

PIRLS 2011

Characteristics of National Samples

Australia

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of non-mainstream schools (e.g. special education schools), very small schools (MOS < 5), remote schools, and schools that burned down in Victorian bushfires.
- ◆ Within-school exclusions consisted of intellectually and physically disabled students, and English as a second language (ESL) students.

Sample Design

- ◆ Explicit stratification by states/territories.
- ◆ Implicit stratification by geographic location (metropolitan, provincial, and remote), SEIFA performance index (10), and school type (Catholic, government, and independent).
- ◆ Sampled two classrooms per school and all of the indigenous students found in sampled schools.
- ◆ Schools were oversampled to allow for better estimates at the state/territory level.
- ◆ Student non-response adjustment cells for the indigenous students were built at the explicit stratum level (with no modification to the variance calculation method).
- ◆ All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 1: Allocation of School Sample in Australia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Australian Capital Territory	30	1	29	0	0	0	0
New South Wales	45	0	40	4	0	1	0
Northern Territory	15	0	14	0	0	1	0
Queensland	45	0	44	0	0	1	0
South Australia	40	1	39	0	0	0	0
Tasmania	30	2	28	0	0	0	0
Victoria	45	2	41	1	0	1	0
Western Australia	40	0	40	0	0	0	0
Total	290	6	275	5	0	4	0

Austria

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools and very small schools (MOS < 4).
- ◆ Within-school exclusions consisted of intellectually-disabled students, functionally-disabled students, non-native language speakers, and students with special needs in special education classrooms in regular schools.

Sample Design

- ◆ Explicit stratification by region (Bundesland).
- ◆ Implicit stratification by district (121).
- ◆ Sampled two classrooms per school.
- ◆ All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 2: Allocation of School Sample in Austria, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Burgenland	5	0	5	0	0	0	0
Kärnten	11	0	11	0	0	0	0
Niederösterreich	31	0	31	0	0	0	0
Oberösterreich	29	0	29	0	0	0	0
Salzburg	11	0	11	0	0	0	0
Steiermark	22	0	21	0	0	0	1
Tirol	14	0	14	0	0	0	0
Vorarlberg	8	0	8	0	0	0	0
Wien	29	0	28	0	0	0	1
Total	160	0	158	0	0	0	2

Azerbaijan

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools where students are taught in languages other than Azeri or Russian, very small schools (MOS < 5), and special education schools.
- ◆ Also excluded were students taught in Armenian community schools in Nagorno-Karabakh conflict zone (due to lack of access, students taught in Azeri community schools were in the sample frame under “refugee schools”) and students in international schools (TISA and BAKU) for which no statistics were available. As a result, exclusion rates are biased downward.
- ◆ Within-school exclusions consisted of students with special educational needs and students taught in languages other than Azeri or Russian.

Sample Design

- ◆ Explicit stratification by national examination score.
- ◆ Implicit stratification by geographic sub index (Baku, Baku suburb, refugee school, regional center school, and village school), and performance level on national examination (11). If the national

examination score of the school was unknown (missing), the implicit stratification took into account the school type (gymnasium and lyceum, basic and elementary, and secondary school).

- ◆ Sampled two classrooms per school.
- ◆ All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 3: Allocation of School Sample in Azerbaijan, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Low Performance	40	0	26	12	2	0	0
Medium Performance	30	0	22	6	2	0	0
High Performance	78	0	74	4	0	0	0
Unknown Performance	22	1	20	1	0	0	0
Total	170	1	142	23	4	0	0

Belgium (French)

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools for disabled children and hospitalized children, and very small schools (MOS < 5).
- ◆ Within-school exclusions consisted of children with less than one year of instruction in French.

Sample Design

- ◆ Explicit stratification by school type.
- ◆ Implicit stratification by region (Brabant Wallon, Bruxelles Capitale, Hainaut, Liege, Luxembourg, and Namur).
- ◆ Sampled two classrooms per school in larger schools (MOS > 35).

Exhibit 4: Allocation of School Sample in Belgium (French), Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Local Board Public Network Schools	73	0	64	4	0	5	0
Private Dependent Schools	64	0	41	8	0	15	0
Public Schools	13	0	10	0	0	3	0
Total	150	0	115	12	0	23	0

Botswana

Sixth Grade (PIRLS)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools.
- ◆ No within-school exclusions.
- ◆ The same sample of schools was used for both prePIRLS and PIRLS.

Sample Design

- ◆ Explicit stratification by inspectoral region.
- ◆ Implicit stratification by performance level (high, medium, low, and unknown).
- ◆ The school measure of size (MOS) was given by the number of Grade 4 students found in schools (Grade 4 and Grade 6 students all attend the same schools).
- ◆ School sample overlap between prePIRLS (Grade 4), TIMSS (Grade 6), PIRLS (Grade 6), and TIMSS (Grade 9): 1) Samples were drawn all at once; 2) All sampled schools were asked to participate in all studies; and 3) All sampled students for PIRLS at Grade 6 also were asked to take TIMSS.

Exhibit 5: Allocation of School Sample in Botswana, Sixth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Central North	25	1	24	0	0	0	0
Central South	28	0	28	0	0	0	0
North	14	0	14	0	0	0	0
South	24	0	24	0	0	0	0
South Central	43	0	43	0	0	0	0
West	16	0	16	0	0	0	0
Total	150	1	149	0	0	0	0

Bulgaria

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools and very small schools (MOS < 5).
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by school type.
- ◆ Implicit stratification by location (capital, large city, and “other”) and region (28).
- ◆ Sampled two classrooms per school.

Exhibit 6: Allocation of School Sample in Bulgaria, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Basic	83	2	77	4	0	0	0
Elementary	13	0	13	0	0	0	0
General	54	1	52	1	0	0	0
Total	150	3	142	5	0	0	0

Canada

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 7 in Alberta, MOS < 10 in Québec, and MOS < 6 for the rest of the country), non-Ministry schools (in Québec), special needs schools, private schools, band-operated schools (First Nations and Native schools), distance learning schools, not funded schools, schools from Yukon and other territories, and schools from New Brunswick where students are taught in English.
- ◆ Within-school exclusions consisted of students with special needs and students who do not speak English or French.

Sample Design

- ◆ Explicit stratification by province, English/French school type, school board within Nova Scotia, “Grade 4” / “Grade 4 & Grade 8” school type, and school size within Alberta.
- ◆ Implicit stratification by independent/public school, program (English, French, and immersion), region (6 in Ontario, and 5 elsewhere), school type in Ontario (Catholic, private, Protestant separate, and public), immersion status (yes/no), and Native status (yes/no).
- ◆ Census of all schools in some explicit strata.
- ◆ Sampled two classrooms in large schools and in the census strata.
- ◆ All variance estimates from the census strata were derived using schools as variance strata.
- ◆ Oversampling in the provinces of British Columbia, Alberta, Ontario, Québec, New Brunswick, Newfoundland, and Nova Scotia.
- ◆ Controlled for school sample overlap: more details available in the Alberta, Ontario, and Québec sections at the end of this document

Exhibit 7: Allocation of School Sample in Canada, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
British Columbia – English	131	0	128	1	0	2	0
British Columbia – French	19	0	19	0	0	0	0
Manitoba	6	0	6	0	0	0	0
New Brunswick – French	73	0	73	0	0	0	0
Newfoundland	153	1	151	0	0	1	0
Saskatchewan	6	0	6	0	0	0	0
Nova Scotia – English51	33	0	33	0	0	0	0
Nova Scotia – English52	16	0	16	0	0	0	0
Nova Scotia – English53	26	0	26	0	0	0	0
Nova Scotia – English54	50	0	50	0	0	0	0
Nova Scotia – English55	27	0	27	0	0	0	0
Nova Scotia – English58	17	0	17	0	0	0	0
Nova Scotia – English59	18	0	18	0	0	0	0
Nova Scotia – French 57	17	1	16	0	0	0	0
Grade 4 only – Ontario – English	39	0	38	0	0	0	1
Grade 4 only – Ontario – French	53	3	49	0	0	1	0
Grade 4 & Grade 8 – Ontario – English	81	4	74	1	0	1	1
Grade 4 & Grade 8 – Ontario – French	27	0	27	0	0	0	0
Grade 4 only – Québec – French	114	0	108	1	0	5	0
Grade 4 only – Québec – English	70	2	65	0	0	2	1
Grade 4 & Grade 8 – Québec – French	6	0	6	0	0	0	0
Grade 4 & Grade 8 – Québec – English	10	0	10	0	0	0	0
Grade 4 only – Alberta – Big	71	1	69	0	0	1	0
Grade 4 only – Alberta – Small	36	1	34	0	0	1	0
Grade 4 & Grade 8 – Alberta – Big	22	1	21	0	0	0	0
Grade 4 & Grade 8 – Alberta – Small	21	0	19	2	0	0	0
Total	1142	14	1106	5	0	14	3

Chinese Taipei

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special needs schools and schools severely damaged in typhoon Mokrak.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by region.
- ◆ No implicit stratification.
- ◆ Sampled two classrooms in large schools (more than 18 classrooms in school).
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS were asked to participate in TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 8: Allocation of School Sample in Chinese Taipei, Fourth Grade

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	40	0	40	0	0	0	0
South	39	0	39	0	0	0	0
East	3	0	3	0	0	0	0
Isolated Islands	2	0	2	0	0	0	0
Total	150	0	150	0	0	0	0

Colombia

Fourth Grade (PIRLS)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 3).
- ◆ Within-school exclusions consisted of students with a mental disability, and students who attend evening or weekend classes.

