit stratum, the other sampled regions make one large explicit stratum. In the large explicit stratum, a sample of schools was selected within each region.
- Within regions, schools were selected with probability proportional to (school) size systematic sampling. Schools were sorted (serpentine) by location (up to 7 levels) before being sorted by school size. The same region sample was used for both TIMSS and PIRLS.
- Within the certainty regions, schools were paired for variance calculation purposes. Otherwise, selected regions were paired for variance calculation purposes.

Allocation of School Sample in Russian Federation

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Sankt-Petersburg*	6	0	6	0	0	0	0
Mosco City*	14	0	14	0	0	0	0
Moscow Region*	10	0	10	0	0	0	0
Nizhni Novgorod Region*	4	0	4	0	0	0	0
Perm Territory*	4	0	4	0	0	0	0
Samara Region*	4	0	4	0	0	0	0
Republic of Tatarstan*	6	0	6	0	0	0	0
Republic of Bashkortostan*	8	0	8	0	0	0	0
Krasnodar Territory*	8	0	8	0	0	0	0
Rostov Region*	6	0	6	0	0	0	0
Chelyabinsk Region*	6	0	6	0	0	0	0
Sverdlovsk Region*	8	0	8	0	0	0	0
Krasnoyarsk Territory*	4	0	4	0	0	0	0
Republic of Dagestan*	6	0	6	0	0	0	0
Novgorod Region	4	0	4	0	0	0	0
Kaliningrad Region	4	0	4	0	0	0	0
Vologda Region	4	0	4	0	0	0	0
Voronezh Region	4	0	4	0	0	0	0
Vladimir Region	4	0	4	0	0	0	0
Tula Region	4	0	4	0	0	0	0
Bryansk Region	4	0	4	0	0	0	0
Ryazan Region	4	0	4	0	0	0	0
Kaluga Region	4	0	4	0	0	0	0
Republic of Marij El	4	0	4	0	0	0	0
Ulyanovsk Region	4	0	4	0	0	0	0
Chuvashi Republic	4	0	4	0	0	0	0
Orenburg Region	4	0	4	0	0	0	0
Saratov Region	4	0	4	0	0	0	0
Astrakhan Region	4	0	4	0	0	0	0
Kurgan Region	4	0	4	0	0	0	0
Khanty Mansijsk AD	4	0	4	0	0	0	0
Irkutsk Region	4	0	4	0	0	0	0

* Certainty Regions

Allocation of School Sample in Russian Federation (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Kemerovo Region	4	0	4	0	0	0	0
Novosibirsk Region	4	0	4	0	0	0	0
Altai Territory	4	0	4	0	0	0	0
Zabaikalsk Territory	4	0	4	0	0	0	0
Tomsk Region	4	0	4	0	0	0	0
Sakhalin Region	4	0	4	0	0	0	0
Republic of Sakha (Yakutia)	4	0	4	0	0	0	0
Primorski Territory	4	0	4	0	0	0	0
Stravropol Territory	4	0	4	0	0	0	0
Kabardino-Balkarian Republic	4	0	4	0	0	0	0
Total	206	0	206	0	0	0	0

Saudi Arabia

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 7) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region and by gender (boys, girls) within larger regions
- No implicit stratification
- Sampled one classroom per school

Allocation of School Sample in Saudi Arabia

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Asir - Boys	8	0	8	0	0	0	0
Asir - Girls	8	0	8	0	0	0	0
Bahah	8	0	8	0	0	0	0
Eastern Region - Boys	12	0	10	1	1	0	0
Eastern Region - Girls	12	0	11	0	1	0	0
Hail	8	0	8	0	0	0	0
Jawf	8	0	8	0	0	0	0
Jizan	10	2	5	1	2	0	0
Madinah - Boys	8	0	8	0	0	0	0
Madinah - Girls	8	0	7	1	0	0	0
Makkah - Boys	20	0	18	2	0	0	0
Makkah - Girls	22	0	20	1	1	0	0
Najran	8	4	0	1	3	0	0
Northern Borders	8	0	8	0	0	0	0
Qassim	8	0	8	0	0	0	0
Riyadh	44	0	42	2	0	0	0
Tabuk	8	0	8	0	0	0	0
Total	208	6	185	9	8	0	0

