WEI SURVEY OF PRIMARY SCHOOLS
TECHNICAL REPORT

United Nations
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The UIS is based in Montreal, Canada.

Published in 2009 by:

UNESCO Institute for Statistics
P.O. Box 6128, Succursale Centre-Ville
Montreal, Quebec H3C 3J7
Canada

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ISBN 978-92-9189-082-8
Ref: UIS/TD/09-08

Acknowledgements

This technical manual was co-ordinated and edited by Ursula Itzlinger (UIS). Special appreciation is also given to the various authors, revisers and contributors, including: Aletta Grisay (University of Liège), Sonia Gontero (UIS), Nicola Melki (UIS), Albert Motivans (UIS), John Pacifico (UIS), T. Neville Postlethwaite (University of Hamburg), Owen Power (Statistics Canada), Mamadou Thiam (UIS), Hélène Tran (UIS) and Yanhong Zhang (UIS).

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Chapter 1. Overview

1.1 Survey background

The World Education Indicators (WEI) programme was founded in 1997 as a joint endeavour of the UNESCO Institute for Statistics (UIS) and the Organisation for Economic Co-operation and Development (OECD). It focuses on consolidating basic education statistics, in addition to launching special projects to collect additional data on current and emerging education issues.

The WEI Survey of Primary Schools (WEI-SPS) was established in 2002 to address education quality and equitable distribution among students by producing internationally comparable data on the functioning of schools, teaching, learning conditions, and resources available to support change both in education systems and the communities they serve. In 2005 and 2006, 11 of the 19 countries in the World Education Indicators[1] programme participated in this survey, which collected detailed information on the context, conditions and conduct of primary schools. For some participating countries, the study also presented an opportunity for capacity building to support large-scale national assessments.

The data from this survey has enabled researchers to answer many of the questions surrounding key issues in education (UNESCO-UIS, 2008).

1.2 Survey objectives

The main objective of the WEI-SPS study was to obtain cross-national data on how schools function, including the amount of resources available to them. The participating countries used the data collected to explore questions on school inputs, policies and processes. The countries were also interested in learning the extent to which resources and good practices were equitably distributed among schools.

Specifically, participating countries wanted to address the following questions:

- How do the contexts of primary schools compare across countries? What material and human resources were available, and how did they compare across countries? How equitable is the distribution of these resources within countries?
- What are the basic characteristics of the pupil population served by primary schools in each country? What are the transition patterns at the end of primary school and between the primary and lower secondary levels?
- To what extent do countries vary in the official number of school days per year and the number of lost school days per year? To what extent and at what level is educational leadership provided in schools, both across and within participating countries?
- How much do countries vary in the way that reading and mathematics are taught and in the emphasis placed on different aspects of these two subjects?

[1] The WEI countries include: Argentina, Brazil, Chile, China, Egypt, India, Indonesia, Jamaica, Jordan, Malaysia, Paraguay, Peru, the Philippines, the Russian Federation, Sri Lanka, Thailand, Tunisia, Uruguay and Zimbabwe.

- To what extent is the school climate conducive to acceptable levels of instruction, learning, achievement orientation and discipline across countries? How equitable is the distribution of these conditions within countries?

- How do countries compare in terms of teaching strategies and styles?

1.3 WEI-SPS framework

The focus of the WEI-SPS study was on equality, efficiency and quality of learning provided in primary schools. In order to keep the survey concise, emphasis was placed on indicators that had been described in literature as being significantly associated with school and instructional effectiveness and which could be operationalised on the school and classroom level. Within this selected group of indicators, factors related to malleable conditions at the school and classroom levels (i.e. conditions that can be changed by the actions of the school or an outside agency) were highlighted. These factors can be grouped into three distinct categories:

i. Context: The environment in which individual schools operate. For example, the broader legal and regulatory context in a country determines the role and impact of private schools in the education system.

ii. Input: The material and human resources available to schools. These resources range from budget allocations to the experiences and qualifications of teachers.

iii. Process: The transformation of input into output. Processes take place at several levels, including country or system, school, classroom and the individual learner (Scheerens, 2002a).

1.4 Survey design and administration

Although the countries participating in WEI-SPS were equally interested in a survey of schools at the upper secondary level, it was decided to focus on the primary level in order to yield more comparable data and it was easier to implement. The survey design and framework were created in a collaborative effort by participating countries, the OECD and the UIS.

In 2005 and 2006, the main survey of WEI-SPS was conducted in 11 countries *(see **Table 1**)*. International sampling experts oversaw and approved – and in some cases implemented – the national sampling plans. Countries could sample more schools to yield more accurate results but had to select at least 400 schools as a baseline. In many countries, a larger sample was used to obtain more information on areas of national interest, most notably by region, province or school sector (i.e. public or private schools).

Table 1. WEI-SPS participating countries

Country	Schools eligible	Schools sampled
Argentina	16,900	1,189
Brazil	127,441	646
Chile	6,103	668
India[2]	6,103	668
Malaysia	6,796	742
Paraguay	5,537	812
Peru	5,537	812
Philippines	5,537	812
Sri Lanka	7,255	612
Tunisia	3,758	470
Uruguay	1,453	437

In several countries, more than one language of instruction is used in primary grades, either throughout a country or even within a school. The questionnaires had to be delivered in a language in which school heads and teachers would be proficient (e.g. the language used in the teacher's training). This language did not necessarily have to match the language in which the students are taught. An international English version of the questionnaire was translated into a total of eight languages, Spanish being the most common among participating countries. To ensure international comparability, translation verification of all instruments was performed in each language.