Sample Design

- ◆ Explicit stratification by school MOS (known and unknown), urban/rural status, and private/public status.
- ◆ Implicit stratification by states or performance level (42).
- ◆ Sampled one classroom per school.
- ◆ In the first four explicit strata, triplets of schools were sampled (SRS) instead of schools being sampled individually. Within each triplet, a school was sampled among the eligible schools. Weights were derived accordingly (note that the notion of replacements did not apply for these strata).
- ◆ School sample overlap between prePIRLS and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for prePIRLS were asked to participate in PIRLS; and 3) All sampled students for prePIRLS also were asked to take PIRLS.

Exhibit 9: Allocation of School Sample in Colombia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Schools with no MOS – Urban – Public	2	0	2	0	0	0	0
Schools with no MOS – Rural – Private	2	0	2	0	0	0	0
Schools with no MOS – Rural – Public	2	0	1	0	0	1	0
Schools with MOS – Urban – Private	28	1	24	3	0	0	0
Schools with MOS – Urban – Public	78	2	67	7	2	0	0
Schools with MOS – Rural – Private	2	0	1	0	1	0	0
Schools with MOS – Rural – Public	43	2	34	3	3	1	0
Total	157	5	131	13	6	2	0

Croatia

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 6), hospital schools, schools for minority groups (language and writing, and models A and B), schools in which the majority of the classes are composed of solely Roma children, and private elementary schools.
- ◆ Within-school exclusions consisted of students with special needs and special program teaching.

Sample Design

- ◆ Explicit stratification by school type.
- ◆ Implicit stratification by region (Središnja, Istocna, Sjeverna, Zapadna, Južna, and Zagreb) or area (21).
- ◆ Sampled two classrooms in large schools in the “One Building School” stratum (MOS > 90) and sampled two classrooms in each sampled school in the “Multiple Building School” and “Minority School” strata.
- ◆ Satellite schools of mother schools were treated as classrooms of the mother school for purposes of sampling.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS also participated in TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 10: Allocation of School Sample in Croatia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
One Building School	59	0	57	2	0	0	0
Multiple Building School	91	0	91	0	0	0	0
Minority School	2	0	2	0	0	0	0
Total	152	0	150	2	0	0	0

Czech Republic

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools, Polish language schools, and very small schools (MOS < 3 in Grade 4).
- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by extended education status.
- ◆ Implicit stratification by region (14).
- ◆ Sampled two classrooms in the “extended education of languages” stratum. All variance estimates from this stratum were derived using schools as variance strata.
- ◆ Oversampling in the “extended education of languages” stratum.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS also were sampled for TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 11: Allocation of School Sample in Czech Republic, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
No Extended Education	130	2	114	9	4	1	0
Extended Education of Languages	50	0	47	1	2	0	0
Total	180	2	161	10	6	1	0

Denmark

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 5), special education schools, out-of-school, and residential institutions.

- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by public/private status.
- ◆ No implicit stratification.
- ◆ Sampled one classroom per school in most schools.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) No school sample overlap between PIRLS and TIMSS.

Exhibit 12: Allocation of School Sample in Denmark, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	30	0	22	6	0	2	0
Public	210	4	185	18	1	2	0
Total	240	4	207	24	1	4	0

England

Fourth Grade (Year 5)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special schools and very small schools (MOS < 8).
- ◆ Within-school exclusions consisted of students with significant special educational needs.

Sample Design

- ◆ Explicit stratification by “Year 5” / “Year 5 & Year 9” schools.
- ◆ Implicit stratification by attainment level (low, low to medium, medium, medium to high, high, and unknown), and school type (primary, junior, middle, independent, and unknown).
- ◆ Sampled two classrooms in large schools (MOS > 85).
- ◆ Response adjustment cells were built using attainment status.

- ◆ School sample overlap between TIMSS (Year 5), PIRLS, and TIMSS (Year 9): 1) Samples were drawn all at once; and 2) No school sample overlap between these three studies.

Exhibit 13: Allocation of School Sample in England, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Year 5 only	146	2	106	9	10	19	0
Year 5 & Year 9	4	0	3	0	1	0	0
Total	150	2	109	9	11	19	0

Finland

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools and language schools (instructional language not Finnish or Swedish).
- ◆ Within-school exclusions consisted of students with dyslexia or other severe linguistic disorders, intellectually disabled students, functionally disabled students, and students with limited proficiency in the assessment language.

Sample Design

- ◆ Explicit stratification by major region and urban & semi-urban/rural status.
- ◆ No implicit stratification.
- ◆ Sampled two classrooms per school.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS also were sampled for TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 14: Allocation of School Sample in Finland, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Southern Finland – Urban & Semi-urban	61	0	59	2	0	0	0
Southern Finland – Rural	8	0	8	0	0	0	0
Western Finland – Urban & Semi-urban	27	0	26	1	0	0	0
Western Finland – Rural	7	0	7	0	0	0	0
Eastern Finland – Urban & Semi-urban	11	0	11	0	0	0	0
Eastern Finland – Rural	7	1	5	0	0	1	0
Northern Finland – Urban & Semi-urban	15	1	13	1	0	0	0
Northern Finland – Rural	5	0	5	0	0	0	0
Swedish Speaking – Urban & Semi-urban	6	1	5	0	0	0	0
Swedish Speaking – Rural	3	1	2	0	0	0	0
Total	150	4	141	4	0	1	0

France

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of overseas territories (TOM), La Réunion (Southern hemisphere), Guyane (isolated), very small schools (MOS < 3), private schools without contracts, specialized schools, and French schools in foreign countries.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by school size.
- ◆ Implicit stratification by school type (public–priority education zone, public–other, and private).
- ◆ Sampled two classrooms per school.

Exhibit 15: Allocation of School Sample in France, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Large Schools	120	0	119	1	0	0	0
Small Schools	55	0	51	3	0	1	0
Total	175	0	170	4	0	1	0

Georgia

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 91 percent. Coverage in Georgia was restricted to students whose language of instruction is Georgian (91% of the international target population).
- ◆ School-level exclusions consisted of special needs schools and very small schools (MOS < 4). Schools from South Ossetia also were excluded along with schools from Abkhazia (no physical access, and no official statistics). However, Abkhazia refugee schools functioning in other territories of Georgia were part of the sample frame. As a result, exclusion rates are biased downward.
- ◆ Within-school exclusions consisted of specialized schools for disabled students.

Sample Design

- ◆ Explicit stratification by region and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by state/private status, and highland/town/village status.
- ◆ Sampled two classrooms in large schools (MOS > 50).
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 16: Allocation of School Sample in Georgia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only	2	0	2	0	0	0	0
Grade 4 & Grade 8 – qvemo qarTli	14	1	13	0	0	0	0
Grade 4 & Grade 8 – aWara	20	0	19	1	0	0	0
Grade 4 & Grade 8 – afxazeTi – Itolvilebi	2	0	2	0	0	0	0
Grade 4 & Grade 8 – guria	6	0	6	0	0	0	0
Grade 4 & Grade 8 – imereTi	28	0	25	0	0	3	0
Grade 4 & Grade 8 – kaxeTi	14	0	13	0	0	1	0
Grade 4 & Grade 8 – mcxeTa-mTianeTi	5	0	5	0	0	0	0
Grade 4 & Grade 8 – raWa-leGxumi da qvemo svaneTi	2	0	2	0	0	0	0
Grade 4 & Grade 8 – samcxe-javaxeTi	5	0	5	0	0	0	0
Grade 4 & Grade 8 – Sida qarTli	14	0	14	0	0	0	0
Grade 4 & Grade 8 – Tbilisi	50	2	48	0	0	0	0
Grade 4 & Grade 8 – samegrelo-zemo svaneTi	18	0	18	0	0	0	0
Total	180	3	172	1	0	4	0

Germany

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools for children with special needs (mentally disabled, physically disabled, visual impairment, hearing impairment, autism, and long-term sickness).
- ◆ Within-school exclusions consisted of children with special needs in regular schools.

Sample Design

- ◆ Explicit stratification by federal state.
- ◆ Implicit stratification by regional subdivision (30), and school type (Grundschule, Freie Waldorfschule, and Förderschule).

- ◆ Sampled one classroom per school.
- ◆ School sample overlap between PIRLS and TIMSS (Grade 4): 1) Samples were drawn all at once; and 2) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 17: Allocation of School Sample in Germany, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Baden-Württemberg	29	0	26	2	0	1	0
Bayern	32	0	32	0	0	0	0
Berlin	7	0	6	0	0	0	1
Brandenburg	5	0	5	0	0	0	0
Bremen	2	0	2	0	0	0	0
Hamburg	4	0	4	0	0	0	0
Hessen	15	0	15	0	0	0	0
Mecklenburg-Vorpommern	3	0	3	0	0	0	0
Niedersachsen	21	0	19	2	0	0	0
Nordrhein-Westfalen	47	0	44	2	0	1	0
Rheinland-Pfalz	10	0	10	0	0	0	0
Saarland	2	0	2	0	0	0	0
Sachsen	8	0	8	0	0	0	0
Sachsen-Anhalt	4	0	4	0	0	0	0
Schleswig-Holstein	7	0	6	1	0	0	0
Thüringen	4	0	4	0	0	0	0
Total	200	0	190	7	0	2	1

Honduras

Sixth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 5), and schools with different curriculum/schedule.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Grade 6” / “Grade 6 & Grade 9” schools, public/private status, and urban/rural status.