Singapore

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and private schools
- For PIRLS 2016, like in all previous cycles, Singapore took a census of all public schools with Grade 4 students. The sampling frame excluded private schools, which are largely foreign-system schools operating in Singapore and which serve predominantly international students. These foreign-system schools are fundamentally different from the public schools in many respects (e.g., language of instruction; school-calendar year).
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- No explicit stratification
- No implicit stratification
- Sampled two classrooms per school
- Census of all schools. Within schools, two half classrooms were sampled with probability proportional to the size of the classroom. Within selected classrooms, 19 students were randomly sampled.
- Schools were used as variance estimation strata and classes were used to build jackknife replicates

Allocation of School Sample in Singapore - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
None	177	0	177	0	0	0	0
Total	177	0	177	0	0	0	0

Allocation of School Sample in Singapore - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
None	177	0	177	0	0	0	0
Total	177	0	177	0	0	0	0

Slovak Republic

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and taught in language other than Slovak and Hungarian
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by language (Slovak, Hungarian), socioeconomic status (less than 1% of students coming from lower socioeconomic status, less than 10% of students coming from lower socioeconomic status, 10% or more students from lower socioeconomic status), and region group (5) within Slovak language strata
- No implicit stratification
- Sampled two classrooms per school
- Field Test and Main Data Collection samples were selected separately. The PIRLS Main Data Collection sample was selected using the Chowdhury method to minimize overlap with the PIRLS Field Test sample.
- Systematic sampling selection with equal probabilities used for sampling in strata with large sampling fractions

Allocation of School Sample in Slovak Republic

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Slovak - Higher SES - Region 1	20	0	19	1	0	0	0
Slovak - Higher SES - Regions 2 & 3 & 5	20	0	18	2	0	0	0
Slovak - Higher SES - Region 4	20	0	19	1	0	0	0
Slovak - Higher SES - Regions 6 & 8	16	1	14	1	0	0	0
Slovak - Higher SES - Region 7	20	0	19	1	0	0	0
Slovak - Medium and Lower SES - Region 1	7	0	7	0	0	0	0
Slovak - Medium SES - Regions 2 & 3 & 5	26	0	23	3	0	0	0
Slovak - Medium SES - Region 4	8	0	8	0	0	0	0
Slovak - Medium SES - Regions 6 & 7 & 8	20	0	19	1	0	0	0
Slovak - Lower SES - Regions 2 & 3 & 5	8	0	8	0	0	0	0
Slovak - Lower SES - Region 4	8	0	8	0	0	0	0
Slovak - Lower SES - Regions 6 & 7 & 8	32	0	31	0	1	0	0
Hungarian - Higher and Medium SES	8	0	7	1	0	0	0
Hungarian - Lower SES	8	0	8	0	0	0	0
Total	221	1	208	11	1	0	0

Slovenia

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and Waldorf schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type according to school structure (main school, dislocated unit) and region (Pomurska, Koroška, Osrednjeslovenska, other regions)
- No implicit stratification
- Sampled two classrooms per school

Allocation of School Sample in Slovenia - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Main - Pomurska	10	1	9	0	0	0	0
Main - Koroška	10	0	10	0	0	0	0
Main - Osrednjeslovenska	26	1	24	0	0	1	0
Main - Other Regions	70	0	68	0	0	2	0
Dislocated - Pomurska	8	0	8	0	0	0	0
Dislocated - Koroška	13	0	13	0	0	0	0
Dislocated - Osrednjeslovenska	13	0	11	0	0	2	0
Dislocated - Other Regions	22	0	17	0	0	5	0
Total	172	2	160	0	0	10	0

Allocation of School Sample in Slovenia - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Main - Pomurska	10	1	9	0	0	0	0
Main - Koroška	10	0	10	0	0	0	0
Main - Osrednjeslovenska	26	1	24	0	0	1	0
Main - Other Regions	70	0	68	0	0	2	0
Dislocated - Pomurska	8	0	8	0	0	0	0
Dislocated - Koroška	13	0	12	0	0	1	0
Dislocated - Osrednjeslovenska	13	0	11	0	0	2	0
Dislocated - Other Regions	22	0	17	0	0	5	0
Total	172	2	159	0	0	11	0

South Africa

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools, very small schools (measure of size < 6), schools for which language of testing cannot be determined, and schools with less than 30 learners
- Within-school exclusions consisted of students with intellectual disabilities and non-native language speakers

