

## 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)

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.1.1 Allocation of School Sample in Armenia - Fourth Grade
$\left.\begin{array}{lccccccc}\hline & & & & \text { Participating Schools } & & \begin{array}{c}\text { Non- } \\ \text { Explicit Stratum }\end{array} & \begin{array}{c}\text { Total Sampled } \\ \text { Schools }\end{array} \\ \text { Schools }\end{array}\right]$

## 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)


## 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| Armenia | 150 | 0 | 149 | 0 | 0 | 1 |
| Total | 150 | 0 | 149 | 0 | 0 | 1 |

## B. 2 Australia

## FOURTH 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools |  | Participating Schools |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## 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)


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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


## Sample Design

- 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

|  |  |  | Participating Schools |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Schools |  |  |  |

## 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)


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| Private - Type A (Castilian) | 20 | 0 | 20 | 0 | 0 | 0 |
| Private - Type B (Mixed) | 20 | 0 | 20 | 0 | 0 | 0 |
| $\begin{aligned} & \text { Private - Type D } \\ & \text { (Basque) } \end{aligned}$ | 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 114 | 0 | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Participating <br> Schools |  |
| Academic - Large <br> Schools | 30 | 0 | 13 | 4 | 1 |  |  |
| Professional | 150 | 0 | 21 | 6 | 2 | 1 |  |
| Total |  | 122 | 20 | 6 | 2 |  |  |

## B. 6 Botswana

## EIGHTH GRADE

## Coverage and Exclusions

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

Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | $1^{\text {st }}$ <br> Replacement | $\stackrel{2^{\text {nd }}}{\text { Replacement }}$ |  |
| 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | $1^{\text {st }}$ <br> Replacement | $\begin{gathered} 2^{\text {nd }} \\ \text { Replacement } \end{gathered}$ |  |
| 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 <br> - Municipal | 50 | 0 | 50 | 0 | 0 | 0 |
| All Other Regions Subsidized | 21 | 0 | 21 | 0 | 0 | 0 |
| All Other Regions <br> - 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| Chinese Taipei | 150 | 0 | 150 | 0 | 0 | 0 |
| Total | 150 | 0 | 150 | 0 | 0 | 0 |

## EIGHTH GRADE

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| Chinese Taipei | 150 | 0 | 150 | 0 | 0 | 0 |
| Total | 150 | 0 | 150 | 0 | 0 | 0 |

## B. 10 Cyprus

## FOURTH GRADE

## Coverage and Exclusions

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


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> 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 Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 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 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

|  |  |  | Participating Schools |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Participating <br> 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement | 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

| Total Sampled |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Schools |$\quad$| Ineligible |
| :---: |
| Schools |$\quad$| Participating Schools |
| :---: |

## B. 14 Ghana

## EIGHTH GRADE

## Coverage and Exclusions

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


## Sample Design

- 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 <br> Schools | Schools |  | Participating Schools |  | Non- |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Participating <br> Schools |  |  |  |
| Ghana | 150 | 0 | 150 | 0 | 2nd <br> Replacement | 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 150 | 0 | Sampled | 1st <br> Replacement | 2nd <br> Replacement | 2chools |  |
| Hong Kong, SAR | 150 | 0 | 116 | 14 | 2 | 18 |  |
| Total | 116 | 14 | 2 | 18 |  |  |  |

## EIGHTH GRADE

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 |

## EIGHTH GRADE

## Coverage and Exclusions

- Coverage is $100 \%$
- School-level exclusions consisted of special education schools and very small schools (less than 15 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 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |

## 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

| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> 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


## 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 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd Replacement |  |
| Indonesia | 150 | 0 | 148 | 2 | 0 | 0 |
| Total | 150 | 0 | 148 | 2 | 0 | 0 |

## B. 19 Iran, Islamic Republic of

## FOURTH GRADE

## Coverage and Exclusions

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


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| 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


## Sample Design

- 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

|  | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| Italy | 172 | 1 | 165 | 6 | 0 | 0 |
| Total | 172 | 1 | 165 | 6 | 0 | 0 |

## EIGHTH 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.21.2 Allocation of School Sample in Italy - Eighth Grade

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd Replacement |  |
| Italy | 172 | 1 | 164 | 6 | 1 | 0 |
| Total | 172 | 1 | 164 | 6 | 1 | 0 |

## B. 22 Japan

## FOURTH GRADE

## Coverage and Exclusions

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


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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

|  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Sampled |
| Schools |  |$\quad$| Ineligible |
| :---: |
| Explicit Stratum |