- ◆ Implicit stratification by school type (municipal, official, urban, rural, and semi-public), geographic area (18), and urban/private status.
- ◆ Sampled two classrooms per school in large schools (MOS > 125).
- ◆ The school measure of size (MOS) was given by the number of Grade 4 students found in schools (Grade 4 and Grade 6 students all attended the same schools).
- ◆ School sample overlap between TIMSS (Grade 6), PIRLS, and TIMSS (Grade 9): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 6 & Grade 9” stratum were asked to participate in TIMSS at Grade 9 (a subset of these schools was also asked to participate in both PIRLS and TIMSS at Grade 6); and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 6.

Exhibit 18: Allocation of School Sample between Studies in Honduras

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 6	To TIMSS Grade 6	To TIMSS Grade 9
Grade 6 only	120	120	120	0
Grade 6 & Grade 9	50	32	32	50
Grade 9 only	110	0	0	110
Total	280	152	152	160

Exhibit 19: Allocation of School Sample in Honduras, Sixth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 6 only – Public Urban	42	1	34	4	2	0	1
Grade 6 only – Public Rural	71	3	65	3	0	0	0
Grade 6 only – Private	7	0	5	2	0	0	0
Grade 6 & Grade 9 – Public Urban	10	0	9	1	0	0	0
Grade 6 & Grade 9 – Public Rural	17	0	16	1	0	0	0
Grade 6 & Grade 9 – Private	5	0	4	0	1	0	0
Total	152	4	133	11	3	0	1

Hong Kong

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of non-native language speaker schools, schools with different curriculum, international schools, special schools, and schools expected to be closing before data collection.
- ◆ Within-school exclusions consisted of non-native language speakers under inclusive education scheme.

Sample Design

- ◆ Explicit stratification by school type and session (am/pm/day).
- ◆ Implicit stratification by school gender (boys, co-educational, or girls).
- ◆ Sampled one classroom per school.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS also were sampled for TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 20: Allocation of School Sample in Hong Kong, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Aided – Whole day	117	0	105	2	0	10	0
Aided – AM	4	0	3	0	0	1	0
Aided – PM	3	0	3	0	0	0	0
Direct Subsidy	6	0	5	0	0	1	0
Government	11	0	7	0	0	4	0
Private	9	0	7	0	0	2	0
Total	150	0	130	2	0	18	0

Hungary

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special schools for students with special educational needs, very small schools (MOS < 5 in both Grade 4 and Grade 8), and students taught in a foreign language.
- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by type of community and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by geographic region (Del-Alfold, Del-Dunantul, Kozep-Dunantul, Kozep-Magyarország, Nyugat-Dunantul, Eszak-Alfold, and Eszak-Magyarország).
- ◆ Sampled two classrooms per school.
- ◆ School sample overlapped between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 21: Allocation of School Sample between Studies in Hungary

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	22	22	22	0
Grade 4 & Grade 8	128	128	128	128
Grade 8 only	22	0	0	22
Total	172	150	150	150

Exhibit 22: Allocation of School Sample in Hungary, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Capital	2	0	2	0	0	0	0
Grade 4 only – County Seat	2	0	2	0	0	0	0
Grade 4 only – Town	10	0	9	1	0	0	0
Grade 4 only – Rural Area	8	0	8	0	0	0	0
Grade 4 & Grade 8 – Capital	20	0	20	0	0	0	0
Grade 4 & Grade 8 – County Seat	28	0	27	0	0	1	0
Grade 4 & Grade 8 – Town	40	0	40	0	0	0	0
Grade 4 & Grade 8 – Rural Area	40	0	38	2	0	0	0
Total	150	0	146	3	0	1	0

Indonesia

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools, very small schools (MOS < 7), and schools in Papua and West Papua.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by general/Islamic school status, and public/private school type.
- ◆ Implicit stratification by school performance (high, medium, and low), and province (31).
- ◆ Sampled two classrooms in large schools (MOS > 90).

Exhibit 23: Allocation of School Sample in Indonesia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Public – General	126	0	126	0	0	0	0
Public – Islamic	2	0	2	0	0	0	0
Private – General	14	0	14	0	0	0	0
Private – Islamic	16	0	16	0	0	0	0
Total	158	0	158	0	0	0	0

Iran, Islamic Republic of

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 4) and schools geographically difficult to access.
- ◆ No within-school exclusions.

Sample Design

- ◆ No explicit stratification.
- ◆ Implicit stratification by province (31), public/private status, and school gender (boys, co-educational, or girls).
- ◆ Sampled one classroom per school.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled schools for PIRLS also were sampled for TIMSS; and 3) All sampled students for PIRLS also were asked to take TIMSS.

Exhibit 24: Allocation of School Sample in Iran, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Iran	250	6	244	0	0	0	0
Total	250	6	244	0	0	0	0

Ireland

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of non-aided first level educational institutions (private schools), and students in special schools (students with special educational needs).
- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by school size.
- ◆ Implicit stratification by school-level socio-economic status (DEIS1, DEIS2, rural, and “other”), language status (Irish, Gaeltacht, and English), and school gender (boys, co-educational, or girls).
- ◆ Sampled two classrooms per school.
- ◆ The school sample for PIRLS was selected by controlling for the overlap between three studies using the Chowdhury approach (samples drawn sequentially). The PIRLS sample of schools was selected by minimizing the overlap with the samples from the previous PIRLS field test and the samples were drawn for a national study. Note that these two previous samples were drawn independently from each other.
- ◆ All sampled students from schools selected for PIRLS were asked to participate in TIMSS at Grade 4.

Exhibit 25: Allocation of School Sample in Ireland, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Very Small Enrolment	2	1	1	0	0	0	0
Small Enrolment	45	0	45	0	0	0	0
Medium Enrolment	41	0	40	1	0	0	0
Large Enrolment	64	0	62	2	0	0	0
Total	152	1	148	3	0	0	0

Israel

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of Ultra Orthodox schools, special education schools, very small schools (MOS < 5), and schools where instruction is in English or French.
- ◆ Within-school exclusions consisted of classes for students with special educational needs in regular schools and students with special educational needs learning in regular classes.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school status, and school orientation.
- ◆ Implicit stratification by socio-economic status (SES) (high, medium, and low), school gender (boys, co-educational, or girls), and geographic region (North and South).
- ◆ Sampled two classrooms in large schools (MOS > 130).
- ◆ There was one census stratum (“Grade 4 & Grade 8 – Arabic Druze”). All variance estimates for this stratum were derived using schools as variance strata.
- ◆ School sample overlap between PIRLS and TIMSS (Grade 8): 1) Samples were drawn all at once; and 2) Only two of the sampled schools in the “Grade 4 and Grade 8” stratum also were asked to participate in TIMSS at Grade 8 and PIRLS.

Exhibit 26: Allocation of School Sample between Studies in Israel

Explicit Strata	Total Sampled Schools	Allocation of Schools	
		To PIRLS Grade 4	To TIMSS Grade 8
Grade 4 only	129	129	0
Grade 4 & Grade 8	45	24	23
Grade 8 only	129	0	129
Total	303	153	152

Exhibit 27: Allocation of School Sample in Israel, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Hebrew Secular	64	0	64	0	0	0	0
Grade 4 only – Hebrew Religious	27	0	27	0	0	0	0
Grade 4 only – Arabic Arab	26	0	25	0	0	1	0
Grade 4 only – Arabic Druze	4	0	4	0	0	0	0
Grade 4 only – Arabic Bedouin	8	0	8	0	0	0	0
Grade 4 & Grade 8 – Hebrew Secular	6	0	6	0	0	0	0
Grade 4 & Grade 8 – Hebrew Religious	8	0	6	0	2	0	0
Grade 4 & Grade 8 – Arabic Arab	5	0	5	0	0	0	0
Grade 4 & Grade 8 – Arabic Druze	2	0	2	0	0	0	0
Grade 4 & Grade 8 – Arabic Bedouin	3	0	3	0	0	0	0
Total	153	0	150	0	2	1	0

Italy

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of students taught in Slovenian and very small schools (MOS < 5).
- ◆ Within-school exclusions consisted of intellectually and functionally disabled students, and non-native language speakers.

Sample Design

- ◆ Explicit stratification by geographic area, and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by public/private status, and by region or province (104).
- ◆ Sampled two classrooms in large schools (MOS > 150).

- ◆ Oversampling as follows: 40 schools selected per region to allow comparison between the five main regions (Northeast, Northwest, Central, South, and Southern Islands) plus additional sampling for sub-regions (Trento & Bolzano, and Valle D'Aosta).
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 28: Allocation of School Sample between Studies in Italy

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	106	106	106	0
Grade 4 & Grade 8	99	99	99	99
Grade 8 only	105	0	0	105
Total	310	205	205	204

Exhibit 29: Allocation of School Sample in Italy, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Central	21	0	20	0	1	0	0
Grade 4 only – Northeast, without Trento & Bolzano	14	0	8	3	2	1	0
Grade 4 only – Northwest, without Valle D'Aosta	19	0	17	2	0	0	0
Grade 4 only – South	28	0	24	3	0	1	0
Grade 4 only – Southern Islands	20	0	14	6	0	0	0
Grade 4 only – Valle D'Aosta (Northwest)	2	0	0	1	1	0	0
Grade 4 only – Trento & Bolzano (Northeast)	2	0	1	1	0	0	0
Grade 4 & Grade 8 – Central	19	0	15	4	0	0	0
Grade 4 & Grade 8 – Northeast, without Trento & Bolzano	21	0	18	2	1	0	0

Exhibit 29: Allocation of School Sample in Italy, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 & Grade 8 – Northwest, without Valle D'Aosta	21	0	16	3	1	1	0
Grade 4 & Grade 8 – South	12	0	11	0	1	0	0
Grade 4 & Grade 8 – Southern Islands	20	0	18	2	0	0	0
Grade 4 & Grade 8 – Valle D'Aosta (Northwest)	2	0	1	1	0	0	0
Grade 4 & Grade 8 – Trento & Bolzano (Northeast)	4	0	3	0	1	0	0
Total	205	0	166	28	8	3	0

Kuwait

Sixth Grade

Coverage and Exclusions

- ◆ Coverage is 78 percent. Coverage in Kuwait was restricted to students in public schools (78% of the international target population).
- ◆ School-level exclusions consisted of special needs schools (based on sampling forms provided for Grade 4).
- ◆ No within-school exclusions (based on sampling forms provided for Grade 4).