Sample Design

- Explicit stratification by language (11) and province (9)
- No implicit stratification
- Sampled two classrooms or more in schools teaching in more than one language
- Class group option was used in schools teaching in more than one language

Allocation of School Sample in South Africa

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Afrikaans - Northern Cape	10	0	10	0	0	0	0
Afrikaans - All other provinces	14	0	12	1	0	1	0
English - EC, GT, KZ, LP provinces	22	0	19	2	0	1	0
English - All other provinces	16	1	15	0	0	0	0
IsiNdebele - All provinces	8	0	8	0	0	0	0
IsiXhosa - Eastern Cape	16	0	16	0	0	0	0
IsiXhosa - All other provinces	8	0	8	0	0	0	0
IsiZulu - KwaZulu-Natal	24	0	18	4	1	1	0
IsiZulu - All other provinces	8	0	7	0	0	1	0
Sepedi - All provinces	16	0	15	0	0	1	0
Sesotho - All provinces	16	0	16	0	0	0	0
Setswana - Northern Cape	8	0	8	0	0	0	0
Setswana - All other provinces	20	0	20	0	0	0	0
SiSwati - All provinces	22	0	21	0	0	1	0
Tshivenda - All provinces	22	0	22	0	0	0	0
Xitsonga - All provinces	18	0	17	0	0	1	0
Afrikaans & English - EC, GT, KZ, LP provinces	4	0	4	0	0	0	0
Afrikaans & English - Northern Cape	4	0	2	0	0	2	0
Afrikaans & English - All other provinces	10	0	9	1	0	0	0
Neither Afrikaans nor English - FS & NC provinces	4	0	4	0	0	0	0

Allocation of School Sample in South Africa (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Neither Afrikaans nor English - All other provinces	12	0	12	0	0	0	0
Afrikaans/English/others - EC, GT, KZ, LP provinces	12	0	11	1	0	0	0
Afrikaans/English/others - All other provinces	10	1	8	1	0	0	0
Total	304	2	282	10	1	9	0

Spain

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and international schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (8), school type (public, private). Within Madrid, private schools were also stratified by category (government dependent, independent) and by bilingual status (bilingual, not bilingual) within the public and government dependent private schools
- No implicit stratification
- Sampled two classrooms in large schools of Andalusia (measure of size > 74) and one classroom otherwise
- Oversampling of schools in Andalusia, Asturias, Basque Country, Canary Islands, Castile and Leon, Catalonia, La Rioja, and Madrid

Allocation of School Sample in Spain

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Andalusia - Public	110	0	109	1	0	0	0
Andalusia - Private	40	0	39	0	1	0	0
Asturias - Public	30	0	30	0	0	0	0
Asturias - Private	20	0	20	0	0	0	0
Castile and Leon - Public	29	0	29	0	0	0	1
Castile and Leon - Private	20	0	20	0	0	0	0
Catalonia - Public	30	0	30	0	0	0	0
Catalonia - Private	20	0	19	1	0	0	0
La Rioja - Public	27	0	27	0	0	0	0
La Rioja - Private	23	0	23	0	0	0	0
Madrid - Public - Bilingual	40	0	40	0	0	0	0
Madrid - Public - Non Bilingual	40	0	40	0	0	0	0
Madrid - Private - Bilingual	40	0	40	0	0	0	0
Madrid - Private - Non Bilingual	40	0	40	0	0	0	0
Madrid - Independent Private - Non Bilingual	8	0	8	0	0	0	0
Basque Country - Public	30	0	30	0	0	0	0
Basque Country - Private	20	0	20	0	0	0	0
Other regions - Public	42	0	41	1	0	0	0
Other regions - Private	20	0	20	0	0	0	0
Total	629	0	625	3	1	0	1

Sweden

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools, international schools, special program schools, and very small schools (measure of size < 5)
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by grade average (4)
- No implicit stratification
- Sampled two classrooms per school
- The PIRLS sample was selected by controlling for the overlap with the TIMSS Grade 4 and Grade 8 samples using the Chowdhury approach

Allocation of School Sample in Sweden - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Higher average score	14	0	14	0	0	0	0
Medium average score	14	0	14	0	0	0	0
Low average score	24	1	23	0	0	0	0
Missing score	106	3	102	1	0	0	0
Total	158	4	153	1	0	0	0