International standardisation of data collection and data entry is a further means to ensure comparable data. The geographic, cultural and economic diversity found in the group of WEI-SPS countries presented a challenge in creating international standards for operational issues. As a result, operational standards were detailed in a series of manuals, and software tools were implemented for standardised and quality-controlled data entry.

The school head, all Grade 4 teachers of mathematics/arithmetic and reading, and national curriculum experts were defined as respondents. In most countries, teachers at the primary level tend to be home-class teachers who teach the whole class in both subjects. The survey was administered near the end of the school year in all countries, since questions sought information on student backgrounds and perceived academic performances.

Four questionnaires were developed to be completed in less than one hour. Surveyors distributed and collected materials, in addition to ensuring that data were correct and complete. One or more national curriculum expert per country completed the curriculum questionnaire.

With support from the UIS, data were entered and cleaned in the participating countries. Subsequently, a database was finalised containing only internationally comparable data. Indices and composite variables were created based on research literature and data analysis, conducted at the UIS and featured in an international report (UNESCO-UIS, 2008).

[2] India's target population was limited to the states of Assam, Madhya Pradesh, Rajasthan, and Tamil Nadu.

1.5 Survey management

The survey was designed and implemented jointly by the OECD and the UIS, aided by a network of consultants and international experts. Each participating country assigned a National Project Manager (NPM), who was responsible for the implementation of the survey at the country level and liaised with the international platform. A Steering Committee, consisting of WEI country representatives, international experts and officials from the OECD and the UIS *(see **Appendix I**),* was established early in the process to guide survey development, priority findings and methodological discussions, in addition to approving the survey design.

The OECD and the UIS managed the implementation of the survey at the international level. The OECD team was in charge of framework and instrument development, as well as contracting international experts to aid in this effort. The UIS team provided operational guidelines and led the sampling, which also entailed contracting international school sampling experts. The UIS compiled the international database, led the data analysis and reporting, and conducted workshops for data analysis. All international survey costs and quality control costs were born by the OECD and the UIS, with financial support from the World Bank. The NPMs were responsible for national implementation, including finding research questions of national interest, defining the national sample together with the international sampling experts, budgeting, and national reporting.

1.6 Organization of the report

In order to judge the quality, accuracy and reliability of a survey, readers require access to background information. Data users need details on the meaning of data, what weights are available and limitations to the data. The goal of this report is to describe the technical aspects of the survey. Analytical findings are not included in this report. They can be found in the UIS report, *A View Inside Primary Schools: A World Education Indicators (WEI) Cross-National Study* (UNESCO-UIS, 2008).

Chapter 2 describes the framework of the survey and the process of instrument development. Chapter 3 explains the necessity of quality control in translating international questionnaires. It describes the processes to which all translated texts were subjected, in order to ensure that standardised instruments were available in the appropriate national languages.

Chapter 4 gives an introduction to the sampling issues of WEI-SPS. It lists the definitions for the target population, stratification, non-response and response rate standards. Chapter 5 describes in detail the samples desired and achieved in the participating countries, including exclusion rates. It shows the calculation of weights: school weights, teacher weights, student-based school and teacher weights, adjustment for non-response, and benchmark-adjustment for the weights.

Chapter 6 deals with the administration of the survey, as well as the guidelines and procedures put in place to ensure the production of internationally comparable high-quality data. Chapter 7 presents issues surrounding data entry, data cleaning and quality control at the national and international levels.

The Appendices contain details and examples to help data users better understand and utilise the data.

Chapter 2. Questionnaire development

Proper schooling is a crucial element in any effort to improve the quality of learning. What makes some schools or school systems more successful than others in equipping their students with an equitable education of high quality? How do primary schools in WEI countries compare, both across and within countries? These are some of the questions that sparked the creation of the WEI-SPS.

The development of the WEI-SPS questionnaires was headed by the OECD, with support from the UIS and assistance from experts in the fields of education and education research. The experiences of diverse organizations and projects were taken into account *(see Section 2.2).* Numerous consultations were needed during the development phase and for selection of questions to address. In June 2003, participating countries rated potential indicators in terms of priority and a framework for the survey was established. After further discussions at WEI conferences and several meetings of the SPS Steering Committee, the framework and the questionnaires were finalized.

The final questionnaires in English were distributed to countries for translation and to initiate the pilot study, which took place in the second half of 2004. After a final priority rating of certain questions in November 2004 and an analysis review in December 2004, the main survey questionnaires were developed (OECD-UIS 2005b).

2.1 Analytical framework and indicators

At the core of WEI-SPS lies the analytical framework. Based on previous research on school effectiveness (which is summarised in **Figure 1**), it defines the context of the survey and the research questions used. The framework also serves as the scaffold for the questionnaire development.

