

Appendix B

Characteristics of National Samples

Introduction

For each country participating in TIMSS 2003, this appendix describes the target population definition (where necessary), the extent of coverage and exclusions, the use of stratification variables, and any deviations from the general TIMSS sample design.

B.1 Armenia

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students)

- No explicit stratification
- Implicit stratification by region, for a total of 11 implicit strata
- Same schools sampled in Fourth Grade and Eighth Grade

Exhibit B.1.1 Allocation of School Sample in Armenia – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible	I	Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Armenia	150	0	148	0	0	2
Total	150	0	148	0	0	2

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by region, for a total of 11 implicit strata
- Same schools sampled in Fourth Grade and Eighth Grade

Exhibit B.1.2 Allocation of School Sample in Armenia – Eighth Grade

Fundinia Canadana	Total Sampled	Ineligible	ı	Participating Schoo	ols	Non-
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Armenia	150	0	149	0	0	1
Total	150	0	149	0	0	1

B.2 Australia

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of special education schools, hospital schools, schools with radically different curricula, remote schools in the Northern Territory, and very small schools (less than five eligible students)

- Explicit stratification by States and Territories, for a total of eight explicit strata
- Implicit stratification by school type (Government, Catholic, Independent), for a total of 24 implicit strata

Exhibit B.2.1 Allocation of School Sample in Australia – Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	I	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
New South Wales	40	0	29	2	4	5
Victoria	35	0	26	6	0	3
Queensland	35	2	29	1	1	2
South Australia	30	0	25	1	1	3
Western Australia	30	1	20	6	1	2
Tasmania	30	0	25	0	0	5
Northern Territory	15	0	11	2	0	2
Australian Capital Territory	15	0	13	1	0	1
Total	230	3	178	19	7	23

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, hospital schools, schools with radically different curricula, remote schools in the Northern Territory, and very small schools (less than five eligible students)

- Explicit stratification by States and Territories, for a total of eight explicit strata
- Implicit stratification by school type (Government, Catholic, Independent), for a total of 24 implicit strata
- Schools were sampled with equal probabilities in the "Tasmania", "Northern Territory", and "Australian Capital Territory" strata

Exhibit B.2.2 Allocation of School Sample in Australia – Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	I	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
New South Wales	40	0	27	4	1	8
Victoria	35	0	31	2	1	1
Queensland	35	1	29	1	3	1
South Australia	30	0	25	2	0	3
Western Australia	30	1	23	2	1	3
Tasmania	30	1	25	1	0	3
Northern Territory	15	1	13	1	0	0
Australian Capital Territory	15	0	13	1	1	0
Total	230	4	186	14	7	19

B.3 Bahrain

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- There were no reported school-level exclusions

- No explicit stratification
- Implicit stratification by school type (girl schools, boy schools, private schools), for a total of three implicit strata
- All schools in the sample

Exhibit B.3.1 Allocation of School Sample in Bahrain - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
explicit stratum	Schools Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Bahrain	67	0	67	0	0	0
Total	67	0	67	0	0	0

B.4 Basque Country, Spain

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of other language schools and very small schools (less than ten eligible students)

- Explicit stratification by school type (public, private) and language (Basque, Castilian, mixed), for a total of six explicit strata
- No implicit stratification
- Small schools were sampled with probabilities proportional to size
- Four schools were sampled with certainty in the "Public Type A (Castilian)" stratum

Exhibit B.4.1 Allocation of School Sample in Basque Country, Spain – Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	I	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Private – Type A (Castilian)	20	0	20	0	0	0
Private – Type B (Mixed)	20	0	20	0	0	0
Private – Type D (Basque)	20	0	20	0	0	0
Public – Type A (Castilian)	20	0	19	1	0	0
Public – Type B (Mixed)	20	0	20	0	0	0
Public – Type D (Basque)	20	0	20	0	0	0
Total	120	0	119	1	0	0

B.5 Belgium (Flemish)

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than five eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by school type (catholic, communal, state), for a total of three implicit strata

Exhibit B.5.1 Allocation of School Sample in Belgium (Flemish) - Fourth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Belgium (Flemish)	150	0	133	12	4	1
Total	150	0	133	12	4	1

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than five eligible students)

- Explicit stratification by school program (academic, professional) and school size (very large, large) in the "Academic" stratum, for a total of three explicit strata
- Implicit stratification by school type (catholic, communal, state), for a total of seven implicit strata
- Schools sampled with equal probabilities in the "Academic Very Large Schools" stratum

Exhibit B.5.2 Allocation of School Sample in Belgium (Flemish) – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	1	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Academic – Large Schools	114	0	96	13	4	1
Professional	30	0	21	6	2	1
Total	150	0	122	20	6	2

B.6 Botswana

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools

- Explicit stratification by school type (government, private), for a total of two explicit strata
- Implicit stratification by region (five regions) and urbanization (rural, semi-urban, urban), for a total of 21 implicit strata
- Schools sampled with equal probabilitie

Exhibit B.6.1 Allocation of School Sample in Botswana – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	I	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Government	145	0	142	0	0	3
Private	5	0	4	0	0	1
Other	2	2	0	0	0	0
Total	152	2	146	0	0	4

B.7 Bulgaria

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than five eligible students)

Sample Design

- Explicit stratification by school size (very large, large), for a total of two explicit strata
- Implicit stratification within large schools by entrance examination (with, without), for a total of three implicit strata
- The one "Very Large School" was in fact a cluster of smaller schools. One of them was sampled with PPS

Exhibit B.7.1 Allocation of School Sample in Bulgaria – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ols	Non-		
	Schools	Schools	Sampled	1 st Replacement	2 nd Replacement	Participating Schools
Very Large Schools	1	0	1	0	0	0
Large Schools	169	1	162	1	0	5
Total	170	1	163	1	0	5

B.8 Chile

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of remote schools, schools on Easter Island, and very small schools (less than 11 eligible students)

Sample Design

• Explicit stratification by region (North & Region 8, all other regions) and school type (municipal, subsidized, private), for a total of six explicit strata

• Implicit stratification by urbanization (rural, urban), for a total of 12 implicit strata

Exhibit B.8.1 Allocation of School Sample in Chile - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	ĺ	Non-		
	Schools		Sampled	1 st Replacement	2 nd Replacement	Participating Schools
North & Region 8 – Municipal	45	0	43	2	0	0
North & Region 8 – Subsidized	34	0	33	1	0	0
North & Region 8 — Private	31	0	31	0	0	0
All Other Regions – Municipal	50	0	50	0	0	0
All Other Regions - Subsidized	21	0	21	0	0	0
All Other Regions - Private	14	0	13	1	0	0
Total	195	0	191	4	0	0