## 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 |

## EIGHTH 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)


## Sample Design

- 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 $\mathcal{E}$ 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 Sampled <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> Replacement | 2nd <br> Replacement |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Lebanon | 160 | 0 | 148 | 4 | 0 | Non- <br> Participating <br> Schools |
| 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

| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> Replacement | Non- <br> Replacement | 2nd <br> Participating <br> Schools |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fourth Grade Only | 42 | 0 | 37 | 3 | 1 | 1 |  |
| Fourth Grade \& Eighth <br> Grade | 118 | 0 | 110 | 2 | 0 | 6 |  |
| Total | 160 | 0 | 147 | 5 | 1 | $\mathbf{1}$ |  |

## 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 <br> Schools | Ineligible <br> Schools |  | Participating Schools |  |  |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement | 2articipating <br> 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| 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)


## Sample Design

- 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 8 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 <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | Non- |
| :---: |

## 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| Fourth Grade Only <br> - Region Stratum 1 | 25 | 0 | 24 | 0 | 0 | 1 |
| Fourth Grade Only <br> - Region Stratum 2 | 25 | 0 | 8 | 0 | 0 | 17 |
| Fourth Grade Only <br> - Region Stratum 3 | 35 | 0 | 34 | 0 | 0 | 1 |
| Fourth Grade Only <br> - Region Stratum 4 | 25 | 0 | 24 | 0 | 0 | 1 |
| Fourth Grade Only <br> - Region Stratum 5 | 30 | 0 | 29 | 0 | 0 | 1 |
| Fourth Grade Only <br> - Region Stratum 6 | 30 | 0 | 28 | 0 | 0 | 2 |
| Fourth Grade Only <br> - Region Stratum 7 | 25 | 0 | 23 | 0 | 0 | 2 |
| Fourth Grade Only <br> - 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 |

## EIGHTH GRADE

## 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 <br> - Region Stratum 2 | 25 | 25 | 0 | 0 | 0 | 0 |
| Eighth Grade Only <br> - Region Stratum 3 | 35 | 35 | 0 | 0 | 0 | 0 |
| Eighth Grade Only <br> - Region Stratum 4 | 25 | 0 | 23 | 0 | 0 | 2 |
| Eighth Grade Only <br> - Region Stratum 5 | 30 | 0 | 26 | 0 | 0 | 4 |
| Eighth Grade Only <br> - Region Stratum 6 | 30 | 0 | 23 | 0 | 0 | 7 |
| Eighth Grade Only <br> - Region Stratum 7 | 25 | 0 | 20 | 0 | 0 | 5 |
| Eighth Grade Only <br> - 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 and Exclusions

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


## Sample Design

- 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 | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st <br> Replacement | 2nd <br> Replacement |  |
| 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 <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maori language <br> instruction | 10 | 0 | 5 | 1 | 0 | 4 |
| English language <br> 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)


## Sample Design

- 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

|  |  |  |  | Participating Schools |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Schools |

## 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)


## Sample Design

- 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 $\mathcal{E}$ 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 <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> Replacement | Non- <br> Replacement | 2narticipating <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fourth Grade Only <br> - Bokmål | 46 | 0 | 42 | 2 | 0 | 2 |

## EIGHTH 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)


## Sample Design

- 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 $\delta$ 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 |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 |

## EIGHTH GRADE

## 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Eighth Grade Only <br> -English | 32 | 1 | 22 | 4 | 3 | 2 |
| Eighth Grade Only <br> - French | 25 | 1 | 23 | 0 | 0 | 1 |
| Fourth \& Eighth Grade <br> - English | 88 | 1 | 75 | 5 | 1 | 6 |
| Fourth \& Eighth Grade <br> - French | 55 | 1 | 51 | 2 | 0 | 1 |
| Total | 200 | 4 | 171 | $\mathbf{1 1}$ | $\mathbf{4}$ | 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)


## Sample Design

- 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

|  |  |  | Participating Schools |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Participating <br> 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 | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| 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)


## 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.37.2 Allocation of School Sample in the Philippines - Eighth Grade

|  |  |  |  | Participating Schools |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Peplacement | 2nd <br> Replacement | Schools |

## 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Sampled | Participating Schools <br> Replacement | 2nd <br> Replacement | Participating <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Fourth Grade Only <br> -English | 65 | 1 | 63 | 0 | 0 | 1 |
| Fourth Grade Only <br> - English \& French | 2 | 0 | 2 | 0 | 0 | 0 |
| Fourth Grade Only <br> - French | 112 | 0 | 111 | 1 | 0 | 0 |
| Fourth \& Eighth Grade <br> - English | 13 | 1 | 12 | 0 | 0 | 0 |
| Fourth \& Eighth Grade <br> - French | 6 | 2 | 4 | 0 | 0 | 0 |
| Total | $\mathbf{1 9 8}$ | $\mathbf{4}$ | $\mathbf{1 9 2}$ | $\mathbf{1}$ | $\mathbf{0}$ | $\mathbf{1}$ |