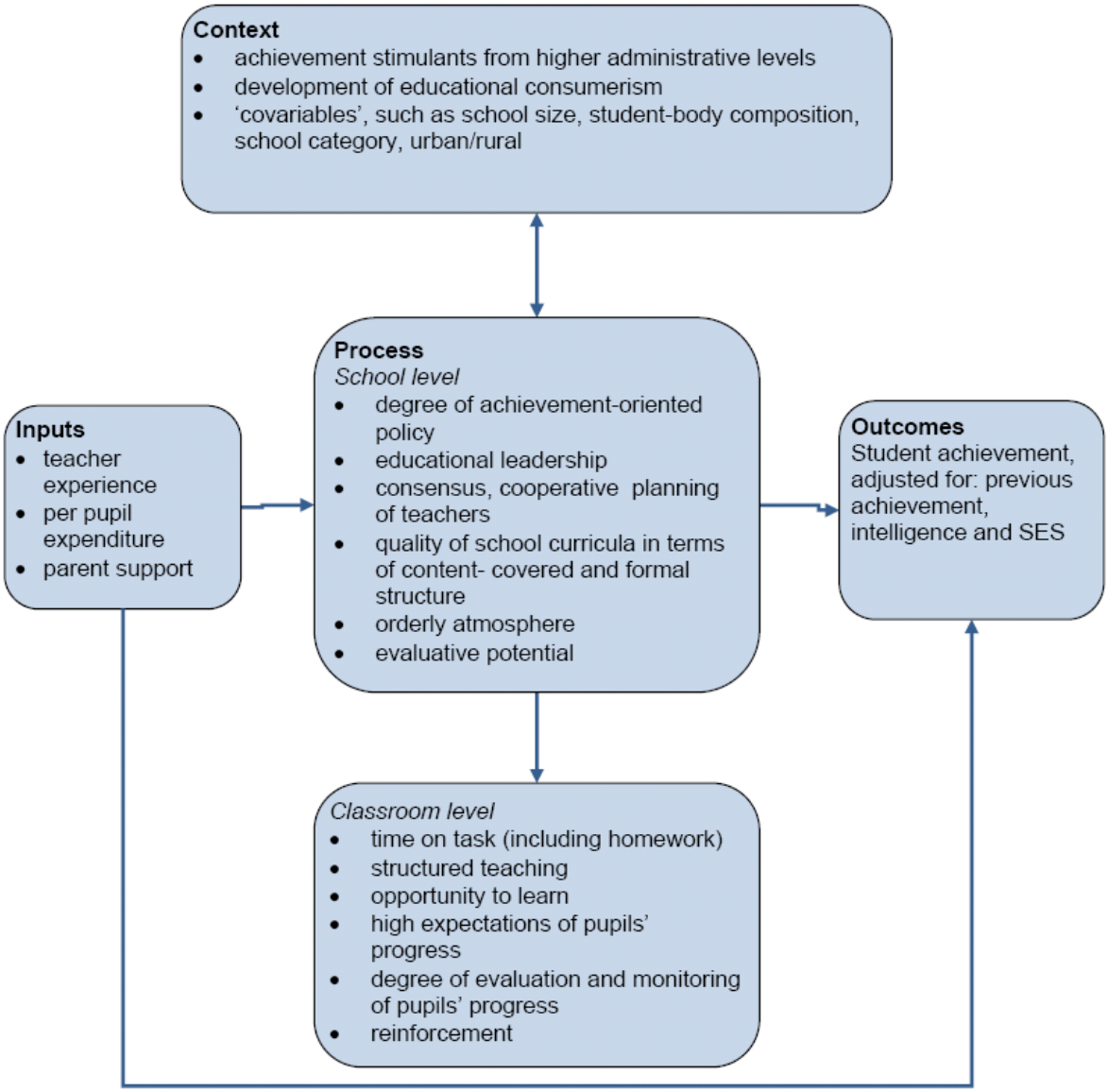
The framework outlines the conceptual basis for the selection of indicators on the functioning of schools, in particular concerning school effectiveness and equity (Scheerens, 2003). The choice of indicators took the following points into consideration:

- The purpose of the proposed SPS was to provide internationally comparable indicators on the quality and equity of schooling among and within the WEI countries;

- These indicators should be considered relevant to audiences at various levels of national systems: government officials, regional or provincial officers and school directors. Feeding back information in a format that was considered useful to each of these audiences was a major objective of the survey; and

- The school survey encouraged participating countries to add national questions, enhancing the relevance for country-specific needs. The possibility of using the survey as a more permanent instrument of educational monitoring and information provision was taken into consideration.

Figure 1. Summary of the research findings on school effectiveness



Source: Scheerens, 2002a.

Indicators at school level – School Questionnaire

The *School Questionnaire* was completed by the school head. Most questions refer to the entire primary school, including all primary grades. A few questions (e.g. instructional time in Grade 4 classes) were intended for a specific grade only. The indicators at school level for the *School Questionnaire* are:

- School material resources
- Availability and condition of school resources – school facilities
  - ⇒ Availability of school resources – school materials
  - ⇒ Adequacy of school resources – principal's perceptions of shortages in school material resources
- School human resources
  - ⇒ School human resources – staff
  - ⇒ School size and class size
  - ⇒ Staff qualification
  - ⇒ Staff stability
  - ⇒ Permanent and temporary teachers, support staff
- Educational leadership
  - ⇒ Principal's workload
  - ⇒ Principal's activities
  - ⇒ Educational leadership (principal's management rating scale)
- Curriculum alignment
  - ⇒ Curriculum alignment
  - ⇒ Instructional time
  - ⇒ Instructional time – days lost
- Staff consensus and cooperation
  - ⇒ Frequency of staff meetings
  - ⇒ School staff co-operation – practices
  - ⇒ School staff co-operation – official policy
  - ⇒ Principal's relations with teachers
  - ⇒ Staff Consensus
- Parental involvement
  - ⇒ Parents and community contributions
  - ⇒ School - parent relations
- School autonomy
  - ⇒ School autonomy - participation in school decision making
- Professional development of school head and staff
  - ⇒ Staff professional development
  - ⇒ Principal's professional development
  - ⇒ Types of professional development activities
  - ⇒ Proportion of staff involved in several kinds of professional development activities
- School evaluation
  - ⇒ School assessment practices – the different uses intended for student assessments
  - ⇒ School evaluation and teacher appraisal
  - ⇒ School evaluation - inspections