Allocation of School Sample in Sweden - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Higher average score	14	0	13	0	0	1	0
Medium average score	14	0	13	0	0	1	0
Low average score	24	1	22	0	0	1	0
Missing score	106	3	96	0	0	7	0
Total	158	4	144	0	0	10	0

Trinidad and Tobago

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5)
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by type of school (government-related, private) and region within government-related stratum (8). Government-related strata include government and denominational schools.
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 69)

Allocation of School Sample in Trinidad and Tobago

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	12	0	12	0	0	0	0
Government-related - Caroni	22	0	22	0	0	0	0
Government-related - North Eastern	10	0	10	0	0	0	0
Government-related - Port of Spain and surroundings	20	0	20	0	0	0	0
Government-related - South Eastern	12	0	12	0	0	0	0
Government-related - St George East	32	0	32	0	0	0	0
Government-related - St. Patrick	16	1	15	0	0	0	0
Government-related - Tobago	8	0	8	0	0	0	0
Government-related - Victoria	20	0	20	0	0	0	0
Total	152	1	151	0	0	0	0

United Arab Emirates

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools, measure of size < 13 for all Emirates except Dubai and Abu Dhabi and measure of size < 10 for Dubai, schools with an instructional language other than Arabic, English, or French for Dubai and with an instructional language other than English and Arabic for the other Emirates, geographically inaccessible schools in all Emirates except Dubai, and home schools in Emirates other than Abu Dhabi and Dubai
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by Emirates (7), school type (public, private) and language of instruction (Arabic, English)
- No implicit stratification
- Census of schools in Dubai, Umm Al Quwain, and Fujairah private schools. Also, all private English schools with curriculum not from the United Kingdom, United States, or Canada, in the regions Abu Dhabi and Al Ain were sampled. In census strata, classes or half classes were used to build jackknife replicates for variance estimation. Two classrooms selected within these schools. Some schools are paired together within an explicit stratum when there is only one class participating.

Allocation of School Sample in United Arab Emirates - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Arabic	28	1	27	0	0	0	0
Private - Arabic	9	1	8	0	0	0	0
Private - English	138	1	136	0	0	1	0
Private - French	3	0	3	0	0	0	0
Abu Dhabi - Public - Both - ADEC Schools	26	0	26	0	0	0	0
Abu Dhabi - Private - Arabic - Ministry of Education	14	0	14	0	0	0	0
Abu Dhabi - Private - English - UK/US/ CAD	30	1	29	0	0	0	0
Abu Dhabi - Private - English - Others	18	1	17	0	0	0	0
Al Ain - Public - Both - ADEC Schools	22	0	22	0	0	0	0
Al Ain - Private - Arabic - Ministry of Education	9	0	9	0	0	0	0
Al Ain - Private - English - UK/US/ CAD	12	0	12	0	0	0	0
Al Ain - Private - English - Others	10	0	10	0	0	0	0
Al Gharbia	12	0	12	0	0	0	0
Sharjah - Public - Arabic	12	0	11	0	0	1	0
Sharjah - Private - Arabic	12	0	10	1	0	1	0
Sharjah - Private - English	20	0	20	0	0	0	0
Ajman - Public - Arabic	12	0	10	0	0	2	0
Ajman - Private - Arabic	12	0	12	0	0	0	0
Ajman - Private - English	8	0	8	0	0	0	0
Umm Al Quwain - Public - Arabic	6	0	6	0	0	0	0
Umm Al Quwain - Private - Arabic	1	0	1	0	0	0	0

Allocation of School Sample in United Arab Emirates - PIRLS (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Umm Al Quwain - Private - English	4	0	4	0	0	0	0
Fujairah - Public - Arabic	18	0	18	0	0	0	0
Fujairah - Private - Arabic	5	0	4	0	0	1	0
Fujairah - Private - English	9	0	9	0	0	0	0
Ras Al Khaimah - Public - Arabic	16	1	15	0	0	0	0
Ras Al Khaimah - Private - Arabic	8	0	7	0	0	1	0
Ras Al Khaimah - Private - English	8	1	7	0	0	0	0
Total	482	7	467	1	0	7	0