B.9 Chinese Taipei

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than eight eligible students)

- No explicit stratification
- Implicit stratification by region (five regions), for a total of five implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.9.1 Allocation of School Sample in Chinese Taipei – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Chinese Taipei	150	0	150	0	0	0
Total	150	0	150	0	0	0

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than eight eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by region (five regions) and gender (girls, boys, mixed), for a total of ten implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.9.2 Allocation of School Sample in Chinese Taipei – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Chinese Taipei	150	0	150	0	0	0
Total	150	0	150	0	0	0

B.10 Cyprus

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of isolated schools and very small schools (less than seven eligible students)

- Explicit stratification by district, for a total of four explicit strata
- Implicit stratification by urbanization (rural, urban), for a total of eight implicit strata
- Schools sampled with equal probabilities

Exhibit B.10.1 Allocation of School Sample in Cyprus - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	ı	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Nicosia	54	0	54	0	0	0
Larnaka	38	0	38	0	0	0
Limassol	42	0	42	0	0	0
Pafos	16	0	16	0	0	0
Total	150	0	150	0	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of isolated schools and very small schools (less than 15 eligible students)

- Explicit stratification by district, for a total of four explicit strata
- Implicit stratification by urbanization (rural, urban), for a total of eight implicit strata
- All schools in the sample

Exhibit B.10.2 Allocation of School Sample in Cyprus - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	ı	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Nicosia	22	0	22	0	0	0
Larnaka	13	0	13	0	0	0
Limassol	16	0	16	0	0	0
Pafos	8	0	8	0	0	0
Total	59	0	59	0	0	0

B.11 Egypt

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of schools for the blind, handicraft schools, sport schools, and very small schools (less than 12 eligible students)

Sample Design

- Explicit stratification by school type, for a total of six explicit strata
- Implicit stratification by gender (boys, girls, mixed), urbanization (rural, urban), school type (public, free private) in the "Afternoon 2nd Shift" stratum, schedule (full time, morning shift, noon shift) in the "Public" stratum, for a total of 42 implicit strata

Exhibit B.11.1 Allocation of School Sample in Egypt - Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible	Participating Schools			Non-
		Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Afternoon 2nd Shift	25	0	25	0	0	0
Public Schools	115	0	115	1	0	0
Experimental Language Schools	25	0	25	0	0	0
Free Private Schools	2	0	2	0	0	0
Private Schools	25	0	25	0	0	0
Private Language Schools	25	0	25	1	0	0
Total	217	0	217	2	0	0

B.12 England

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than eight eligible students)

- No explicit stratification
- Implicit stratification by school performance (six levels) and school type (primary, junior, middle, independent), for a total of 24 implicit strata

Exhibit B.12.1 Allocation of School Sample in England – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
England	150	0	79	31	13	27
Total	150	0	79	31	13	27

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by school performance (six levels) and school type (comprehensive to 16, comprehensive to 18, independent, grammar, other), for a total of 27 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.12.2 Allocation of School Sample in England – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	1	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
England	160	0	62	22	3	73
Total	160	0	62	22	3	73

B.13 Estonia

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than seven eligible students)

Sample Design

- Explicit stratification by language (Estonian, Russian) and school size (very large, large), for a total of four explicit strata
- Implicit stratification by urbanization (five levels) and school type (years 1-12, years 1-9), for a total of 26 implicit strata
- All schools sampled in the two "Very Large Schools" strata

Exhibit B.13.1 Allocation of School Sample in Estonia – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools		Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Very Large Estonian Schools	16	0	16	0	0	0
Large Estonian Schools	94	1	92	0	0	1
Very Large Russian Schools	7	0	7	0	0	0
Large Russian Schools	37	1	36	0	0	0
Total	154	2	151	0	0	1

B.14 Ghana

EIGHTH GRADE

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than 11 eligible students)

- No explicit stratification
- Implicit stratification by region, for a total of ten implicit strata

Exhibit B.14.1 Allocation of School Sample in Ghana – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ı	Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Ghana	150	0	150	0	0	0
Total	150	0	150	0	0	0

B.15 Hong Kong, SAR

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, international schools, and very small schools (less than nine eligible students)

- No explicit stratification
- Implicit stratification by gender (single-sex, mixed), school type (aided, government & private), and schedule (morning, afternoon, whole day), for a total of 12 implicit strata

Exhibit B.15.1 Allocation of School Sample in Hong Kong, SAR – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible	I	ols	Non-	
		Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Hong Kong, SAR	150	0	116	14	2	18
Total	150	0	116	14	2	18

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and international schools

Sample Design

- No explicit stratification
- Implicit stratification by gender (single-sex, mixed), school type (aided, government & private), and language (Chinese, English), for a total of eight implicit strata

Exhibit B.15.2 Allocation of School Sample in Hong Kong, SAR - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Hong Kong, SAR	150	0	112	12	1	25
Total	150	0	112	12	1	25

B.16 Hungary

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than 15 eligible students)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata
- Implicit stratification by province (20 provinces) and urbanization (village, town, county seat, Budapest), for a total of 109 implicit strata
- Small schools were sampled with probabilities proportional to size
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.16.1 Allocation of School Sample in Hungary – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible Schools		Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only	14	0	14	0	0	0
Fourth Grade & Eighth Grade	146	1	142	1	0	2
Total	160	1	156	1	0	2

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than 15 eligible students)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata
- Implicit stratification by province (20 provinces) and urbanization (village, town, county seat, Budapest), for a total of 113 implicit strata
- Small schools were sampled with probabilities proportional to size
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.16.2 Allocation of School Sample in Hungary – Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	1	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only	22	2	20	0	0	0
Fourth Grade & Eighth Grade	138	1	134	1	0	2
Total	160	3	154	1	0	2

B.17 Indiana State, U.S.