- School climate
  - ⇒ Principal's perception of staff morale
  - ⇒ Principal's perception of students' motivation
  - ⇒ Behavioural problems of students
  - ⇒ School disciplinary climate concerning teacher behaviour
- Ability grouping and school remedial activities
  - ⇒ Ability grouping between classes/streaming
  - ⇒ Ability grouping – grouping within classes
  - ⇒ School remedial – extension activities
- School ambition
  - ⇒ Extra activities
  - ⇒ Principal's locus of control
- Indicators on school background characteristics
  - ⇒ School type – governance
  - ⇒ School type – funding
  - ⇒ Community in which the school is located
  - ⇒ School admission policies
  - ⇒ Distance of the school to public resources and facilities
  - ⇒ Background characteristics of the school's intake
    - general conditions relative to "being disadvantaged"
    - socio-economic status
    - linguistic background and discrepancy between the language spoken at home and at school
- School structure
  - ⇒ Grades taught
  - ⇒ Shifts
  - ⇒ Multi-grade classes
  - ⇒ School sites
- School attrition
- Programme completion

Indicators at classroom level – Teacher Questionnaire

The *Teacher Questionnaire* was completed by mathematics/arithmetic or reading teachers of Grade 4 classes in a school, with respect to their instructional environment in these Grade 4 classes. The indicators at classroom level for the *Teacher Questionnaire* are:

- Instructional resources
  - ⇒ Classroom furniture - tables and chairs
  - ⇒ Classroom equipment
  - ⇒ Textbooks
- Instruction time in basic subjects
  - ⇒ Official instruction time - language
  - ⇒ Official instruction time - arithmetic and mathematics
  - ⇒ Lesson time that is spent on other activities than teaching/learning
- Classroom organisation and management
- Classroom climate
  - ⇒ Supportive and challenging classroom climate
  - ⇒ Teacher's perception of student's motivation

- Student assessment at classroom level
  - ⇒ Assessment methods
  - ⇒ Relative importance of different assessment methods
  - ⇒ Use of student assessment
- Active learning
  - ⇒ Active teaching in reading
  - ⇒ Active teaching in mathematics
  - ⇒ Reproductive and active learning activities
- Differentiation
  - ⇒ Internal differentiation in instructional approach and grouping
- Teacher professional satisfaction
- Structured teaching/scaffolding
- School goals and achievement expectations
- Indicators on teacher background characteristics and attitudes
  - ⇒ Descriptive background characteristics
    - – Gender
    - – Age
    - – Experience as a teacher
    - – Level of education
    - – In-service training
  - ⇒ Perception of working conditions
    - – Self-perception in terms of status
  - ⇒ Class size, number of shifts.

Indicators at classroom level – Annex to the Teacher Questionnaire (OTL)

The *Opportunity to Learn (OTL) Questionnaire* was completed by the same teachers who took the *Teacher Questionnaire*. Subject teachers answered only for the subject they were teaching in Grade 4. In all WEI-SPS countries except in Malaysia, it is unusual to have subject teachers at the primary level; most teachers are home class teachers who teach all or most subjects. The indicators at classroom level for the *Annex to the Teacher Questionnaire* are:

- Opportunity to learn in reading and mathematics/arithmetic
  - ⇒ the level of difficulty of the reading materials that classroom teachers consider appropriate for use in an “average” Grade 4 class
  - ⇒ the types of reading materials used most often
  - ⇒ the nature of the reading questions and reading activities that are typically used for Grade 4 students
  - ⇒ the level of difficulty of the Mathematics activities that classroom teachers consider appropriate for use in an “average” Grade 4 class
  - ⇒ the nature of the Mathematics tasks that are typically used for Grade 4 students.

Indicators at system level – National Project Manager (NPM) Questionnaire (or Curriculum Questionnaire)

The *NPM Questionnaire* was completed by national curriculum experts. They were asked questions on the national education system. Indicators at the system level are:

- Opportunity to learn in reading and mathematics/arithmetic (same as in the *Annex to the Teacher Questionnaire*)
- Education system indicators
- The teaching force
- Current reforms affecting Grade 4 education, if applicable.

It should be noted that not all indicators could be included in the main WEI report (UNESCO-UIS, 2008). However, the international WEI-SPS database includes the data necessary for analysis of these indicators.

2.2 Piloting the questionnaires

Following the assessment of the relevance and policy priority ranking of the indicators in the WEI participanting countries, pilot questionnaires were constructed using established and tested questions as much as possible. The pilot surveys used questions drawn from international and national surveys, notably from those of the International Association for the Evaluation of Educational Achievement (IEA), the Organisation for Economic Co-operation and Development (OECD), the School Achievement Indicators Program (Canada), the Schools and Staffing Survey (United States), the Southern and Eastern Consortium for Monitoring of Educational Quality (SACMEQ), *Zelfevaluatie basisonderwijs – ZEBO* (Self-Evaluation in Primary Education, the Netherlands), the Victorian Department of Education (Australia) and the Assessment Research Centre (Australia). If no adequate question could be found, a questionnaire design team drafted the questions specifically for the survey.