Sample Design

- ◆ Explicit stratification by region.
- ◆ Implicit stratification by school gender (boys or girls).
- ◆ Sampled two classrooms per school in large schools (MOS > 143) of “Hawalli” and “Farwaniya” explicit strata.
- ◆ Schools were paired for variance calculation purposes in the “Farwaniya” stratum because all schools were sampled. The same was done for the certainty schools of the “Ahmadi” stratum.

Exhibit 30: Allocation of School Sample in Kuwait, Sixth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Asema	20	0	19	0	0	1	0
Hawalli	22	0	19	0	0	3	0
Farwaniya	31	0	26	0	0	5	0
Ahmadi	35	0	32	0	0	3	0
Jahra	27	0	24	0	0	3	0
Mubarak	15	0	13	0	0	2	0
Total	150	0	133	0	0	17	0

Lithuania

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 93 percent. Coverage in Lithuania was restricted to students whose language of instruction is Lithuanian (93% of the international target population).
- ◆ School-level exclusions consisted of very small schools and special schools.
- ◆ Within-school exclusions consisted of intellectually disabled students and students whose language of instruction was not Lithuanian.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school status and school location.
- ◆ Implicit stratification by school type (primary, primary & Kindergarten, basic, secondary, and gymnasium).
- ◆ Sampled two classrooms in large schools (MOS > 50).
- ◆ A national booklet was used (resulting in one less international booklet). A larger sample size was required to compensate for the loss.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 31: Allocation of School Sample between Studies in Lithuania

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	39	39	39	0
Grade 4 & Grade 8	121	121	121	121
Grade 8 only	29	0	0	29
Total	189	160	160	150

Exhibit 32: Allocation of School Sample in Lithuania, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Vilnius	6	0	6	0	0	0	0
Grade 4 only – Other Major Cities	9	1	8	0	0	0	0
Grade 4 only – Cities	20	2	16	1	0	0	1
Grade 4 only – Small Cities & Villages	4	1	3	0	0	0	0
Grade 4 & Grade 8 – Vilnius	18	0	16	2	0	0	0
Grade 4 & Grade 8 – Other Major Cities	25	0	23	2	0	0	0
Grade 4 & Grade 8 – Cities	39	0	36	2	1	0	0
Grade 4 & Grade 8 – Small Cities & Villages	39	1	37	1	0	0	0
Total	160	5	145	8	1	0	1

Malta

Fourth Grade (English)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ No school-level exclusions.
- ◆ No within-school exclusions.

Sample Design

- ◆ No explicit stratification.
- ◆ Implicit stratification by Malta/Gozo location, and school type (church, independent, and state).

- ◆ Census of all students. All variance estimates were derived using classrooms as variance strata.

Exhibit 33: Allocation of School Sample in Malta (English), Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Malta	99	3	96	0	0	0	0
Total	99	3	96	0	0	0	0

Morocco

Fourth Grade

Coverage and Exclusions

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

Sample Design

- ◆ Explicit stratification by public/private status and superior region.
- ◆ Implicit stratification by urban/rural status, and school type (10).
- ◆ The 16 original regions were grouped into ten superior regions: Region 1—Guelmim, Es-smara, Laayoune-Boujdour, Sakia AlHamra, Oued Ed, dhab, and Lagouira; Region 2—Sous, Massa, and Draa; Region 3—Grand Casablanca; Region 4—Marrakech, Tensift, and Al Haouz; Region 5—Rabat, Salé, Zemmour, and Zaer ; Region 6—Fès and Boulmane; Region 7—Meknès and Tafilalet; Region 8—Gharb, Chrarda, Beni Hssen, Tanger, and Tetouan; Region 9—Chaouia, Ourdigha, Doukala, Abda, Tadla, and Azilal; Region 10—l’Oriental, Taza, Taounate, and Al Hoceima.
- ◆ Sampled one classroom per school.
- ◆ Oversampling to allow for reliable estimates at the regional level.
- ◆ Overlap was maximized between Grade 4 and Grade 6 school samples.
- ◆ All sampled students for PIRLS at Grade 4 also were asked to take TIMSS at Grade 4.

Exhibit 34: Allocation of School Sample in Morocco, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	39	0	38	0	0	1	0
Public – Region 1	25	0	25	0	0	0	0
Public – Region 2	25	0	25	0	0	0	0
Public – Region 3	25	1	24	0	0	0	0
Public –Region 4	25	1	24	0	0	0	0
Public – Region 5	25	0	25	0	0	0	0
Public – Region 6	25	0	25	0	0	0	0
Public – Region 7	25	0	25	0	0	0	0
Public – Region 8	25	0	24	0	0	1	0
Public – Region 9	25	0	25	0	0	0	0
Public – Region 10	25	0	24	0	0	1	0
Total	289	2	284	0	0	3	0

Sixth Grade

Coverage and Exclusions

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

Sample Design

- ◆ Explicit stratification by public/private status and superior region.
- ◆ Implicit stratification by urban/rural status and school type (10).
- ◆ The 16 original regions were grouped into ten superior regions: Region 1—Guelmim, Es-smara, Laayoune-Boujdour, Sakia AlHamra, Oued Ed, dhab, and Lagouira; Region 2—Sous, Massa, and Draa; Region 3—Grand Casablanca; Region 4—Marrakech, Tensift, and Al Haouz; Region 5—Rabat, Salé, Zemmour, and Zaer ; Region 6—Fès and Boulmane; Region 7—Meknès and Tafilalet; Region 8—Gharb, Chrarda, Beni Hssen, Tanger, and Tetouan; Region 9—Chaouia, Ourdigha, Doukala, Abda, Tadla, and Azilal; Region 10—l’Oriental, Taza, Taounate, and Al Hoceima.
- ◆ Sampled one classroom per school.

- ◆ The school measure of size (MOS) was given by the number of Grade 4 students found in schools (Grade 4 and Grade 6 students all attending the same schools).
- ◆ Oversampling to allow for reliable estimates at the regional level.
- ◆ All sampled schools for PIRLS at Grade 4 also were asked to participate in PIRLS at Grade 6.

Exhibit 35: Allocation of School Sample in Morocco, Sixth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	39	1	38	0	0	0	0
Public – Region 1	25	0	25	0	0	0	0
Public – Region 2	25	0	25	0	0	0	0
Public – Region 3	25	2	23	0	0	0	0
Public – Region 4	25	2	23	0	0	0	0
Public – Region 5	25	0	25	0	0	0	0
Public – Region 6	25	0	24	0	0	1	0
Public – Region 7	25	0	24	0	0	1	0
Public – Region 8	25	2	22	0	0	1	0
Public – Region 9	25	1	24	0	0	0	0
Public – Region 10	25	0	25	0	0	0	0
Total	289	8	278	0	0	3	0

The Netherlands

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools for special education, and very small schools (MOS < 7).
- ◆ Within-school exclusions consisted of non-native language speakers (less than one year of instruction in Dutch).

Sample Design

- ◆ Explicit stratification by socio-economic level (SES). The SES levels differ between the PIRLS and TIMSS studies. Because sample overlap was controlled, distinct SES levels were maintained.

- ◆ Implicit stratification by urbanization (very high, high, moderate, low, and very low), and school size (large and small).
- ◆ Sampled all classrooms in selected schools.
- ◆ Given that school nonresponse was mainly found in large schools, the nonresponse adjustment was conducted using the expected counts of students not participating rather than using the counts of schools not participating. Variance calculation is slightly biased as a result.
- ◆ Schools were selected with equal probabilities.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) No sample overlap between these studies.

Exhibit 36: Allocation of School Sample in the Netherlands, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
High Mean SES	47	0	35	7	3	2	0
High to Medium Mean SES	38	0	25	8	2	3	0
Medium Mean SES	27	0	14	9	0	4	0
Medium to Low Mean SES	27	0	17	4	4	2	0
Low Mean SES	12	0	6	3	1	2	0
Total	151	0	97	31	10	13	0

New Zealand

Fourth Grade (Year 5)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of the Westmount School (Closed Brethren), the Correspondence School, special education schools, Maori-medium Level 2 immersion schools, and very small schools (MOS < 4; includes some very small Maori-medium Level 1 immersion schools).
- ◆ Within-school exclusions consisted of special needs students: class level and within class, students who have insufficient years of instruction in the assessment language, and students who only receive 51–80 percent of their instruction in Level 2 Maori language immersion units in either

English-medium schools or in Maori-medium Level 1 immersion schools, and students in Level 1 Pacifica language immersion units (e.g. Samoan).