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- There were no reported school-level exclusions

Sample Design

- Explicit stratification by school type (public, private), for a total of two explicit strata
- Implicit stratification urbanization (eight levels) and minority status (above 15%, below 15%), for a total of 32 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.17.1 Allocation of School Sample in Indiana State, U.S. - Fourth Grade

Evalicit Stratiim	Total Sampled	Ineligible	ĺ	Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Public	50	0	50	0	0	0
Private	6	0	6	0	0	0
Total	56	0	56	0	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- There were no reported school-level exclusions

- Explicit stratification by school type (public, private), for a total of two explicit strata
- Implicit stratification urbanization (eight levels) and minority status (above 15%, below 15%), for a total of 31 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.17.2 Allocation of School Sample in Indiana State, U.S. - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ı	Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Public	50	0	49	0	0	1
Private	6	0	5	0	0	1
Total	56	0	54	0	0	2

B.18 Indonesia

EIGHTH GRADE

Coverage and Exclusions

- Coverage in Indonesia was restricted to students in non-Islamic schools (80% of International Desired Target Grade)
- School-level exclusions consisted of very small schools (less than ten eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by school type (public, private) and performance (high, average, low), for a total of six implicit strata

Exhibit B.18.1 Allocation of School Sample in Indonesia – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Indonesia	150	0	148	2	0	0
Total	150	0	148	2	0	0

B.19 Iran, Islamic Republic of

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of remote schools and very small schools (less than seven eligible students)

- Explicit stratification by school size (small, large) and school type (public, private), for a total of four explicit strata
- No implicit stratification
- Small schools were sampled with probabilities proportional to size

Exhibit B.19.1 Allocation of School Sample in Iran, Islamic Republic of - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	ĺ	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Small – Public	24	1	23	0	0	0
Small – Private	8	0	8	0	0	0
Large – Public	108	4	104	0	0	0
Large – Private	36	0	36	0	0	0
Total	176	5	171	0	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of adult schools and remote schools

- Explicit stratification by school size (small, large) and school type (public, private), for a total of four explicit strata
- No implicit stratification
- Small schools were sampled with probabilities proportional to size

Exhibit B.19.2 Allocation of School Sample in Iran, Islamic Republic of - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	1	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Small – Public	20	0	20	0	0	0
Small – Private	5	1	4	0	0	0
Large – Public	148	5	143	0	0	0
Large – Private	15	1	14	0	0	0
Total	188	7	181	0	0	0

B.20 Israel

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, Ultra Orthodox schools, Arab schools (East Jerusalem), and very small schools (less than nine eligible students)

Sample Design

- Explicit stratification by ethnicity (Hebrew secular, Hebrew religious, Arab), for a total of three explicit strata
- Implicit stratification by school type (five types) and socio-economic status (four levels), for a total of 40 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.20.1 Allocation of School Sample in Israel - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	1	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Hebrew Secular	70	1	68	0	1	0
Hebrew Religious	40	1	37	2	0	0
Arab	40	1	38	0	0	1
Total	150	3	143	2	1	1

B.21 Italy

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than eight eligible students)

Sample Design

• No explicit stratification

- Implicit stratification by province (20 provinces) and urbanization (capital town, other towns), for a total of 40 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.21.1 Allocation of School Sample in Italy - Fourth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Italy	172	1	165	6	0	0
Total	172	1	165	6	0	0

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than eight eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by province (20 provinces) and urbanization (capital town, other towns), for a total of 40 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.21.2 Allocation of School Sample in Italy – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ı	Participating Schools		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Italy	172	1	164	6	1	0
Total	172	1	164	6	1	0

B.22 Japan

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of schools for educable mentally disabled students and schools for functionally disabled students

- Explicit stratification by urbanization (big city area, city area, non-city area), for a total of three explicit strata
- No implicit stratification

Exhibit B.22.1 Allocation of School Sample in Japan – Fourth Grade

	Total Sampled	Ineligible	I	Non-		
Explicit Stratum	um Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Big City	27	0	27	0	0	0
City	84	0	84	0	0	0
Non-City	39	0	39	0	0	0
Total	150	0	150	0	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of schools for educable mentally disabled students and schools for functionally disabled students

- Explicit stratification by school type (public, private or national), urbanization (big city area, city area, non-city area) in the "Public" stratum, for a total of four explicit strata
- No implicit stratification

Exhibit B.22.2 Allocation of School Sample in Japan - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	ı	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Public – Big City	24	0	24	0	0	0
Public – City	79	0	79	0	0	0
Public – Non-City	37	0	36	0	0	1
Private Or National	10	0	7	0	0	3
Total	150	0	146	0	0	4

B.23 Jordan

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than nine eligible students)

Sample Design

- No explicit stratification
- Implicit stratification by school type (public, private, UNRWA), urbanization (rural, urban) in the "Public" and "Private" strata, and gender (boys, girls, mixed), for a total of 15 implicit strata

Exhibit B.23.1 Allocation of School Sample in Jordan - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schools			
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools	
Jordan	150	10	140	0	0	0	
Total	150	10	140	0	0	0	

B.24 Korea, Republic of

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of remote schools, special education schools, sports schools, and very small schools (less than 11 eligible students)

- Explicit stratification by province (16 provinces), for a total of 16 explicit strata
- Implicit stratification by urbanization (large city, middle, rural) and gender (boys, girls, mixed), for a total of 83 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.24.1 Allocation of School Sample in Korea, Republic of - Eighth Grade

	Total Sampled	Ineligible	1	Participating Schoo	ls	Non-
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Seoul	30	0	30	0	0	0
Pusan	12	0	12	0	0	0
Taegu	9	0	9	0	0	0
Inchon	9	0	9	0	0	0
Kwangju	5	0	5	0	0	0
Taejon	5	1	4	0	0	0
Ulsan	4	0	4	0	0	0
Kyunggi-do	30	0	30	0	0	0
Kangwon-do	4	0	4	0	0	0
Chungchongbuk-do	5	0	5	0	0	0
Chungchongnam-do	6	0	6	0	0	0
Chollabuk-do	6	0	6	0	0	0
Chollanam-do	6	0	6	0	0	0
Kyongsangbuk-do	8	0	7	0	0	1
Kongsangnam-do	10	0	10	0	0	0
Cheju-do	2	0	2	0	0	0
Total	151	1	149	0	0	1

B.25 Latvia

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, other language schools, and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade) and school size (very large, large) in the "Fourth Grade and Eighth Grade" stratum, for a total of three explicit strata
- Implicit stratification by language (Latvian, Russian, mixed) and urbanization (rural, urban), for a total of 15 implicit strata

- Schools sampled with equal probabilities in the "Fourth Grade and Eighth Grade Very Large" stratum
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.25.1 Allocation of School Sample in Latvia - Fourth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	ı	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only	15	0	15	0	0	0
Fourth & Eighth Grade – Very Large	27	1	25	0	0	1
Fourth & Eighth Grade – Large	108	0	97	1	2	8
Total	150	1	137	1	2	9