In November 2003, four questionnaires were sent to countries for review:

- *School Questionnaire* to be completed by the school head;
- *Teacher Questionnaire* to be completed by all teachers in Grade 4 of the surveyed school who teach reading and/or mathematics/arithmetic at this school;
- *Annex to the Teacher Questionnaire (Opportunity To Learn-Questionnaire, OTL)* to be completed by the same teacher as the Teacher Questionnaire; and
- *National Project Manager Questionnaire (Curriculum Questionnaire)* to be completed by curriculum experts in the participating countries.

In Argentina, Chile, Malaysia, Peru, the Philippines and Tunisia, the questionnaires were reviewed by an expert panel. In Brazil, they were administered to some schools and a qualitative pre-pilot test was performed. The results were incorporated into subsequent versions of the questionnaires, which were finalised in early 2004.

Between June and December 2004, the questionnaires were piloted in 11 countries. The number of samples per country are presented in **Table 2**.

Table 2. Pilot samples and case numbers

Country	No. of school questionnaires	No. of teacher questionnaires	OTL version A	OTL version B
Brazil	40	85	40	46
Chile	19	26	13	11
India	120	137	-	136
Indonesia	193	174	96	97
Malaysia	76	247	139	98
Paraguay	43	71	43	28
Peru	29	30	-	30
Philippines	20	62	26	36
Sri Lanka	35	60	58	58
Tunisia	11	39	-	-
Uruguay	23	39	21	21
Total	**609**	**970**	**436**	**561**

Due to scheduling problems, Argentina did not participate in the pilot but tested the operations using the main survey questionnaires in spring 2005 in six schools. Due to financial problems, Indonesia dropped out of the survey after the pilot. Tunisia had decided earlier not to administer the OTL questionnaire in order to keep the survey time as short as possible. India and Peru administered version B of the OTL questionnaire only in the pilot.

In the main survey, only version B of the OTL questionnaire was used internationally, as this version showed more variation across countries. Items where the modal grade was not Grade 4 for all countries were replaced with items from version A of the OTL questionnaire (OECD/UIS 2005c).

The *NPM (Curriculum) Questionnaire* was piloted in Brazil, India, Paraguay and Uruguay. In Brazil and India, it was administered to the curriculum experts at the provincial or regional levels since the curricula in both countries varied by region/state or even municipality. In the main survey, the *NPM Questionnaire* was administered in all countries. In most countries, it was administered to a group of curriculum experts, who completed one questionnaire together. In countries with federal structures, this proved to be difficult, as the curriculum experts of the respective regions reported that their curriculum differed substantially. In the case of Brazil and India, the resulting "national intended curriculum" is artificial even though the data of the pilot showed overlaps for a number of curriculum issues. In India, the *Curriculum Questionnaire* was administered to curriculum experts of the participating states only *(see Chapters 4 and 5 for details on participating states).*

2.3 Finalizing the main survey questionnaires

Upon receiving all data, an international pilot database was created and analysis commenced. This process included analysing the feasibility and validity of questionnaire items across countries and verifying that the material was cross-culturally appropriate. For example, when National Programme Managers validated the questionnaires prior to piloting, a few questions had to be omitted as they were deemed inappropriate in some participating countries. This affected mostly OTL questionnaire items.

Results from the pilot indicated that the questionnaires were too long, especially the *School Questionnaire*. While reviewing the data, problems with some of the questions were also detected. Due to time constraints, restructuring and further piloting was not an option and, as such, the questions that would have required major changes or re-piloting were dropped from the questionnaires. Wherever possible, the priority ranking of items were taken into account when dropping questions. In the *School Questionnaire*, some questions were made optional. They were moved to the end of the questionnaire and could be administered by those countries that had deemed them as high priority (OECD/UIS 2005a, 2005b and 2005c).

In addition, minor changes were implemented to clarify some questions. In some cases, answer categories were added or collapsed to improve future analysis if the pilot results indicated insufficient discrimination between answers from two categories, or if there were too few respondents to choose a particular category.

Questions regarding national school systems and teaching forces were deleted from the *NPM Questionnaire*, as there were other sources where the data could be found, notably the UIS and IBE databases.

Results from processing the pilot data also triggered further amendments to the main survey questionnaires. For example, questions that generated a high number of missing data or outliers, or failed some of the logical tests, were assigned for further review by the questionnaire design group. In addition, all open-ended questions were deleted or replaced with categorical questions.

When data were of inconsistent or implausible values, they were not cleaned automatically. In the pilot, these cases were only listed and country NPMs were presented with the list of inconsistencies. These lists helped identify problematic questions, which were then reviewed and eliminated or rephrased.

Chapter 3. Translation procedures

Survey instruments were developed in English and later translated by WEI-SPS participating countries into their main language(s) of instruction. The instruments were translated into a total of eight languages and adapted in English for one country. Out of the 11 participating countries, one administered the survey in three languages while another administered it in two. The most common language in which the survey was administered was Spanish (five countries), and the second most common language was Tamil (two countries). Details on the languages used can be found in **Table 3**. Countries adapted and translated the instruments following the guidelines compiled in *Instructions for Translation/Adaptation of the WEI-SPS Main Survey Questionnaires (OECD/UIS/WEI/SPS(2005)9)*.