Sample Design

- ◆ Explicit stratification by language of instruction, “Grade 4” / “Grade 4 & Grade 8” school type, and school size.
- ◆ Implicit stratification by socioeconomic status indicator (very high, high, moderate, low, and very low), school gender (boys, co-educational, or girls), and major urban/ “other” school status.
- ◆ Sampled two classrooms in large schools (the rule varies from one stratum to the next) and in dual language schools. In the latter, one classroom from each language group was sampled.
- ◆ Response adjustment for students assessed in Maori was based on student-weighted counts amongst all participating classrooms assessed in Maori.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; and 2) No school sample overlap between these studies.

Exhibit 37: Allocation of School Sample between Studies in New Zealand

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	368	187	181	0
Grade 4 & Grade 8	34	14	8	12
Grade 8 only	150	0	0	150
Total	552	201	189	162

Exhibit 38: Allocation of School Sample in New Zealand, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Maori Level 1 Immersion	6	0	2	1	0	3	0
Grade 4 only – English-Medium with Level 1 Immersion	8	0	8	0	0	0	0
Grade 4 only – English-Medium only	173	2	161	8	1	1	0

Exhibit 38: Allocation of School Sample in New Zealand, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 & Grade 8 – Maori Level 1 Immersion	6	0	2	1	0	3	0
Grade 4 & Grade 8 – English-Medium with Level 1 immersion	2	0	2	0	0	0	0
Grade 4 & Grade 8 – English-Medium only – Small School	2	0	2	0	0	0	0
Grade 4 & Grade 8 – English-Medium only – Small Year 5, Large Year 9	2	0	1	1	0	0	0
Grade 4 & Grade 8 – English-Medium only – Large School	2	0	2	0	0	0	0
Total	201	2	180	11	1	7	0

Northern Ireland

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools and special schools.
- ◆ Within-school exclusions consisted of students with significant special educational needs.

Sample Design

- ◆ Explicit stratification by region.
- ◆ Implicit stratification by deprivation level (high, moderate to high, moderate, low to moderate, and low).
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 39: Allocation of School Sample in Northern Ireland, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Belfast	23	0	14	1	2	6	0
Western	29	0	17	5	2	5	0
Northeast	37	0	22	9	3	3	0
Southeast	34	0	22	5	0	7	0
Southern	37	0	25	7	2	3	0
Total	160	0	100	27	9	24	0

Norway

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of international schools, schools where students are taught in Sami language, and very small schools (MOS < 3).
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Bokmål” / “Nynorsk or other” status, and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by community size (small, medium, large, and very large).
- ◆ Sampled two classrooms per school.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) No school sample overlap between TIMSS at Grade 8 and PIRLS at Grade 4; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 40: Allocation of School Sample between Studies in Norway

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	121	121	121	0
Grade 4 & Grade 8	68	29	29	39
Grade 8 only	111	0	0	111
Total	300	150	150	150

Exhibit 41: Allocation of School Sample in Norway, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Bokmål	103	2	63	16	7	15	0
Grade 4 only – Nynorsk or other	18	2	8	2	2	4	0
Grade 4 & Grade 8 – Bokmål	23	0	10	4	3	6	0
Grade 4 & Grade 8 – Nynorsk or other	6	0	4	1	0	0	1
Total	150	4	85	23	12	25	1

Fifth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 3 in Grade 4), schools where students are taught in Sami language, and international schools.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Bokmål” / “Nynorsk or other” status, and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by community size (small, medium, large, and very large).
- ◆ Sampled two classrooms per school.
- ◆ Sampled every second Grade 4 school.

Exhibit 42: Allocation of School Sample in Norway, Fifth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Bokmål	51	0	24	9	4	14	0
Grade 4 only – Nynorsk or other	9	0	3	2	1	3	0
Grade 4 & Grade 8 – Bokmål	12	0	6	1	0	5	0
Grade 4 & Grade 8 – Nynorsk or other	3	0	2	1	0	0	0
Total	75	0	35	13	5	22	0

Oman

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools and very small schools (MOS < 10).
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school status, region, and school type.
- ◆ Implicit stratification by urban/rural status and school gender (boys, co-educational, or girls).
- ◆ There were census strata along with certainty schools outside these strata. Two classrooms per school were sampled in these schools. All variance estimates were computed using schools as variance strata.
- ◆ Census of all students in the first two explicit strata. All variance estimates were computed using classrooms as variance strata.
- ◆ Oversampling to allow for better estimates at the regional level.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) Overlap was maximized between all studies for schools selected from the “Grade 4 & Grade 8” stratum; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 43: Allocation of School Sample between Studies in Oman

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	182	182	182	0
Grade 4 & Grade 8	164	156	156	122
Grade 8 only	217	0	0	217
Total	563	338	338	339

Exhibit 44: Allocation of School Sample in Oman, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Integrated Curriculum	4	0	4	0	0	0	0
Grade 4 only – International	5	0	5	0	0	0	0
Grade 4 only – Private	10	0	10	0	0	0	0
Grade 4 only – Public – Ad Dakhliyah	20	0	20	0	0	0	0
Grade 4 only – Public – Adh Dhahirah	14	0	14	0	0	0	0
Grade 4 only – Public – Al Batinah North	24	1	23	0	0	0	0
Grade 4 only – Public – Al Batinah South	20	0	20	0	0	0	0
Grade 4 only – Public – Al Buraimi governorates	8	0	8	0	0	0	0
Grade 4 only – Public – Al Wusta	1	0	1	0	0	0	0
Grade 4 only – Public – Ash Sharqiyah North	12	0	12	0	0	0	0
Grade 4 only – Public – Ash Sharqiyah South	18	0	18	0	0	0	0
Grade 4 only – Public – Dhofar governorates	20	0	20	0	0	0	0
Grade 4 only – Public – Musandam governorates	4	0	4	0	0	0	0
Grade 4 only – Public – Muscat governorates	22	0	22	0	0	0	0
Grade 4 & Grade 8 – International	23	0	19	0	0	4	0
Grade 4 & Grade 8 – Private	20	0	18	0	0	2	0
Grade 4 & Grade 8 – Public – Ad Dakhliyah	10	1	9	0	0	0	0
Grade 4 & Grade 8 – Public – Adh Dhahirah	16	0	16	0	0	0	0
Grade 4 & Grade 8 – Public – Al Batinah North	6	0	6	0	0	0	0
Grade 4 & Grade 8 – Public – Al Batinah South	10	0	10	0	0	0	0
Grade 4 & Grade 8 – Public – Al Buraimi governorates	5	0	5	0	0	0	0

Exhibit 44: Allocation of School Sample in Oman, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 & Grade 8 – Public – Al Wusta	15	0	15	0	0	0	0
Grade 4 & Grade 8 – Public – Ash Sharqiyah North	18	3	15	0	0	0	0
Grade 4 & Grade 8 – Public – Ash Sharqiyah South	12	0	12	0	0	0	0
Grade 4 & Grade 8 – Public – Dhofar governorates	10	0	10	0	0	0	0
Grade 4 & Grade 8 – Public – Musandam governorates	3	0	3	0	0	0	0
Grade 4 & Grade 8 – Public – Muscat governorates	8	0	8	0	0	0	0
Total	338	5	327	0	0	6	0

Poland

Fourth Grade (Standard 3)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 5) and special schools.
- ◆ Within-school exclusions consisted of special needs students in regular classrooms.

Sample Design

- ◆ Explicit stratification by urbanization.
- ◆ Implicit stratification by districts (voivodship) (16).
- ◆ Sampled two classrooms per school.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; 2) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 45: Allocation of School Sample in Poland, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Village	61	0	61	0	0	0	0
Town (up to 20 thousand inhabitants)	24	0	24	0	0	0	0
City (20 to 100 thousand inhabitants)	29	0	29	0	0	0	0
City (above 100 thousand inhabitants)	36	0	36	0	0	0	0
Total	150	0	150	0	0	0	0

Portugal

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of extremely small schools (MOS < 5).
- ◆ Within-school exclusions consisted of students with special educational needs, and non-native language speakers.

Sample Design

- ◆ Explicit stratification by public/private status.
- ◆ Implicit stratification by region (12).
- ◆ Sampled two classrooms per school.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 46: Allocation of School Sample in Portugal, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Private	16	0	13	2	0	1	0
Public	134	0	120	11	2	1	0
Total	150	0	133	13	2	2	0

Qatar

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools that provide instruction in languages other than English and Arabic.
- ◆ No within-school exclusions.
- ◆ Private (from the “Grade 4 & Grade 8” explicit stratum in the co-educational schools) and community schools were not part of previous cycles.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school types.
- ◆ Implicit stratification by school gender (boys, co-educational, or girls) and school type (community, independent, and private).
- ◆ Sampled two classrooms per school in large schools (MOS > 150).
- ◆ Census of all schools. Variance estimates were computed using schools as variance strata for schools where at least two classrooms or all classrooms were sampled.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 47: Allocation of School Sample between Studies in Qatar

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	113	113	113	0
Grade 4 & Grade 8	62	62	62	62
Grade 8 only	51	0	0	51
Total	226	175	175	113

Exhibit 48: Allocation of School Sample in Qatar, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only	113	5	107	0	0	1	0
Grade 4 & Grade 8	62	2	59	0	0	0	1
Total	175	7	166	0	0	1	1

Romania

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and school performance level.
- ◆ Implicit stratification by urban/rural status, school performance level (high, medium, low, and unknown), and geographic location (Central, Northeast, South, Southeast, Northwest, and West).
- ◆ Sampled two classrooms in large schools (MOS > 40).
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 49: Allocation of School Sample between Studies in Romania

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	14	14	14	0
Grade 4 & Grade 8	136	136	136	136
Grade 8 only	14	0	0	14
Total	164	150	150	150

Exhibit 50: Allocation of School Sample in Romania, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only	14	0	14	0	0	0	0
Grade 4 & Grade 8 – Unknown Performance	19	0	18	0	0	0	1
Grade 4 & Grade 8 – Low Performance	30	0	29	0	0	0	1
Grade 4 & Grade 8 – Medium Performance	30	0	30	0	0	0	0
Grade 4 & Grade 8 – High Performance	31	0	31	0	0	0	0
Grade 4 & Grade 8 – Very High Performance	26	0	25	1	0	0	0
Total	150	0	147	1	0	0	2

The Russian Federation

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools and special needs schools.
- ◆ Within-school exclusions consisted of disabled students.