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, other language schools, and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade) and school size (very large, large) in the "Fourth Grade and Eighth Grade" stratum, for a total of three explicit strata
- Implicit stratification by language (Latvian, Russian, mixed) and urbanization (rural, urban), for a total of 12 implicit strata
- Schools sampled with equal probabilities in the "Eighth Grade Only" and "Fourth Grade & Eighth Grade Very Large" strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.25.2 Allocation of School Sample in Latvia - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	İ	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only	15	1	14	0	0	0
Fourth & Eighth Grade – Very Large	27	0	26	0	0	1
Fourth & Eighth Grade – Large	108	0	97	1	2	8
Total	150	1	137	1	2	9

B.26 Lebanon

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than nine eligible students)

- No explicit stratification
- Implicit stratification by school type (public, private), urbanization (rural, urban), and gender (boys, girls, mixed), for a total of ten implicit strata

Exhibit B.26.1 Allocation of School Sample in Lebanon – Eighth Grade

Explicit Stratum Total Sample Schools	Total Sampled	Ineligible	I	Non-		
	•	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Lebanon	160	0	148	4	0	8
Total	160	0	148	4	0	8

B.27 Lithuania

FOURTH GRADE

Coverage and Exclusions

- Coverage in Lithuania was restricted to students whose language of instruction is Lithuanian (92% of International Desired Target Grade).
- School-level exclusions consisted of special education schools and very small schools (less than five eligible students)

Sample Design

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata
- Implicit stratification by school type (basic, secondary, primary), for a total of five implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.27.1 Allocation of School Sample in Lithuania - Fourth Grade

	Total Sampled	Ineligible	1	Non-		
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only	42	0	37	3	1	1
Fourth Grade & Eighth Grade	118	0	110	2	0	6
Total	160	0	147	5	1	7

EIGHTH GRADE

Coverage and Exclusions

- Coverage in Lithuania was restricted to students whose language of instruction is Lithuanian (89% of International Desired Target Grade).
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students)

Sample Design

• Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata

- Implicit stratification by school type (basic, secondary), for a total of four implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.27.2 Allocation of School Sample in Lithuania - Eighth Grade

- "	Total Sampled	Ineligible Schools	1	Non-		
Explicit Stratum	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only	23	0	20	2	1	0
Fourth Grade & Eighth Grade	127	0	117	3	0	7
Total	150	0	137	5	1	7

B.28 Macedonia, Republic of

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, other language schools (Turkish and Serbian), schools in politically sensitive regions (near the border with Kosovo), and very small schools (less than seven eligible students)

- Explicit stratification by school size (large, very large), for a total of two explicit strata
- Implicit stratification by language (Macedonian, Albanian) and urbanization (rural, urban), for a total of seven implicit strata
- All schools sampled in the "Very Large Schools" stratum

Exhibit B.28.1 Allocation of School Sample in the Macedonia, Republic of - Eighth Grade

	Total Sampled Ineligible		1	Non-		
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Very Large Schools	28	0	28	0	0	0
Large Schools	122	0	114	7	0	1
Total	150	0	142	7	0	1

B.29 Malaysia

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of private schools, international schools, and special education schools

Sample Design

- No explicit stratification
- Implicit stratification by state (14 states) and urbanization (rural, urban), for a total of 28 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.29.1 Allocation of School Sample in Malaysia - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ı	Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Malaysia	150	0	150	0	0	0
Total	150	0	150	0	0	0

B.30 Moldova

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata
- Implicit stratification by urbanization (rural, urban), school type (Gymnasium, Lyceum, General School, other) in the "Fourth Grade and

Eighth Grade" stratum, and language (National, Russian, mixed) in the "Fourth Grade and Eighth Grade" stratum, for a total of 18 implicit strata

• Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.30.1 Allocation of School Sample in Moldova - Fourth Grade

E. P. St. Comp.	Total Sampled	Ineligible		Non-		
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only	14	2	12	0	0	0
Fourth & Eighth Grade	139	0	135	4	0	0
Total	153	2	147	4	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade), for a total of two explicit strata
- Implicit stratification by urbanization (rural, urban), school type (Gymnasium, Lyceum, General School, other) in the "Fourth Grade and Eighth Grade" stratum, and language (National, Russian, mixed) in the "Fourth Grade & Eighth Grade" stratum, for a total of 18 implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.30.2 Allocation of School Sample in Moldova - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	ı	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only	11	1	10	0	0	0
Fourth Grade & Eighth Grade	139	0	137	2	0	0
Total	150	1	147	2	0	0

B.31 Morocco

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade) and region strata (eight strata) in the "Fourth Grade Only" stratum, for a total of nine explicit strata
- The 16 regions of Morocco were combined into eight region strata
- Implicit stratification by school type (public, private), urbanization (rural, urban) in the "Public" stratum, and administration (four types) in the "Fourth Grade Only Public" stratum, for a total of 66 implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.31.1 Allocation of School Sample in Morocco - Fourth Grade

Explicit Stratum	Total Sampled	Ineligible	Participating Schools			Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only – Region Stratum 1	25	0	24	0	0	1
Fourth Grade Only — Region Stratum 2	25	0	8	0	0	17
Fourth Grade Only — Region Stratum 3	35	0	34	0	0	1
Fourth Grade Only — Region Stratum 4	25	0	24	0	0	1
Fourth Grade Only — Region Stratum 5	30	0	29	0	0	1
Fourth Grade Only — Region Stratum 6	30	0	28	0	0	2
Fourth Grade Only – Region Stratum 7	25	0	23	0	0	2
Fourth Grade Only — Region Stratum 8	30	0	27	0	0	3
Fourth & Eighth Grade	2	2	0	0	0	0
Total	227	2	197	0	0	28

Coverage and Exclusions

- Coverage in Morocco was restricted to students outside the regions of Souss Massa Draa, Casablanca and Gharb-Chrardais (69% of the International Desired Target Grade).
- School-level exclusions consisted of special education schools and very small schools (less than six eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade), region strata (eight strata) in the "Fourth Grade Only" stratum, and school size (large, very large) in the "Region Stratum 1" stratum, for a total of ten explicit strata
- The 16 regions of Morocco were combined into eight region strata
- Implicit stratification by school type (public, private) and urbanization (rural, urban) in the "Public" stratum, for a total of 27 implicit strata

- All schools sampled in the "Eighth Grade Only Region 1 Very Large" stratum
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.31.2 Allocation of School Sample in Morocco - Eighth Grade