Table 3. Language used for the SPS survey

Country	Languages
Argentina	Spanish
Brazil	Portuguese
Chile	Spanish
India	Assamese, Hindi, Tamil
Malaysia	Bahasa Malaysia
Paraguay	Spanish
Peru	Spanish
Philippines	English
Sri Lanka	Sinhala, Tamil
Tunisia	Arabic
Uruguay	Spanish

The translated survey instruments were thoroughly reviewed and verified before being used in the field for administration. The UIS oversaw and coordinated the process between NPMs and verifiers to ensure international comparability of the instruments. The Institute also used additional verifiers from a linguistic quality control firm and its own staff to review each translation.

The verification process was iterative until final approval by the UIS. First, the NPMs submitted their documents to the UIS. The UIS reviewed the documents and commented on them in the National Adaptation and Translation (NAT) form *(see **Appendix II**)*. The verifiers would then review the instruments, document any deviations from the international versions in the NAT forms and answer queries from the UIS that were inserted in the NAT forms. The UIS again would review the documents before sending the questionnaires, along with the NAT forms, back to the NPM for corrections or explanations. The verification process continued until the UIS provided the approval to the NPM to print and administer the documents.

3.1 Translations

The OECD designed the translation verification procedure and the translation and adaptation manual with the associated forms, based on the procedures and materials used for PISA questionnaires. The UIS was responsible for reviewing and approving national adaptations and verifying the international comparability of the instruments. Countries were instructed to submit translations and adaptations to the UIS for approval before the survey was administered and, therefore, before the questionnaires were printed for administration.

The objectives of the translation and adaptation guidelines were to:

- Describe procedures to translate and adapt WEI-SPS questionnaires into national language(s) and national cultural context;
- Describe acceptable modifications that could be made to the instruments as part of the translation/adaptation process; and
- Document procedures for submitting the instruments for adaptations approval and for international verification of the translation.

Instruments to be translated

- *School Questionnaire*
- *Grade 4 Teacher Questionnaire*
- Annex on Reading and Mathematics activities (commonly known as the *Grade 4 Opportunity to Learn (OTL) Questionnaire*)
- School Tracking Form
- Teacher Tracking Form
- *National Project Manager (NPM) Questionnaire*, to be completed by the National Project Manager, with help from person(s) responsible for the primary school curriculum. Translation of this questionnaire was optional, depending on the individual who completed it for the participating country.

National languages

In countries with one predominant language which is used throughout the education system, only a single national version of the instruments was needed.

In multilingual countries, there was a need to develop national versions of the *School, Teacher* and *OTL Questionnaires* for each language used for instruction in the sampled schools, unless a more effective strategy could be applied. The general principle to identify the national languages was that teachers and school heads should complete the WEI-SPS questionnaires in a language of which they had perfect command, that is:

- either the language of instruction they usually use in their school; or
- a national language in which they are supposed to be proficient (because they had secondary or tertiary instruction in it, or because all teachers in the country or region need to sit advanced examinations in that language to obtain a teacher certification).

Paraguay had initially identified Spanish and Guarani as their national languages. However, none of the 100 schools with Guarani as the main language of instruction fell into the sample group.

In Malaysia, there are two categories of primary schools: the national and the national-type schools. National schools use Bahasa Malaysia as the medium of instruction. National-type schools use Mandarin or Tamil. For the survey, Malaysia developed the instruments only in one language (Bahasa Malaysia) to lower costs. As per the UIS translation guidelines, countries could choose the language in which respondents are proficient rather than the language of instruction. In this case, teachers and school heads are deemed to have perfect command of Bahasa Malaysia as it is the national language in which they were trained in secondary education and teacher colleges.

Common languages across WEI countries

A number of WEI countries have common official languages (i.e. Spanish for Argentina, Chile, Paraguay, Peru and Uruguay; Tamil for India and Sri Lanka).

"Standard" Spanish versions of the questionnaires and glossary were translated by the UNESCO Regional Office for Latin America and the Caribbean (OREALC). They were then reviewed by two UIS staff members for consistency with the original English source version. Each NPM could then apply their own national adaptations to this version in order to obtain the "customized" Spanish version for their country. This process was designed to reduce translation costs, while increasing both the quality and comparability of the final versions.

No standard version of the questionnaires in Tamil was produced as each country produced its own national version.

Single language versions

The recommended procedure entailed having each questionnaire translated from English to the target language by two independent translators. The two translations were then reconciled by a third person and reviewed for equivalence against the English source version.

The use of a glossary was strongly recommended to ensure the best possible adaptations to every country's specific terminology. The generic glossary that the UIS provided had been updated to include findings from the pilot study; nevertheless, it was not meant to be exhaustive for every national system.

Translation team

Translators

The NPM was requested to only use translators who have professional experience in translating from English into the target language(s). These translators should have:

- An excellent knowledge of English;
- An excellent knowledge of the target language;
- Experience in their country and cultural context;
- If possible, some familiarity in translating survey materials;
- Familiarity with educational issues; and
- For the OTL: familiarity with specific terms, namely in mathematics (e.g. 'cube' or 'chance'). When in doubt, they consulted with subject teachers when translating these terms.

If more than one person was involved in translating, it was particularly important that they liaise in order to ensure consistency of the translation within and across all questionnaires.