Sample Design

- ◆ Explicit stratification by very large regions. There were 15 certainty regions (with a “*” in the table below) and one large stratum from which 27 regions were selected (as shown in the table below).
- ◆ Implicit stratification by urbanization within selected regions (rural, settlement, city–fewer than 50,000 inhabitants, city–50,000 to 100,000 inhabitants, city–100,000 to 450,000 inhabitants, city–450,000 to 680,000 inhabitants, city–more than 680,000 inhabitants).
- ◆ Extra sampling stage (regions) required before sampling schools within selected regions. Roughly half of the regions were certainty regions (selected with a probability of one). Within these certainty regions, schools were paired for variance calculation purposes. Otherwise, selected regions were paired for variance calculation purposes.

- ◆ Sampled one classroom per school (in general).
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 51: Allocation of School Sample in the Russian Federation, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Alania	4	0	4	0	0	0	0
Altay kr	4	0	4	0	0	0	0
Belgorod obl	4	0	4	0	0	0	0
Kamchatka kr	4	0	4	0	0	0	0
Kostroma obl	4	0	4	0	0	0	0
Kursk obl	4	0	4	0	0	0	0
Murmansk obl	4	0	4	0	0	0	0
N Novgorod obl*	4	0	4	0	0	0	0
Rostov obl*	6	0	6	0	0	0	0
Chuvashia	4	0	4	0	0	0	0
Primorsk kr	4	0	4	0	0	0	0
Astrakhan obl	4	0	4	0	0	0	0
Ivanovo obl	4	0	4	0	0	0	0
Perm kr	4	0	4	0	0	0	0
Samara obl*	4	0	4	0	0	0	0
Tver obl	4	0	4	0	0	0	0
Ulianovsk obl	4	0	4	0	0	0	0
Sankt-Petersburg*	6	0	6	0	0	0	0
Iamal-Nenets ok	4	0	4	0	0	0	0
Krasnoyarsk kr*	4	0	4	0	0	0	0
Stavropol kr	4	0	4	0	0	0	0
Kemerovo obl*	4	0	4	0	0	0	0
Novosibirsk obl	4	0	4	0	0	0	0
Saratov obl	4	0	4	0	0	0	0
Hanty-Mansii ok	4	0	4	0	0	0	0
Dagestan*	6	0	6	0	0	0	0
Sakha	4	0	4	0	0	0	0
Tatarstan*	6	0	6	0	0	0	0
Arhangelsk obl	4	0	4	0	0	0	0
Irkutsk obl*	4	0	4	0	0	0	0

Exhibit 51: Allocation of School Sample in the Russian Federation, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Moscow obl*	10	0	10	0	0	0	0
Sverdlovsk obl*	6	0	6	0	0	0	0
Tomsk obl	4	0	4	0	0	0	0
Chelyabinsk obl*	6	0	6	0	0	0	0
Volgograd obl	4	0	4	0	0	0	0
Lipetsk obl	4	0	4	0	0	0	0
Bashkortostan*	8	0	8	0	0	0	0
Voronezh obl	4	0	4	0	0	0	0
Zabaykalski kr	4	0	4	0	0	0	0
Krasnodar kr*	8	0	8	0	0	0	0
Moscow*	12	0	12	0	0	0	0
Orenburg obl	4	0	4	0	0	0	0
Total	202	0	202	0	0	0	0

* Certainty Regions

Saudi Arabia

Fourth Grade

Coverage and Exclusions

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

Sample Design

- ◆ Explicit stratification by school type and school gender.
- ◆ Implicit stratification by school location (Center, East, South, West, and North), public/private status, and school gender (boys or girls).
- ◆ Sampled two classrooms in large schools (MOS > 150).
- ◆ Oversampling of “religious schools” to allow for better estimates at that level.
- ◆ School sample overlap between TIMSS (Grade 4) and PIRLS: 1) Samples were drawn all at once; and 2) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 52: Allocation of School Sample in Saudi Arabia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Non-religious schools – Girls	68	1	64	2	1	0	0
Non-religious schools – Boys	73	2	66	5	0	0	0
Religious schools – Girls	15	1	14	0	0	0	0
Religious schools – Boys	15	0	15	0	0	0	0
International schools	4	0	4	0	0	0	0
Total	175	4	163	7	1	0	0

Singapore

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special education schools and private schools.
- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” schools.
- ◆ No implicit stratification.
- ◆ 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.
- ◆ All variance estimates were calculated using schools as variance strata.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 53: Allocation of School Sample between Studies in Singapore

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	173	173	173	0
Grade 4 & Grade 8	3	3	3	3
Grade 8 only	162	0	0	162
Total	338	176	176	165

Exhibit 54: Allocation of School Sample in Singapore, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only	173	0	173	0	0	0	0
Grade 4 & Grade 8	3	0	3	0	0	0	0
Total	176	0	176	0	0	0	0

Slovak Republic

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of students taught in Ukrainian, special education schools, and very small schools (MOS < 4).
- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by region and Slovak/Hungarian school status.
- ◆ Implicit stratification by public/church or private status.
- ◆ Sampled two classrooms per school.
- ◆ All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 55: Allocation of School Sample in the Slovak Republic, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Bratislavský – Slovak	16	0	16	0	0	0	0
Bratislavský – Hungarian	2	0	2	0	0	0	0
Trnavský – Slovak	14	1	12	1	0	0	0
Trnavský – Hungarian	8	0	6	2	0	0	0
Trenciansky – Slovak	18	0	16	1	1	0	0
Nitriansky – Slovak	18	0	18	0	0	0	0
Nitriansky – Hungarian	10	0	10	0	0	0	0
Žilinský – Slovak	26	1	24	1	0	0	0
Banskobystrický – Slovak	19	0	19	0	0	0	0
Banskobystrický – Hungarian	6	0	6	0	0	0	0
Prešovský – Slovak	32	0	30	1	0	1	0
Košický – Slovak	27	0	24	3	0	0	0
Košický – Hungarian	4	0	4	0	0	0	0
Total	200	2	187	9	1	1	0

Slovenia

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools ($MOS < 5$), schools for students with special needs (58 schools), Waldorf schools, and schools for the Italian minority (4 schools).
- ◆ Within-school exclusions consisted of students with special needs enrolled in normal school classes but following a limited curriculum.

Sample Design

- ◆ Explicit stratification by region, geographic area, and “Grade 4”/ “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by language achievement index, mathematics achievement index, and region.
- ◆ Sampled two classrooms in large schools ($MOS > 55$).

- ◆ There were two census strata and some certainty schools outside these two strata. Variance estimates were calculated using schools as variance strata for these certainty schools.
- ◆ Oversampling to allow for better estimates at the regional level.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) Most sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 56: Allocation of School Sample between Studies in Slovenia

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	20	20	20	0
Grade 4 & Grade 8	189	182	182	189
Grade 8 only	2	0	0	2
Total	211	202	202	191

Exhibit 57: Allocation of School Sample in Slovenia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Central	5	1	4	0	0	0	0
Grade 4 only – North-Eastern	3	0	3	0	0	0	0
Grade 4 only – South-Eastern	5	0	5	0	0	0	0
Grade 4 only – Western	7	0	6	0	0	1	0
Grade 4 & Grade 8 – Pomurska	16	0	14	2	0	0	0
Grade 4 & Grade 8 – Podravska	24	0	24	0	0	0	0
Grade 4 & Grade 8 – Koroska	17	0	16	0	0	1	0
Grade 4 & Grade 8 – Savinjska	16	0	16	0	0	0	0
Grade 4 & Grade 8 – Zasavska	9	0	9	0	0	0	0
Grade 4 & Grade 8 – Spodnje Posavska	16	0	16	0	0	0	0

Exhibit 57: Allocation of School Sample in Slovenia, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 & Grade 8 – Jugovzhodna Slovenija	10	0	9	0	0	1	0
Grade 4 & Grade 8 – Osrednjeslovenska	35	0	34	0	0	1	0
Grade 4 & Grade 8 – Gorenjska	13	0	13	0	0	0	0
Grade 4 & Grade 8 – Notranjsko-kra ka	3	0	3	0	0	0	0
Grade 4 & Grade 8 – Gorika	7	0	7	0	0	0	0
Grade 4 & Grade 8 – Obalno-kra ka	16	0	14	0	0	2	0
Total	202	1	193	2	0	6	0

Spain

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 4), international schools, and special education schools.
- ◆ Within-school exclusions consisted of disabled students and non-native language speakers (less than 1 year of instruction in language of assessment).

Sample Design

- ◆ Explicit stratification by autonomous community.
- ◆ Implicit stratification by public/private status.
- ◆ Sampled two classrooms per school in larger schools (MOS > 55).
- ◆ Oversampling in Andalucía and in the Canary Islands.
- ◆ School sample overlap between PIRLS and TIMSS at Grade 4: 1) Samples were drawn all at once; 2) A subset of the sampled schools in Andalucía and in the Canary Islands participated in TIMSS; and 3) In all strata, all sampled students for TIMSS also were asked to take PIRLS.