	Total Sampled	Ineligible	1	Participating Schoo	ols	Non-
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only - Reg.1 - Very Large	4	0	4	0	0	0
Eighth Grade Only - Reg.1 - Large	21	0	16	0	0	5
Eighth Grade Only – Region Stratum 2	25	25	0	0	0	0
Eighth Grade Only – Region Stratum 3	35	35	0	0	0	0
Eighth Grade Only – Region Stratum 4	25	0	23	0	0	2
Eighth Grade Only – Region Stratum 5	30	0	26	0	0	4
Eighth Grade Only – Region Stratum 6	30	0	23	0	0	7
Eighth Grade Only – Region Stratum 7	25	0	20	0	0	5
Eighth Grade Only – Region Stratum 8	30	0	19	0	0	11
Fourth & Eighth Grade	2	2	0	0	0	0
Total	227	62	131	0	0	34

B.32 Netherlands

FOURTH GRADE

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by mean National Student Weight (low, medium, high), for a total of three implicit strata

Exhibit B.32.1 Allocation of School Sample in the Netherlands - Fourth Grade

Explicit Stratum Total Sampled Schools	Total Sampled	Ineligible		Non-		
	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools	
Netherlands	150	1	77	36	17	19
Total	150	1	77	36	17	19

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special secondary education, schools with recovery program ("vrije scholen"), and very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by school program (VMBO, HAVO / VWO, mixed), for a total of three implicit strata
- Minimum school sample overlap between TIMSS and PISA

Exhibit B.32.2 Allocation of School Sample in the Netherlands – Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	Participating Schools			Non-
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Netherlands	150	0	118	12	0	20
Total	150	0	118	12	0	20

B.33 New Zealand

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, correspondence schools, Rudolf Steiner schools, and very small schools (less than four eligible students)

Sample Design

- Explicit stratification by language of instruction (Maori, English), for a total of two explicit strata
- Implicit stratification by school type (state, private) in the "Non-Maori" stratum, school decile indicator (low, medium, high) in the "Non-Maori State" stratum, and urbanization (rural, urban) in the "Non-Maori State" stratum, for a total of eight implicit strata

Exhibit B.33.1 Allocation of School Sample in New Zealand - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools		Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Maori language instruction	10	0	5	1	0	4
English language instruction	218	0	189	23	2	4
Total	228	0	194	24	2	8

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, correspondence schools, Maori immersion schools, Rudolf Steiner schools, and very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by school type (state, private), school decile indicator (low, medium, high) in the "State" stratum, urbanization

(rural, urban) in the "State" stratum, and gender (boys, girls, mixed) in the "State" stratum, for a total of ten implicit strata

• Schools were sampled with equal probabilities

Exhibit B.33.2 Allocation of School Sample in New Zealand - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	I	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
New Zealand	175	1	149	20	0	5
Total	175	1	149	20	0	5

B.34 Norway

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, Sami schools, and very small schools (less than five eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade) and language (Bokmål, other), for a total of four explicit strata
- No implicit stratification
- Small schools were sampled with probabilities proportional to size in the "Fourth Grade & Eighth Grade Bokmål" stratum
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.34.1 Allocation of School Sample in Norway – Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools		Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only – Bokmål	46	0	42	2	0	2
Fourth Grade Only — Other	79	0	68	3	0	8
Fourth & Eighth Grade – Other	20	0	20	0	0	0
Total	150	0	134	5	0	11

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, Sami schools, and very small schools (less than five eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade) and language (Bokmål, other), for a total of four explicit strata
- No implicit stratification
- Small schools were sampled with probabilities proportional to size in the "Eighth Grade Only – Bokmål", "Fourth Grade & Eighth Grade – Bokmål", and "Eighth Grade Only – Other" strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.34.2 Allocation of School Sample in Norway - Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	Participating Schools			Non-
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only – Bokmål	42	0	40	0	0	2
Fourth & Eighth Grade — Bokmål	8	0	6	0	0	2
Eighth Grade Only – Other	73	0	68	0	0	5
Fourth & Eighth Grade – Other	27	0	24	0	0	3
Total	150	0	138	0	0	12

B.35 Ontario Province, Canada

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, remote schools (northern regions), and very small schools (less than ten eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade) and language (English, French), for a total of four explicit strata
- Implicit stratification by school type (public, private, separate), for a total of 12 implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.35.1 Allocation of School Sample in Ontario Province, Canada - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	F	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only – English	32	2	27	1	1	1
Fourth Grade Only — French	25	0	24	1	0	0
Fourth & Eighth Grade – English	88	2	75	4	1	6
Fourth & Eighth Grade – French	55	0	53	2	0	0
Total	200	4	179	8	2	7

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, native schools, overseas schools, and very small schools (less than ten eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade) and language (English, French), for a total of four explicit strata
- Implicit stratification by school type (public, private, separate), for a total of 11 implicit strata
- All schools sampled in the "Eighth Grade Only French" stratum
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.35.2 Allocation of School Sample in Ontario Province, Canada - Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	Participating Schools			Non-
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only – English	32	1	22	4	3	2
Eighth Grade Only – French	25	1	23	0	0	1
Fourth & Eighth Grade – English	88	1	75	5	1	6
Fourth & Eighth Grade – French	55	1	51	2	0	1
Total	200	4	171	11	4	10

B.36 Palestinian Nat'l Authority

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than 11 eligible students)

- Explicit stratification by school size (very large, large), for a total of two explicit strata
- Implicit stratification by regions (Gaza Strip, West Bank), school type (public, private, UNWRA), and gender (boys, girls, mixed), for a total of 20 implicit strata
- All schools sampled in the "Very Large Schools" stratum

Exhibit B.36.1 Allocation of School Sample in Palestinian Nat'l Authority - Eighth Grade

F. 11 11 61	Total Sampled	Ineligible		Non-		
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Very Large Schools	22	0	22	0	0	0
Large Schools	128	5	123	0	0	0
Total	150	5	145	0	0	0

B.37 Philippines

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of schools in the ARMM region and very small schools (less than ten eligible students)

Sample Design

- Explicit stratification by school type (public, private), for a total of two explicit strata
- Implicit stratification by region (16 regions), for a total of 32 implicit strata

Exhibit B.37.1 Allocation of School Sample in the Philippines – Fourth Grade

Explicit Stratum Total Sampled Schools	Total Sampled	Ineligible		Non-		
	•	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Public	149	0	111	9	4	25
Private	11	0	11	0	0	0
Total	160	0	122	9	4	25