National research staff

To solve issues related to national adaptations, translators were instructed to work in close collaboration with the NPM or the national research staff member who was responsible for the development of the national version(s). This person was responsible, in particular, for the following tasks:

i. Review the glossary and adapt it to the national education system. This had to be repeated for every target language;

ii. Provide the translator(s) with all documentation and materials needed for the translation:
   – questionnaires, tracking forms, data entry manual and other materials to be translated
   – WEI-SPS guidelines for translators
   – glossary
   – NAT forms.

iii. Send the translated materials to the UIS for international verification of equivalence against the source version;

iv. Incorporate in the materials possible edits which were suggested by the international verifier; and

v. Ensure that the questionnaires were reviewed and received final endorsement by the national authorities or National Committee before going to print.

National Committee

Involving a National Committee in the process of instrument review/endorsement was an important step for many reasons. First, the experts involved provided useful advice to improve the materials. Second, their prior endorsement was intended to help prevent possible conflicts or criticisms when the study results were released, in the event that any unexpected or serious concerns about the national education system were raised. Third, the Committee members could facilitate the dissemination of the study results by identifying the various constituencies that may be interested in particular issues and advising on the best way to convey the information collected to each of them.

Adaptation procedures

There are many linguistic, cultural and organizational differences across school systems, which needed to be accounted for to ensure that the data were collected in equivalent ways. Adaptations were needed in all national versions, including the English versions of the questionnaires used in the Philippines.

NPMs were instructed to:

- Replace <bracketed terms> in the source versions with equivalent national terms;

- Refrain from dropping questions, response categories and completion directives from the questionnaire, unless it could be clearly proven that keeping these would have negatively affected responses in the country;
- Abstain from adding notes or examples to questions unless it could be clearly proven that questions would not have been answered without them (however, this could affect international comparability);
- Limit the number of national questions as this could affect response rates;
- Keep additions separate from international questions; and
- Fully document adaptations, deletions and additions in the NAT forms.

It should be noted that India submitted an English version of its adapted questionnaires for review by the UIS before translating them into three other languages (Assamese, Hindi and Tamil).

3.2 Verification

National versions of the questionnaires were submitted by NPMs to the UIS for verification of:

i. the quality of the translation. Verifiers checked for possible mistranslations or lack of linguistic equivalence against the English source versions, included their suggested edits in the national version of the questionnaires and added notes about any undocumented deviations in the NATs provided by the NPMs; and

ii. the appropriateness of national adaptations made by English-speaking UIS researchers who used the NAT forms to check whether the national adaptations were acceptable, asked for additional explanations from the NPM or from the linguistic verifier in case of doubtful changes, and finally approved or disapproved each adaptation.

Depending on the language, the verification of the translation quality was performed either by a verifier from a linguistics quality control firm or a verifier at the UIS. Comments were reviewed by the UIS and then sent back to the NPMs for corrections or for further clarifications. Corrected national versions were then sent again to the UIS for the second verification step. This process was iterative until final approval was given by the UIS for printing all national documents.

Submission of translated material for central verification

All national versions used for the main survey were submitted in MS Word format to the UIS, together with a copy of the NAT forms for verification of their equivalence against the international source version of the instruments. Countries also submitted the glossary of terms they prepared to assist their translators.

All countries participating in the SPS data collection submitted national versions of instruments for translation verification.

Translation verification process

The appointed international verifiers had a native command of the target language and fluent command of English. They received training to help them perform their task, which consisted of:

- Verifying the linguistic correctness of the translated materials, their adherence to the WEI-SPS Translation Guidelines and their equivalence against the English source version;
- Checking whether all approved adaptations were consistently incorporated in the materials;
- Ensuring that no undocumented or unapproved adaptations were included; and
- Checking whether possible last-minute changes or errata circulated by the UIS/OECD were correctly implemented.

Verifiers were provided with general information about the study. They also received materials describing the translation procedures used by the national centres, cultural adaptations deemed acceptable, and detailed instructions for reviewing the instruments. The verification guidelines emphasized the importance of maintaining the meaning and format of each question, while allowing for cultural adaptations as needed. Items in the OTL also had to maintain their difficulty level and could only be adapted with regards to cultural issues (e.g. “cake” instead of “pizza”).

Each verifier received:

- an international version of each questionnaire
- national version of each questionnaire
- NAT forms
- SPS glossary with corresponding terms in the target language
- translated School Tracking Form
- translated Teacher Tracking Form
- guidelines for translation verification.

Possible edits suggested by the verifiers were entered in “track changes” mode in the electronic Word files provided by the NPM. This helped the national team perform the final revision of their materials (the NPM was able to “accept” or “reject” each particular correction proposed by the verifier, without having to create a new entry in the file).

When undocumented adaptations were found in the materials, the verifier was instructed to note them in the NAT form and return the form to the person in charge of adaptations approval at the UIS, who then informed the NPM on whether the new adaptations were approved or not.

Before the final approval of the documents, NPMs were asked to submit a PDF version of the documents for final review by the verifiers. This last review was principally done to check the overall appearance of the document.

Three countries (Brazil, Paraguay and the Philippines) did not submit PDF versions, because the conversion from Word to PDF format caused visual inconsistencies in their documents. Therefore, verification of the layout was performed on the Word version and proved to conform to the English source documents. Nevertheless, approval to print was given to these three countries with the condition that their printed versions follow the same layout as the approved Word version. Finally, paper copies of the documents were provided to the UIS as proof that layout was consistent with the English version.