Exhibit 58: Allocation of School Sample between Studies in Spain

Explicit Strata	Total Sampled Schools	Allocation of Schools	
		To PIRLS Grade 4	To TIMSS Grade 4
Andalusia	150	150	30
Canary Islands	49	49	7
Other	115	115	115
Total	314	314	152

Exhibit 59: Allocation of School Sample in Spain, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Andalusia	150	0	149	0	0	1	0
Aragon	4	0	3	0	0	1	0
Asturias	2	0	2	0	0	0	0
Balearic Islands	4	0	4	0	0	0	0
Basque Country	6	0	5	1	0	0	0
Canary Islands	49	0	49	0	0	0	0
Cantabria	2	0	2	0	0	0	0
Castile and Leon	7	0	7	0	0	0	0
Castile-La Mancha	8	0	8	0	0	0	0
Catalonia	23	0	23	0	0	0	0
Ceuta and Melilla	2	0	2	0	0	0	0
Extremadura	4	0	4	0	0	0	0
Galicia	7	0	4	3	0	0	0
La Rioja	2	0	2	0	0	0	0
Madrid	20	0	20	0	0	0	0
Murcia	6	0	6	0	0	0	0
Navarra	2	0	2	0	0	0	0
Valencia	16	0	16	0	0	0	0
Total	314	0	308	4	0	2	0

Sweden

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 5), international schools, and special schools for disabled students.
- ◆ Within-school exclusions consisted of students with special needs.

Sample Design

- ◆ Explicit stratification by immigrant status, and new school status since school listing.
- ◆ Implicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and school grade point average (7).
- ◆ Oversampling to allow for better estimates at the immigrant status level. More classrooms were sampled in “higher percentage of immigrants” strata.
- ◆ School sample overlap between PIRLS and TIMSS at Grade 4:
 - 1) Samples were drawn all at once; and
 - 2) All sampled students for TIMSS also were asked to take PIRLS.

Exhibit 60: Allocation of School Sample in Sweden, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
No Immigrants	56	2	52	2	0	0	0
Low Percentage of Immigrants	62	3	57	1	0	1	0
Medium Percentage of Immigrants	21	2	19	0	0	0	0
High Percentage of Immigrants	20	1	18	0	1	0	0
New Schools	2	0	2	0	0	0	0
Total	161	8	148	3	1	1	0

Trinidad and Tobago

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 7).
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by educational district.
- ◆ Implicit stratification by school index (very high, high, medium, and low), and school type (denominational, government, and private).
- ◆ Sampled two classrooms in large schools (MOS > 80).

Exhibit 61: Allocation of School Sample in Trinidad and Tobago, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Caroni	22	0	22	0	0	0	0
North Eastern	9	0	9	0	0	0	0
Port of Spain & Environs	28	0	28	0	0	0	0
St. George East	37	0	37	0	0	0	0
St. Patrick	16	0	15	0	0	1	0
South Eastern	11	0	11	0	0	0	0
Victoria	20	0	20	0	0	0	0
Tobago	7	0	7	0	0	0	0
Total	150	0	149	0	0	1	0

United Arab Emirates

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools with students taught in languages other than Arabic and English, schools that are geographically inaccessible, very small schools (MOS < 10), and special education schools (see the Dubai section).

- ◆ Within-school exclusions consisted of students with functional disabilities.

Sample Design

- ◆ Explicit stratification by educational zones and “Grade 4” / “Grade 4 & Grade 8” school type.
- ◆ Implicit stratification by school type (public, private, and “other”), curricula, school gender (boys, co-educational, or girls), and assessment language (English, Arabic, or both).
- ◆ Census of all schools in Dubai, in the West region of Abu Dhabi, and in the educational zone of Umm-Al Quwain (with two sampled classrooms per school). Classes within these schools were used to build jackknife replicates for variance calculation. Also, there were certainty schools outside of these regions, and variance calculation was done following the same approach for these schools.
- ◆ The United Arab Emirates was divided into three large districts: Abu Dhabi (Abu Dhabi, Al Ain, and West region), Dubai, and the rest of the Emirates. All three districts were oversampled to allow for better estimates at the district level.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 62: Allocation of School Sample between Studies in the United Arab Emirates, Fourth Grade

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	187	187	187	0
Grade 4 & Grade 8	291	291	291	291
Grade 8 only	186	0	0	186
Total	664	478	478	477

Exhibit 63: Allocation of School Sample in the United Arab Emirates, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Dubai Grade 4 only	43	0	40	0	0	0	3
Dubai Grade 4 & Grade 8	109	0	98	0	0	1	10
Grade 4 only – Abu Dhabi	35	0	35	0	0	0	0
Grade 4 only – Al Ain	23	1	22	0	0	0	0
Grade 4 only – West Region	15	2	13	0	0	0	0
Grade 4 & Grade 8 – Abu Dhabi	55	0	54	0	0	1	0
Grade 4 and Grade 8 – Al Ain	29	0	29	0	0	0	0
Grade 4 & Grade 8 – West Region	11	0	11	0	0	0	0
Grade 4 only – Sharjah	30	0	30	0	0	0	0
Grade 4 only – Ajman	8	0	8	0	0	0	0
Grade 4 only – Fujairah	10	0	10	0	0	0	0
Grade 4 only – Ras Al Kaimah	14	0	14	0	0	0	0
Grade 4 only – Umm-Al Quwain	9	1	8	0	0	0	0
Grade 4 & Grade 8 – Sharjah	51	0	51	0	0	0	0
Grade 4 & Grade 8 – Ajman	16	1	15	0	0	0	0
Grade 4 & Grade 8 – Fujairah	7	0	7	0	0	0	0
Grade 4 & Grade 8 – Ras Al Kaimah	10	0	10	0	0	0	0
Grade 4 & Grade 8 – Umm-Al Quwain	3	0	3	0	0	0	0
Total	478	5	458	0	0	2	13

United States

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ No school-level exclusions.
- ◆ Within-school exclusions consisted of students who lack English language proficiency and students with disabilities.

Sample Design

- ◆ Explicit stratification by high/low poverty index, public/private status, and census region.
- ◆ Implicit stratification by location (city, rural, suburban, or town) and ethnic status.
- ◆ The same schools were sampled for both PIRLS and TIMSS studies. Within the sampled schools, different classrooms (students) were sampled for each study. In general, two classrooms were sampled per study per school.
- ◆ Sampled schools with only one classroom were randomly assigned to PIRLS or TIMSS. These schools were treated as nonresponse.
- ◆ Response adjustment cells are given by the explicit strata for all schools except private schools. For private schools, all four private strata were merged to define a single adjustment cell.
- ◆ Oversampling to compensate for losses linked to splitting the sample allocation between PIRLS and TIMSS (in previous cycle, sample of 300 schools with two classrooms per school).

Exhibit 64: Allocation of School Sample in the United States, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
High poverty – Public – CENSREG = 1	20	1	13	1	0	5	0
High poverty – Public – CENSREG = 2	25	2	12	3	0	8	0
High poverty – Public – CENSREG = 3	84	1	71	2	1	9	0
High poverty – Public – CENSREG = 4	49	0	39	5	0	5	0
Private – CENSREG = 1	10	2	4	0	0	4	0
Private – CENSREG = 2	11	2	6	0	0	3	0
Private – CENSREG = 3	14	0	6	0	0	7	1
Private – CENSREG = 4	9	1	3	0	0	5	0
Low poverty – Public – CENSREG = 1	44	0	35	3	0	6	0
Low poverty – Public – CENSREG = 2	62	1	53	3	0	5	0

Exhibit 64: Allocation of School Sample in the United States, Fourth Grade (Continued)

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Low poverty – Public – CENSREG = 3	72	1	65	0	0	6	0
Low poverty – Public – CENSREG = 4	50	1	42	3	0	4	0
Total	450	12	349	20	1	67	1

PIRLS 2011 Characteristics of Benchmarking Participants

Alberta, Canada

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 7).
- ◆ Within-school exclusions consisted of students with special needs.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and school size.
- ◆ Implicit stratification by funding (private, public, and “other”) and immersion school status (yes or no).
- ◆ There were only three certainty-selected schools, so there were too few to use special estimation variance procedures.
- ◆ Sampled two classrooms in large schools (MOS > 32).
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) No sampled schools involved in both Grade 4 and Grade 8 populations; and 3) Sampled schools from the large strata were involved in both PIRLS and TIMSS at Grade 4. However, students within the schools either took PIRLS or TIMSS. No students took both PIRLS and TIMSS.

Exhibit 65: Allocation of School Sample between Studies in Alberta

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only – Big	71	71	71	0
Grade 4 only – Small	72	36	36	0
Grade 4 & Grade 8 – Big	45	22	22	23
Grade 4 & Grade 8 – Small	72	21	21	30
Grade 8 only	97	0	0	97
Total	260	150	150	150

Exhibit 66: Allocation of School Sample in Alberta, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Big	71	1	69	0	0	1	0
Grade 4 only – Small	36	1	34	0	0	1	0
Grade 4 & Grade 8 – Big	22	1	21	0	0	0	0
Grade 4 & Grade 8 – Small	21	0	19	2	0	0	0
Total	150	3	143	2	0	2	0

Ontario, Canada

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 6), First Nations schools, and special education schools.
- ◆ Within-school exclusions consisted of students with special educational needs and students who do not speak English or French.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and English/French status.
- ◆ Implicit stratification by geographic region (Barrie, London, Ottawa, Sudbury, Thunder Bay, and Toronto) and type of school (Catholic, private, Protestant separate, and public).
- ◆ Sampled two classrooms in large schools (MOS > 49).
- ◆ There were some certainty-selected schools but there were too few to use special estimation variance procedures.
- ◆ Oversampling in the “French” strata.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) No sampled schools involved in both TIMSS at Grade 4 and PIRLS; 3) All sampled schools from the “Grade 4 & Grade 8” strata are involved in either PIRLS or TIMSS at Grade 4; and 4) A subset of these “Grade 4 & Grade 8” schools also were involved in TIMSS at Grade 8.