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of schools in the ARMM Region and very small schools (less than ten eligible students)

- Explicit stratification by school type (public, private), for a total of two explicit strata
- Implicit stratification by region (16 regions), for a total of 32 implicit strata

Exhibit B.37.2 Allocation of School Sample in the Philippines – Eighth Grade

FYNIICIT STRATIIM	Total Sampled	Participating Schools Ineligible				Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Public	126	0	100	5	0	21
Private	34	0	32	0	0	2
Total	160	0	132	5	0	23

B.38 Québec Province, Canada

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, remote schools (northern regions), and very small schools (less than 11 eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Fourth Grade only, Fourth Grade and Eighth Grade) and language (English, French, English & French), for a total of five explicit strata
- Implicit stratification by school type (public, private), for a total of nine implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.38.1 Allocation of School Sample in Québec Province, Canada - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	ĺ	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only – English	65	1	63	0	0	1
Fourth Grade Only – English & French	2	0	2	0	0	0
Fourth Grade Only – French	112	0	111	1	0	0
Fourth & Eighth Grade – English	13	1	12	0	0	0
Fourth & Eighth Grade – French	6	2	4	0	0	0
Total	198	4	192	1	0	1

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, remote schools (northern regions), and very small schools (less than 11 eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade) and language (English, French, English & French), for a total of five explicit strata
- Implicit stratification by school type (public, private), for a total of nine implicit strata
- All schools sampled in the "Eighth Grade Only English" and "Eighth Grade Only English & French" strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.38.2 Allocation of School Sample in Québec Province, Canada – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	Participating Schools			Non-
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only – English	66	8	58	0	0	0
Eighth Grade Only – English & French	1	0	1	0	0	0
Eighth Grade Only – French	113	5	98	2	0	8
Fourth & Eighth Grade – English	13	0	12	0	0	1
Fourth & Eighth Grade – French	6	1	4	0	0	1
Total	199	14	173	2	0	10

B.39 Romania

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by region (42 regions) and urbanization (rural, urban), for a total of 83 implicit strata

Exhibit B.39.1 Allocation of School Sample in Romania – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Romania	150	1	148	0	0	1
Total	150	1	148	0	0	1

B.40 Russian Federation

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of evening schools, special needs schools, atypical schools, and very small schools (less than four eligible students)

- Preliminary sampling of 45 regions from a frame of 89 regions, 17 regions large enough to be sampled with certainty
- No explicit stratification (the explicit strata in table B.40.1 correspond to the primary sampling units)
- Implicit stratification by town size (ten levels), for a total of 225 implicit strata
- Generally, four schools sampled per region, more schools sampled in some certainty regions
- Large schools were sampled with equal probabilities in the regions "Rasan Obl", "Kirov Obl", and "Omsk Obl"

Exhibit B.40.1 Allocation of School Sample in the Russian Federation – Fourth Grade

	Total Sampled	Ineligible		Participating Schoo	ols	Non- Participating Schools
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	
Sankt-Petersburg*	6	0	6	0	0	0
Archangelsk Obl	4	0	4	0	0	0
Komi	4	0	4	0	0	0
Karelia	4	0	4	0	0	0
Moscow*	10	0	10	0	0	0
Moscow Obl*	8	0	8	0	0	0
Voroneg Obl	4	0	4	0	0	0
Tula Obl	4	0	4	0	0	0
Brjansk Obl	4	0	4	0	0	0
Yaroslav Obl	4	0	4	0	0	0
Tambov Obl	4	0	4	0	0	0
Rasan Obl	4	0	4	0	0	0
Kaluga Obl	4	0	4	0	0	0
Bashkortostan*	8	0	8	0	0	0
Tatarstan*	6	0	6	0	0	0
N_Novgorod Obl*	4	0	4	0	0	0
Samara Obl*	4	0	4	0	0	0
Perm Obl*	4	0	4	0	0	0
Saratov Obl	4	1	3	0	0	0
Orenburg Obl	4	0	4	0	0	0
Udmurtia	4	0	4	0	0	0
Kirov Obl	4	0	4	0	0	0
Pensa Obl	4	0	4	0	0	0
Marii_Al	4	0	4	0	0	0
Krasnodar Kr*	6	0	6	0	0	0
Rostov Obl*	6	0	6	0	0	0
Dagestan*	6	0	6	0	0	0
Stavropol Kr*	4	0	4	0	0	0
Volgograd Obl	4	0	4	0	0	0
Alania	4	0	4	0	0	0
Sverdlovsk Obl*	6	0	5	1	0	0
Chelyabinsk Obl*	4	0	4	0	0	0
Hanty_Mansii Ok	4	0	4	0	0	0
Tumen Obl	4	0	4	0	0	0
Krasnoyarsk Obl*	4	0	4	0	0	0

Exhibit B.40.1 Allocation of School Sample in the Russian Federation – Fourth Grade (...Continued)

	Total Sampled Schools	Ineligible Schools	1	Non-		
Explicit Stratum			Sampled	1st Replacement	2nd Replacement	Participating Schools
Kemerovo Obl*	4	0	4	0	0	0
Irkutsk Obl*	4	0	4	0	0	0
Altay Kr	4	0	4	0	0	0
Novosibirsk Obl	4	0	4	0	0	0
Omsk Obl	4	0	4	0	0	0
Chita Obl	4	0	4	0	0	0
Tyva	4	0	4	0	0	0
Primorsk Kr	4	0	4	0	0	0
Saha	4	0	4	0	0	0
Magadan Obl	4	0	4	0	0	0
Total	206	1	204	1	0	0

Strata marked with (*) were selected with certainty

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of evening schools, special needs schools, atypical schools, and very small schools (less than five eligible students)

- Preliminary sampling of 45 regions from a frame of 89 regions, 19 regions large enough to be sampled with certainty
- No explicit stratification (the explicit strata in table B.40.2 correspond to the primary sampling units)
- Implicit stratification by town size (ten levels), for a total of 230 implicit strata
- Generally, four schools sampled per region, more schools sampled in some certainty regions
- Large schools were sampled with equal probabilities in the regions "Rasan Obl", "Kirov Obl", "Omsk Obl", and "Tomsk Obl"

Exhibit B.40.2 Allocation of School Sample in the Russian Federation – Eighth Grade