Allocation of School Sample in United Arab Emirates - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Arabic	28	1	27	0	0	0	0
Private - Arabic	9	1	8	0	0	0	0
Private - English	138	1	136	0	0	1	0
Private - French	3	0	3	0	0	0	0
Abu Dhabi - Public - Both - ADEC Schools	26	0	26	0	0	0	0
Abu Dhabi - Private - Arabic - Ministry of Education	14	0	14	0	0	0	0
Abu Dhabi - Private - English - UK/US/ CAD	30	1	29	0	0	0	0
Abu Dhabi - Private - English - Others	18	1	17	0	0	0	0
Al Ain - Public - Both - ADEC Schools	22	0	22	0	0	0	0
Al Ain - Private - Arabic - Ministry of Education	9	0	9	0	0	0	0
Al Ain - Private - English - UK/US/ CAD	12	0	12	0	0	0	0
Al Ain - Private - English - Others	10	0	10	0	0	0	0
Al Gharbia	12	0	11	0	0	1	0
Sharjah - Public - Arabic	12	0	11	0	0	1	0
Sharjah - Private - Arabic	12	0	10	1	0	1	0
Sharjah - Private - English	20	0	20	0	0	0	0
Ajman - Public - Arabic	12	0	9	0	0	3	0
Ajman - Private - Arabic	12	0	12	0	0	0	0
Ajman - Private - English	8	0	8	0	0	0	0
Umm Al Quwain - Public - Arabic	6	0	6	0	0	0	0
Umm Al Quwain - Private - Arabic	1	0	1	0	0	0	0

Allocation of School Sample in United Arab Emirates - ePIRLS (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Umm Al Quwain - Private - English	4	0	3	0	0	1	0
Fujairah - Public - Arabic	18	0	18	0	0	0	0
Fujairah - Private - Arabic	5	0	4	0	0	1	0
Fujairah - Private - English	9	0	9	0	0	0	0
Ras Al Khaimah - Public - Arabic	16	1	15	0	0	0	0
Ras Al Khaimah - Private - Arabic	8	0	7	0	0	1	0
Ras Al Khaimah - Private - English	8	1	7	0	0	0	0
Total	482	7	464	1	0	10	0

United States

Coverage and Exclusions

- Coverage is 100 percent
- No school level exclusions
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by poverty level (high, low), school type (public, private), and census region (4)
- Implicit stratification by urbanization (city, suburb, town, rural) and ethnicity status (above 15% non-White students in a school, below 15% non-White students in a school)
- Sampled two classrooms in large schools
- High poverty level schools were oversampled

Allocation of School Sample in United States - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
High Poverty Level - Public - Northeast	8	0	7	1	0	0	0
High Poverty Level - Public - Midwest	9	0	6	1	0	2	0
High Poverty Level - Public - South	24	0	23	1	0	0	0
High Poverty Level - Public - West	9	0	6	0	0	3	0
Low Poverty Level - Private - Northeast	3	1	2	0	0	0	0
Low Poverty Level - Private - Midwest	3	0	2	1	0	0	0
Low Poverty Level - Private - South	4	0	4	0	0	0	0
Low Poverty Level - Private - West	2	1	0	0	0	1	0
Low Poverty Level - Public - Northeast	18	1	11	3	0	3	0
Low Poverty Level - Public - Midwest	25	0	15	5	3	2	0
Low Poverty Level - Public - South	41	1	35	3	2	0	0
Low Poverty Level - Public - West	30	0	20	6	1	3	0
Total	176	4	131	21	6	14	0

Allocation of School Sample in United States - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
High Poverty Level - Public - Northeast	8	0	7	0	0	1	0
High Poverty Level - Public - Midwest	9	0	6	1	0	2	0
High Poverty Level - Public - South	24	0	22	1	0	1	0
High Poverty Level - Public - West	9	0	6	0	0	3	0
Low Poverty Level - Private - Northeast	3	1	2	0	0	0	0
Low Poverty Level - Private - Midwest	3	0	2	1	0	0	0
Low Poverty Level - Private - South	4	0	4	0	0	0	0
Low Poverty Level - Private - West	2	1	0	0	0	1	0
Low Poverty Level - Public - Northeast	18	1	11	3	0	3	0
Low Poverty Level - Public - Midwest	25	0	15	5	2	3	0
Low Poverty Level - Public - South	41	1	35	3	2	0	0
Low Poverty Level - Public - West	30	0	18	6	1	5	0
Total	176	4	128	20	5	19	0