## EIGHTH 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| Eighth Grade Only - English | 66 | 8 | 58 | 0 | 0 | 0 |
| Eighth Grade Only <br> - 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)


## Sample Design

- 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

|  | Total Sampled |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating 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)

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)

| Explicit Stratum | Total Sampled <br> Schools | Ineligible <br> Schools | Participating Schools |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | | Non- |
| :---: |
| Participating <br> Schools |
| Altay Kr* |

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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools |  | Participating Schools |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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

|  |  |  |  | Participating Schools |  | Non- |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Explicit Stratum | Total Sampled <br> Schools | Schools |  |  |  |  |

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| 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


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools | Sampled | 1st <br> Replacement | 2nd <br> Replacement | Non- <br> Participating <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gymnasium - Slovak | 30 | 0 | 26 | 3 | 1 | 0 |
| Gymnasium | 10 | 1 | 9 | 0 | 0 | 0 |
| -Hungarian | 120 | 0 | 116 | 4 | 0 | 0 |
| Basic - Slovak | 20 | 0 | 19 | 1 | 0 | 0 |
| Basic - Hungarian | $\mathbf{1 8 0}$ | $\mathbf{1}$ | $\mathbf{1 7 0}$ | $\mathbf{8}$ | $\mathbf{1}$ | $\mathbf{0}$ |
| Total |  |  |  |  | 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)


## Sample Design

- 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 | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 <br> Large | 3 | 0 | 3 | 0 | 0 | 0 |
| Old System - Large | 120 | 0 | 114 | 5 | 0 | 1 |
| Total | 177 | 0 | 169 | 5 | 0 | 3 |

## EIGHTH 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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 <br> 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)


## Sample Design

- 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 <br> Schools | Ineligible <br> Schools |  | Sampled | Participating Schools <br> Replacement | 2nd <br> Replacement |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Pastern Cape | 33 | 0 | 29 | 3 | 1 | Non- <br> Schools |
| Free State | 25 | 0 | 24 | 1 | 0 | 0 |
| Gauteng | 27 | 0 | 20 | 3 | 0 | 0 |
| Kwazulu Natal | 48 | 0 | 43 | 2 | 1 | 4 |
| Mpumalanga | 25 | 0 | 23 | 1 | 0 | 2 |
| North West | 25 | 0 | 25 | 0 | 0 | 1 |
| Northern Cape | 25 | 0 | 24 | 1 | 0 | 0 |
| Northern Province | 32 | 0 | 31 | 0 | 0 | 0 |
| Western Cape | 25 | 0 | 22 | 1 | 0 | 1 |
| Total | 255 | 0 | 241 | 12 | 2 | 2 |

## B. 48 Sweden

## EIGHTH GRADE

Coverage and Exclusions

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


## Sample Design

- No explicit stratification
- No implicit stratification

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

| Explicit Stratum | Total Sampled Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd <br> Replacement |  |
| 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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

|  |  |  |  | Participating Schools |  | Non- <br> Explicit Stratum | Total Sampled <br> Schools |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Schools |  |  |  |  |  |

## EIGHTH GRADE

## 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
$\left.\begin{array}{lccccccc}\hline & & & & \text { Participating Schools } & & \begin{array}{c}\text { Non- }\end{array} \\ \text { Explicit Stratum } & \begin{array}{c}\text { Total Sampled } \\ \text { Schools }\end{array} & \text { Schools }\end{array}\right)$

## 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| High Poverty | 120 | 3 | 85 | 1 | 16 | 15 |
| Low Poverty | 190 | 7 | 127 | 3 | 16 | 37 |
| Total | 310 | 10 | 212 | 4 | 32 | 52 |

## EIGHTH GRADE

## Coverage and Exclusions

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


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| 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)


## Sample Design

- 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 Schools | Ineligible Schools | Participating Schools |  |  | NonParticipating Schools |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sampled | 1st Replacement | 2nd Replacement |  |
| Rural | 103 | 0 | 103 | 0 | 0 | 0 |
| Urban | 47 | 0 | 47 | 0 | 0 | 0 |
| Total | 150 | 0 | 150 | 0 | 0 | 0 |