	Total Sampled	Ineligible	I	Participating Schools			
Explicit Stratum	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools	
Sankt-Petersburg*	6	0	6	0	0	0	
Leningrad Obl	4	0	4	0	0	0	
Vologda Obl	4	0	4	0	0	0	
Murmansk Obl	4	0	4	0	0	0	
Novgorod Obl	4	0	4	0	0	0	
Moscow*	12	0	12	0	0	0	
Moscow Obl*	10	0	10	0	0	0	
Vladimir Obl	4	0	4	0	0	0	
Tver Obl	4	0	4	0	0	0	
Rasan Obl	4	0	3	0	0	1	
Smolensk Obl	4	0	4	0	0	0	
Orel Obl	4	0	4	0	0	0	
N_Novgorod Obl*	6	0	6	0	0	0	
Kirov Obl	4	0	4	0	0	0	
Marii_Al	4	0	4	0	0	0	
Belgorod Obl	4	0	4	0	0	0	
Tambov Obl	4	0	4	0	0	0	
Samara Obl*	6	0	6	0	0	0	
Saratov Obl*	4	0	4	0	0	0	
Volgograd Obl*	4	0	4	0	0	0	
Ulianovsk Obl	4	0	4	0	0	0	
Tatarstan	4	0	4	0	0	0	
Kalmykia	4	0	4	0	0	0	
Krasnodar Kr*	8	0	8	0	0	0	
Rostov Obl*	6	0	6	0	0	0	
Stavropol Kr*	4	0	4	0	0	0	
Kabarda_Balkaria	4	0	4	0	0	0	
Sverdlovsk Obl*	8	0	8	0	0	0	
Bashkortostan*	6	0	6	0	0	0	
Chelyabinsk Obl*	6	0	6	0	0	0	
Perm Obl*	4	0	3	0	0	1	
Orenburg Obl	4	0	4	0	0	0	
Udmurtia	4	0	4	0	0	0	
Kemerovo Obl*	6	0	6	0	0	0	
Novosibirsk Obl*	4	0	4	0	0	0	

Exhibit B.40.2 Allocation of School Sample in the Russian Federation – Eighth Grade (...Continued)

	Total Sampled Schools	Ineligible Schools	1	Non-		
Explicit Stratum			Sampled	1st Replacement	2nd Replacement	Participating Schools
Altay Kr*	4	0	4	0	0	0
Omsk Obl	4	0	4	0	0	0
Hanty_Mansii Ok	4	0	4	0	0	0
Tomsk Obl	4	0	4	0	0	0
Krasnoyarsk Obl*	4	0	4	0	0	0
Irkutsk Obl*	4	0	4	0	0	0
Chita Obl	4	0	4	0	0	0
Primorsk Kr	4	0	4	0	0	0
Habarovsk Kr	4	0	4	0	0	0
Sahalin Obl	4	0	4	0	0	0
Total	216	0	214	0	0	2

Strata marked with (*) were selected with certainty

B.41 Saudi Arabia

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than seven eligible students)

- No explicit stratification
- Implicit stratification by gender (boys, girls) and school type (government, private), for a total of four implicit strata

Exhibit B.41.1 Allocation of School Sample in Saudi Arabia - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Saudi Arabia	160	0	154	1	0	5
Total	160	0	154	1	0	5

B.42 Scotland

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted very small schools (less than seven eligible students)

Sample Design

- Explicit stratification by grade (Fourth Grade, Fourth Grade & Eighth Grade), for a total of two explicit strata
- Implicit stratification by school performance (six levels) and school type (five types), for a total of 18 implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade

Exhibit B.42.1 Allocation of School Sample in Scotland – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible		Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Fourth Grade Only	146	0	90	25	6	25
Fourth Grade & Eighth Grade	4	0	4	0	0	0
Total	150	0	94	25	6	25

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted very small schools (less than seven eligible students)

Sample Design

- Explicit stratification by grade (Eighth Grade only, Fourth Grade and Eighth Grade) and school size (large, other) in the "Eighth Grade Only" stratum, for a total of three explicit strata
- Implicit stratification by school performance (six levels) and school type (four types), for a total of 28 implicit strata
- Maximum school sample overlap between Fourth Grade and Eighth Grade
- Minimum school sample overlap between TIMSS and PISA

Exhibit B.42.2 Allocation of School Sample in Scotland – Eighth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	I	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
Eighth Grade Only – Large	60	0	48	5	0	7
Eighth Grade Only – Other	82	0	60	7	0	15
Fourth & Eighth Grade	8	0	7	1	0	0
Total	150	0	115	13	0	22

B.43 Serbia

EIGHTH GRADE

Coverage and Exclusions

- Coverage in Serbia was restricted to students outside Kosovo (81% of International Desired Target Grade).
- School-level exclusions consisted of schools near Kosovo, special education schools, and very small schools (less than ten eligible students)

- No explicit stratification
- Implicit stratification by region (Central Serbia, Belgrade, Vojvodina) and urbanization (rural, urban), for a total of six implicit strata

Exhibit B.43.1 Allocation of School Sample in Serbia - Eighth Grade

Explicit Stratum	Total Sampled Ineligible			Non- Participating		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Schools
Serbia	150	0	149	0	0	1
Total	150	0	149	0	0	1

B.44 Singapore

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- No school-level exclusions

Sample Design

• All schools in the sample

Exhibit B.44.1 Allocation of School Sample in Singapore – Fourth Grade

Explicit Stratum	Total Sampled	Ineligible	1	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Singapore	182	0	182	0	0	0
Total	182	0	182	0	0	0

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- No school-level exclusions

Sample Design

• All schools in the sample

Exhibit B.44.2 Allocation of School Sample in Singapore - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Participating Schoo	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Singapore	164	0	164	0	0	0
Total	164	0	164	0	0	0

B.45 Slovak Republic

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools

- Explicit stratification by school type (gymnasium, basic) and language (Slovak, Hungarian), for a total of four explicit strata
- Implicit stratification by regions (eight regions), for a total of 25 implicit strata
- The school measure of size was based on the number of classes in the schools

Exhibit B.45.1 Allocation of School Sample in the Slovak Republic - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible Schools	1	Non-		
	Schools		Sampled	1st Replacement	2nd Replacement	Participating Schools
Gymnasium – Slovak	30	0	26	3	1	0
Gymnasium – Hungarian	10	1	9	0	0	0
Basic – Slovak	120	0	116	4	0	0
Basic – Hungarian	20	0	19	1	0	0
Total	180	1	170	8	1	0