Characteristics of Benchmarking Participants

Buenos Aires, Argentina

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of distance learning schools and special education schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private) and socioeconomic status (low, medium, high)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 70)

Allocation of School Sample in Buenos Aires, Argentina

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
State - Low SES	32	0	25	7	0	0	0
State - Medium SES	31	0	30	1	0	0	0
State - High SES	15	0	10	5	0	0	0
Private - Low SES	18	0	16	2	0	0	0
Private - Medium SES	27	0	24	3	0	0	0
Private - High SES	27	0	26	1	0	0	0
Total	150	0	131	19	0	0	0

Ontario, Canada

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 6), special needs schools, and First Nations schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (private, Catholic, public) and language (English, French) within Catholic and public schools
- Implicit stratification by region (4) in public and Catholic explicit strata
- Sampled two classrooms in large schools (measure of size > 79)
- The school sample for PIRLS was selected by controlling for the overlap with the TIMSS Grade 4 using the Chowdhury approach

Allocation of School Sample in Ontario, Canada

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	8	0	0	1	0	7	0
English - Catholic	30	0	30	0	0	0	0
English - Public	80	2	77	1	0	0	0
French - Catholic & Public	80	0	79	0	0	1	0
Total	198	2	186	2	0	8	0

Quebec, Canada

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 10), special needs schools, international schools, non ministry schools, and special status schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private) and language (French, English)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 80)
- The school sample for PIRLS was selected by controlling for the overlap with the TIMSS Grade 4 using the Chowdhury approach

Allocation of School Sample in Quebec, Canada

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
English - Private	8	1	7	0	0	0	0
English - Public	42	0	39	0	0	3	0
French - Private	8	0	8	0	0	0	0
French - Public	118	1	35	25	13	44	0
Total	176	2	89	25	13	47	0

Denmark (3)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, daycare and rehabilitation home schools as well as German, English, and Rudolf Steiner schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (2)
- No implicit stratification
- Sampled one classroom per school
- The same sample of schools for PIRLS Grade 4 was used for Grade 3

Allocation of School Sample in Denmark (3)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public	171	7	154	9	0	1	0
Private	27	0	16	6	1	4	0
Total	198	7	170	15	1	5	0

Norway (4)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 5), special needs schools, instructional language other than Bokmal and Nynorsk, and school for adults
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by “Grade 4”/”Grade 4 and Grade 5” schools and language within “Grade 4 and Grade 5” (Bokmål, Nynorsk)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 45)
- The PIRLS school samples were selected by controlling for the overlap with the TIMSS 2015 sample using the Chowdhury approach

Allocation of School Sample in Norway (4)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4	9	0	7	2	0	0	0
Grade 4 and Grade 5 - Bokmål	126	0	120	5	0	1	0
Grade 4 and Grade 5 - Nynorsk	20	0	20	0	0	0	0
Total	155	0	147	7	0	1	0

Moscow City, Russian Federation

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4) and special needs schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- No explicit stratification
- No implicit stratification
- Sampled 2 classrooms in large schools (measure of size > 270)

Allocation of School Sample in Moscow City, Russian Federation

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Moscow City	150	0	150	0	0	0	0
Total	150	0	150	0	0	0	0

Eng/Afr/Zulu – RSA (5)

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools, very small schools (measure of size < 6), schools with less than 30 learners, and Afrikaans & IsiZulu & English schools
- Within-school exclusions consisted of non-native language speakers

Sample Design

- Explicit stratification by language (Afrikaans only, English only, IsiZulu only, Afrikaans and English schools, IsiZulu and English schools)
- No implicit stratification
- Sampled two classrooms in bilingual schools
- The PIRLS Grade 5 sample was selected by controlling for the overlap with the Grade 4 PIRLS Literacy sample using the Chowdhury approach
- Class group option was used in bilingual schools

Allocation of School Sample in Eng/Afr/Zulu – RSA (5)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Afrikaans - No English, No IsiZulu	24	0	20	1	0	3	0
English - No Afrikaans, No IsiZulu	45	10	29	1	0	5	0
IsiZulu - No Afrikaans, No English	49	1	41	1	3	3	0
Afrikaans & English	25	1	19	2	0	3	0
IsiZulu & English	9	1	8	0	0	0	0
Total	152	13	117	5	3	14	0