Exhibit 67: Allocation of School Sample between Studies in Ontario

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only English	85	39	46	0
Grade 4 only French	59	53	6	0
Grade 4 & Grade 8 – English	175	81	94	106
Grade 4 & Grade 8 – French	31	27	4	2
Grade 8 only	42	0	0	42
Total	392	200	150	150

Exhibit 68: Allocation of School Sample in Ontario, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only English	39	0	38	0	0	0	1
Grade 4 only French	53	3	49	0	0	1	0
Grade 4 & Grade 8 – English	81	4	74	1	0	1	1
Grade 4 & Grade 8 – French	27	0	27	0	0	0	0
Total	200	7	188	1	0	2	2

Québec, Canada

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of special needs schools, very small schools (MOS < 10), Native schools, and non-Ministry Schools.
- ◆ Within-school exclusions consisted of children with disabilities.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and English/French status.
- ◆ Implicit stratification by public/private status, and Native status (yes or no).
- ◆ Sampled one classroom per school.

- ◆ There were some certainty-selected schools, but there were too few to use special estimation variance procedures.
- ◆ Oversampling of the “English” strata.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 69: Allocation of School Sample between Studies in Québec

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	184	184	184	0
Grade 4 & Grade 8	16	16	16	16
Grade 8 only	184	0	0	184
Total	384	200	200	200

Exhibit 70: Allocation of School Sample in Québec, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – French	114	0	108	1	0	5	0
Grade 4 only – English	70	2	65	0	0	2	1
Grade 4 & Grade 8 – French	6	0	6	0	0	0	0
Grade 4 & Grade 8 – English	10	0	10	0	0	0	0
Total	200	2	189	1	0	7	1

Maltese—Malta

Fourth Grade (Maltese —Year 5)

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ No school-level exclusions.
- ◆ No within-school exclusions.

Sample Design

- ◆ No explicit stratification.
- ◆ Implicit stratification by Malta/Gozo location, and school type (church, independent, and state).
- ◆ Census of all students. All variance estimates were derived using classrooms as variance strata.

Exhibit 71: Allocation of School Sample in Malta (Maltese), Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Malta	99	3	95	0	0	0	1
Total	99	3	95	0	0	0	1

Eng / Afr (5)—RSA (Republic of South Africa)

Fifth Grade

Coverage and Exclusions

- ◆ Coverage is 38 percent. Coverage in South Africa (PIRLS) was restricted to schools where language of instruction is either Afrikaans or English (38% of the international target population).
- ◆ School-level exclusions consisted of very small schools.
- ◆ No within-school exclusions.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” school type and language of instruction.
- ◆ Implicit stratification by school type (one language, two languages, and multi-language), and province (9).
- ◆ Sampled two classrooms (one from each language) where both languages were found in the school.
- ◆ School sample overlap between PIRLS (Grade 5) and prePIRLS (see the prePIRLS section, below).

Exhibit 72: Allocation of School Sample between Studies in South Africa

Explicit Strata	Total Sampled Schools	Allocation of Schools	
		To prePIRLS Grade 4	To PIRLS Grade 5
Grade 4 only	14	14	0
Grade 4 & Grade 5 – Afrikaans or English	93	93	93
Grade 4 and Grade 5 – Others	238	238	0
Grade 5 only	7	0	7
Total	352	345	100

Exhibit 73: Allocation of School Sample in South Africa, Fifth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 5 only – English	7	1	6	0	0	0	0
Grade 4 & Grade 5 – Afrikaans & English	21	0	21	0	0	0	0
Grade 4 & Grade 5 – Afrikaans	30	2	28	0	0	0	0
Grade 4 & Grade 5 – English	42	5	35	2	0	0	0
Total	100	8	90	2	0	0	0

Andalusia, Spain

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools (MOS < 4), international schools, and special education schools.
- ◆ No within-school exclusions.

Sample Design

- ◆ No explicit stratification.
- ◆ Implicit stratification by school type (public/private).
- ◆ Sampled two classrooms per school in larger schools (MOS > 55).

- ◆ 150 schools were sampled for PIRLS (these included 30 schools already sampled for TIMSS in the national sample for Spain). All sampled schools for Andalusia were used to produce the national estimates for Spain.

Exhibit 74: Allocation of School Sample in Andalusia, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Andalusia	150	0	149	0	0	1	0
Total	150	0	149	0	0	1	0

Abu Dhabi, UAE

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of very small schools and schools with students taught in languages other than Arabic and English.
- ◆ No within-school exclusions.
- ◆ Two school census strata (West region). Variance calculation was adjusted accordingly.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” schools and educational zones.
- ◆ Implicit stratification by private/public status, curricula (24), school gender (boys, co-educational, or girls), and test language (English, Arabic, or both).
- ◆ Sampled two classrooms per school in the West region.
- ◆ All schools from the West region were sampled. Classes within schools were used to build jackknife replicates for variance calculation. There were certainty schools (schools selected with certainty) outside of that region, and variance calculation was conducted following the same approach for these schools.

- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 75: Allocation of School Sample between Studies in Abu Dhabi

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	73	73	73	0
Grade 4 & Grade 8	95	95	95	95
Grade 8 only	75	0	0	75
Total	243	168	168	170

Exhibit 76: Allocation of School Sample in Abu Dhabi, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Grade 4 only – Abu Dhabi	35	0	35	0	0	0	0
Grade 4 only – Al Ain	23	1	22	0	0	0	0
Grade 4 only – West region	15	2	13	0	0	0	0
Grade 4 & Grade 8 – Abu Dhabi	55	0	54	0	0	1	0
Grade 4 & Grade 8 – Al Ain	29	0	29	0	0	0	0
Grade 4 & Grade 8 – West region	11	0	11	0	0	0	0
Total	168	3	164	0	0	1	0

Dubai, UAE

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 100 percent.
- ◆ School-level exclusions consisted of schools with students taught in languages other than Arabic and English, special education schools, and very small schools (MOS < 10). Statistics on special education schools

were not available and were estimated using the sample. They are found under the within-school exclusion rates.

- ◆ Within-school exclusions consisted of students with special educational needs.

Sample Design

- ◆ Explicit stratification by “Grade 4” / “Grade 4 & Grade 8” schools.
- ◆ Implicit stratification by curricula (14) and assessment language (English, Arabic, or both).
- ◆ Sampled two classrooms per school.
- ◆ All schools were sampled. Classes within schools were used to build jackknife replicates for variance calculation.
- ◆ School sample overlap between TIMSS (Grade 4), PIRLS, and TIMSS (Grade 8): 1) Samples were drawn all at once; 2) All sampled schools in the “Grade 4 & Grade 8” stratum were asked to participate in all studies; and 3) All sampled students for PIRLS also were asked to take TIMSS at Grade 4.

Exhibit 77: Allocation of School Sample between Studies in Dubai

Explicit Strata	Total Sampled Schools	Allocation of Schools		
		To PIRLS Grade 4	To TIMSS Grade 4	To TIMSS Grade 8
Grade 4 only	43	43	43	0
Grade 4 & Grade 8	109	109	109	109
Grade 8 only	34	0	0	34
Total	186	152	152	143

Exhibit 78: Allocation of School Sample in Dubai, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
Dubai Grade 4 only	43	0	40	0	0	0	3
Dubai Grade 4 & Grade 8	109	0	98	0	0	1	10
Total	152	0	138	0	0	1	13

Florida, United States

Fourth Grade

Coverage and Exclusions

- ◆ Coverage is 89 percent. Coverage in this state was restricted to students in public schools (89% of the international target population).
- ◆ No school-level exclusions.
- ◆ Within-school exclusions consisted of students who lack English language proficiency and students with disabilities.

Sample Design

- ◆ Explicit stratification by high/low poverty index.
- ◆ Implicit stratification by location (city, rural, suburban, or town) and ethnic status.
- ◆ The same schools were sampled for both TIMSS and PIRLS studies. Within the sampled schools, different classrooms (students) were sampled for each study. In general, two classrooms were sampled per study per school.
- ◆ The TIMSS National US sampled schools were added to this sample with new school IDs. The “supplemental” school sample was selected by controlling for overlap with the TIMSS National US and NAEP (Alpha–public schools) samples using the Chowdhury approach (samples drawn sequentially). This strategy maximized the overlap with the TIMSS national sample and minimized the overlap with the NAEP (Alpha–public schools) sample. In summary, priority was given to schools selected for the TIMSS national sample (including schools also selected for the NAEP Alpha sample); then priority was given to schools not selected for either the TIMSS national or NAEP Alpha samples; and finally priority was given to schools selected for the NAEP Alpha sample and not selected for the TIMSS national sample.

Exhibit 79: Allocation of School Sample in Florida, Fourth Grade

Explicit Strata	Total Sampled Schools	Ineligible Schools	Participating Schools			Refusal Schools	Excluded Schools
			Original Schools	1st Replacements	2nd Replacements		
High Poverty	42	0	39	0	0	2	1
Low Poverty	39	0	38	0	0	1	0
Total	81	0	77	0	0	3	1