B.46 Slovenia

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, Italian schools, and very small schools (less than eight eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by school structure (new system in both Fourth Grade & 2, new system in Fourth Grade, new system in Eighth Grade, old system) and school size (very large, large) in the "Old System" stratum, for a total of five explicit strata
- Implicit stratification by region (eight regions), for a total of 29 implicit strata
- All schools sampled in the "New System In Both Fourth Grade and 2",
 "New System In Fourth Grade", "New System In Eighth Grade", and
 "Old System Very Large" strata
- Same schools sampled in Fourth Grade and Eighth Grade

Exhibit B.46.1 Allocation of School Sample in Slovenia - Fourth Grade

Explicit Stratum	Total Sampled Schools	Ineligible Schools	1	Non-		
			Sampled	1st Replacement	2nd Replacement	Participating Schools
New System In Both Fourth Grade & 2	16	0	16	0	0	0
New System in Fourth Grade	23	0	21	0	0	2
New System In Eighth Grade	15	0	15	0	0	0
Old System – Very Large	3	0	3	0	0	0
Old System - Large	120	0	114	5	0	1
Total	177	0	169	5	0	3

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools, Italian schools, and very small schools (less than eight eligible students in both Fourth Grade and Eighth Grade)

- Explicit stratification by school structure (new system in both Fourth Grade & 2, new system in Fourth Grade, new system in Eighth Grade, old system) and school size (very large, large) in the "Old System" stratum, for a total of five explicit strata
- Implicit stratification by region (eight regions), for a total of 29 implicit strata
- All schools sampled in the "New System In Both Fourth Grade and 2",
 "New System In Fourth Grade", "New System In Eighth Grade", and
 "Old System Very Large" strata
- Same schools sampled in Fourth Grade and Eighth Grade

Exhibit B.46.2 Allocation of School Sample in Slovenia - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	ĺ	Participating Schoo	cipating Schools	
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
New System In Both Fourth Grade & 2	16	0	16	0	0	0
New System In Fourth Grade	23	0	21	0	0	2
New System In Eighth Grade	15	0	15	0	0	0
Old System – Very Large	3	0	3	0	0	0
Old System - Large	120	0	114	5	0	1
Total	177	0	169	5	0	3

B.47 South Africa

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of special education schools and very small schools (less than 12 eligible students)

- Explicit stratification by province, for a total of nine explicit strata
- Implicit stratification by language (English, Afrikaans, mixed), for a total of 19 implicit strata

Exhibit B.47.1 Allocation of School Sample in South Africa - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	I	ols	Non-	
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Eastern Cape	33	0	29	3	1	0
Free State	25	0	24	1	0	0
Gauteng	27	0	20	3	0	4
Kwazulu Natal	48	0	43	2	1	2
Mpumalanga	25	0	23	1	0	1
North West	25	0	25	0	0	0
Northern Cape	25	0	24	1	0	0
Northern Province	32	0	31	0	0	1
Western Cape	25	0	22	1	0	2
Total	265	0	241	12	2	10

B.48 Sweden

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of very small schools (less than seven eligible students)

- No explicit stratification
- No implicit stratification

Exhibit B.48.1 Allocation of School Sample in Sweden – Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Sweden	160	0	155	4	0	1
Total	160	0	155	4	0	1

B.49 Syrian, Arab Republic

EIGHTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of small classes (small schools) because of changes in the school system

Sample Design

- Explicit stratification by urbanization (rural, urban), for a total of two explicit strata
- Implicit stratification by school type (public, private, UNRWA) and gender (girls, boys, mixed), for a total of 16 implicit strata

Exhibit B.49.1 Allocation of School Sample in Syrian, Arab Republic - Eighth Grade

Explicit Stratum	Total Sampled	Ineligible	I	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Rural	73	0	61	7	1	4
Urban	77	0	60	4	1	12
Total	150	0	121	11	2	16

B.50 Tunisia

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of private schools, special education schools, and very small schools (less than eight eligible students)

- No explicit stratification
- Implicit stratification by school type (communal, non-communal) and governates (24 provinces), for a total of 46 implicit strata

Exhibit B.50.1 Allocation of School Sample in Tunisia - Fourth Grade

Explicit Stratum	E d'Artheren	Total Sampled	Ineligible	ı	Non-	
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Tunisia	150	0	150	0	0	0
Total	150	0	150	0	0	0

Coverage and Exclusions

- Coverage is 100%
- School-level exclusions consisted of private schools and special education schools

Sample Design

- No explicit stratification
- Implicit stratification by performance (high, low, unknown) and governates (24 provinces), for a total of 63 implicit strata

Exhibit B.50.2 Allocation of School Sample in Tunisia - Eighth Grade

Explicit Stratum	Fundinia Canadana	Total Sampled	Ineligible	ı	Participating School	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools	
Tunisia	150	0	150	0	0	0	
Total	150	0	150	0	0	0	

B.51 United States

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- There were no reported school-level exclusions

Sample Design

• Explicit stratification by poverty (high, low), for a total of two explicit strata

- Implicit stratification by school type (public, private), region (four regions), urbanization (eight levels), and minority status (above 15%, below 15%), for a total of 192 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.51.1 Allocation of School Sample in the United States- Fourth Grade

Explicit Stratum	Total Sampled	Ineligible	I	Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
High Poverty	120	3	85	1	16	15
Low Poverty	190	7	127	3	16	37
Total	310	10	212	4	32	52

Coverage and Exclusions

- Coverage is 100%
- There were no reported school-level exclusions

- No explicit stratification
- Implicit stratification by school type (public, private), region (four regions), urbanization (eight levels), and minority status (above 15%, below 15%), for a total of 128 implicit strata
- Small schools were sampled with probabilities proportional to size

Exhibit B.51.2 Allocation of School Sample in the United States- Eighth Grade

Explicit Stratum	Total Sampled	Ineligible		Non-		
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
United States	301	5	211	3	18	64
Total	301	5	211	3	18	64

B.52 Yemen

FOURTH GRADE

Coverage and Exclusions

- Coverage is 100%
- School level exclusions consisted of very small schools (less than 13 eligible students)

- Explicit stratification by urbanization (rural, urban), for a total of two explicit strata
- Implicit stratification by school type (public, private, national) and gender (girls, boys, mixed), for a total of 13 implicit strata

Exhibit B.52.1 Allocation of School Sample in Yemen - Fourth Grade

Explicit Stratum		Total Sampled	Participating Schools	Ineligible	ols	Non-
	Schools	Schools	Sampled	1st Replacement	2nd Replacement	Participating Schools
Rural	103	0	103	0	0	0
Urban	47	0	47	0	0	0
Total	150	0	150	0	0	0