Andalusia, Spain

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 4), special needs schools, and international schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private)
- No implicit stratification
- Sampled two classrooms in large schools (measure of size > 74)

Allocation of School Sample in Andalusia, Spain

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public	110	0	109	1	0	0	0
Private	40	0	39	0	1	0	0
Total	150	0	148	1	1	0	0

Madrid, Spain

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of special needs schools and international schools
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, government dependent private, independent private) and bilingual status (bilingual, non bilingual)
- No implicit stratification
- Sampled one classroom per school

Allocation of School Sample in Madrid, Spain

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Bilingual	40	0	40	0	0	0	0
Public - Non Bilingual	40	0	40	0	0	0	0
Private - Bilingual	40	0	40	0	0	0	0
Private - Non Bilingual	40	0	40	0	0	0	0
Independent Private - Non Bilingual	8	0	8	0	0	0	0
Total	168	0	168	0	0	0	0

Abu Dhabi, United Arab Emirates

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of remote schools, and schools with an instructional language other than Arabic or English
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by region (Abu Dhabi, Al Ain, Al Gharbia), school type (public, private), language (Arabic, English), and curriculum (4)
- No implicit stratification
- All Private English schools with curriculum not from United Kingdom, United States, or Canada, were sampled in the regions Abu Dhabi and Al Ain. Two classrooms selected within these schools whenever possible. In these census strata, classes or half classes were used to build jackknife replicates for variance estimation. Sampled one classroom per school in other strata.

Allocation of School Sample in Abu Dhabi, United Arab Emirates - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Abu Dhabi - Public - Both - ADEC schools	26	0	26	0	0	0	0
Abu Dhabi - Private - Arabic - Ministry of Education	14	0	14	0	0	0	0
Abu Dhabi - Private - English - UK/US/CAD	30	1	29	0	0	0	0
Abu Dhabi - Private - English - Others	18	1	17	0	0	0	0
Al Ain - Public - Both - ADEC schools	22	0	22	0	0	0	0
Al Ain - Private - Arabic - Ministry of Education	9	0	9	0	0	0	0
Al Ain - Private - English - UK/US/CAD	12	0	12	0	0	0	0
Al Ain - Private - English - Others	10	0	10	0	0	0	0
Al Gharbia	12	0	12	0	0	0	0
Total	153	2	151	0	0	0	0

Allocation of School Sample in Abu Dhabi, United Arab Emirates - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Abu Dhabi - Public - Both - ADEC schools	26	0	26	0	0	0	0
Abu Dhabi - Private - Arabic - Ministry of Education	14	0	14	0	0	0	0
Abu Dhabi - Private - English - UK/US/CAD	30	1	29	0	0	0	0
Abu Dhabi - Private - English - Others	18	1	17	0	0	0	0
Al Ain - Public - Both - ADEC schools	22	0	22	0	0	0	0
Al Ain - Private - Arabic - Ministry of Education	9	0	9	0	0	0	0
Al Ain - Private - English - UK/US/CAD	12	0	12	0	0	0	0
Al Ain - Private - English - Others	10	0	10	0	0	0	0
Al Gharbia	12	0	11	0	0	1	0
Total	153	2	150	0	0	1	0

Dubai, United Arab Emirates

Coverage and Exclusions

- Coverage is 100 percent
- School-level exclusions consisted of very small schools (measure of size < 10), and schools with an instructional language other than Arabic, English, or French
- Within-school exclusions consisted of students with intellectual disabilities, students with functional disabilities, and non-native language speakers

Sample Design

- Explicit stratification by school type (public, private) and language (Arabic, English, French)
- No implicit stratification
- Sampled two classrooms per school
- Census of all schools
- Schools or classes were used as variance estimation strata and classes or half classes were used to build jackknife replicates

Allocation of School Sample in Dubai, United Arab Emirates - PIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Arabic	28	1	27	0	0	0	0
Private - Arabic	9	1	8	0	0	0	0
Private - English	138	1	136	0	0	1	0
Private - French	3	0	3	0	0	0	0
Total	178	3	174	0	0	1	0

Allocation of School Sample in Dubai, United Arab Emirates - ePIRLS

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public - Arabic	28	1	27	0	0	0	0
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Total	178	3	174	0	0	1	0