While it was expected that most of the edits suggested by the international verifier would be accepted, it is important to note that, in the case of a disagreement, the NPM retained the final responsibility for the quality of the materials used in the country. Disagreements and national adaptations are detailed in an Access database entitled "National Deviations Database". The records from the database are published in **Appendix VI**.

National Adaptation and Translation (NAT) forms

NAT forms were used by:

- Countries for documenting translations and adaptations. They had to be submitted for verification, together with the questionnaires;
- Verifiers for registering all deviations and suggesting changes in each instrument; and
- The UIS to submit comments and final approval.

The usual processing of NAT forms can be described as the following iterative loop:

- The country submitted the completed NAT forms with the questionnaires to the UIS;
- The UIS verified the adaptations described in the NAT forms then either approved, disapproved or posed questions as to the intent of the verifier;
- The UIS submitted the NAT forms to the verifier;
- The verifier registered all deviations and suggested changes in the NAT forms. The verifier also answered the questions that the UIS included in the NAT forms;
- The verifier returned the NAT forms to the UIS;
- The UIS verified the NAT forms once again to approve, disapprove or pose questions to the country; and
- The UIS returned the NAT forms to the country for corrections or questions.

The iterative loop starts again from the beginning of the list. The loop continues until all corrections are made, a PDF version is reviewed, and final approval granted by the UIS to print the questionnaires.

The iterative loop of translation verification was performed for the main survey only. For the pilot, translation verification was done in one step – the country submitted their questionnaires and a verifier at the UIS reviewed the questionnaires without extensive use of the NAT forms. The main objective of the translation verification during the pilot phase was to detect important deviations that needed to be corrected for the main survey. The countries whose questionnaires were verified during the pilot were: Brazil, Chile, Paraguay, Peru, Tunisia and Uruguay.

For the main survey, most questionnaires and NAT forms were verified using the iterative loop. The countries whose documents were verified iteratively until approval by the UIS are Argentina, Brazil, Chile, India (Hindi and Tamil), Paraguay, Peru, the Philippines, Sri Lanka (Sinhala and Tamil), Tunisia and Uruguay.

The countries whose documents were verified using a two-step method are India (Assamese) and Malaysia (Bahasa Malaysia). Before the start of the verification of the questionnaires, India and Malaysia submitted the glossary to the UIS for approval of the adaptations. For step one, the verifier performed the usual detailed verification and checked for consistency by comparison with the source version. Then, the documents were sent back to the country for corrections and they were asked to provide a PDF format of their questionnaires. For step two, the verifier performed the visual verification of the layout and checked whether major corrections identified in the first step were done. No major uncorrected errors were found by the verifiers in step two. India's Assamese and Malaysia's Bahasa Malaysia documents were not iteratively verified because the two-step method proved to be sufficient to produce an internationally comparable version.

Although most countries submitted their NAT forms together with the questionnaires, a few countries did not submit their NAT forms in time for the translation verification to be performed concurrently with that of their first national version of the questionnaires. These countries include: India (Assamese, Hindi and Tamil) and Sri Lanka (Sinhala and Tamil).

3.3 Conclusion

In their survey activities report, NPMs were asked to report the procedures used for the development of their national version(s). The reports received from the countries, along with the verifiers' reports, revealed that there were no items lost due to translation errors or any other translation issues that might have affected the international comparability of the instruments.

The translation procedures proved to be indispensable in ensuring the high quality of the national versions of the instruments. Its intent was to guarantee that the instruments had been translated precisely and were kept comparable to the original versions. The procedures instituted for translation, adaptations and translation verification provided international comparability of the questionnaires used by the WEI-SPS countries. In addition, the exhaustive process of review and verification ensured the accuracy in the analysis and reporting of the data.

Chapter 4. Sampling design

The international sample design for WEI-SPS is described in this chapter. It includes a description of the procedures developed to ensure that the national samples: i) were selected in a manner consistent with the recommended probability sample design; ii) yielded accurate, weighted survey estimates for which sampling variances were calculable; and iii) were internationally comparable across participating countries.

Each participating country was required to use a probability sample representative of the target population. The UIS provided countries with a manual that described the sample design and selection procedures. It also provided countries with advice on how to best meet the WEI-SPS quality standards and how to develop and implement sound national sampling plans.

As a quality control measure, each participating country submitted to the UIS a set of completed forms that included the intention to participate in the study and provided key information pertaining to the sampling plan. These sampling forms were reviewed by the UIS as part of the approval process. The information requested in each sampling form is presented in **Table 4**.

Table 4. Sampling forms summary

Form	Form name	Information
1	Participation	Confirmation of participation; planned date of main survey; school year; age and birth date rules for entering primary school; grade structure of primary schools.
2	National Desired Target Population	Description of national 'desired' target population; identification of target grade; age and enrolment statistics; specification of extent of national coverage; description of exclusions.
3	National Defined Target Population	Description of national 'defined' target population; specification of school level and within-school exclusions.
4	Stratification	Identification of explicit and implicit stratification variables.
5	Small Schools	Pupil enrolment data regarding prevalence of small schools.
6	Sampling Frame	Description of sampling frame; measure of size (MOS).
7	Excluded Schools	List and description of schools excluded from national defined target population; reason for exclusion; number of pupils in excluded schools.
8	Sampling Frame Statistics	Counts of the number of schools and eligible pupils for each stratum.
9	Sample Allocation	Size of sample allocated to each explicit stratum.
10	School Sample Selection	Sample selection information for each explicit stratum that illustrates how the school sample was selected.
11	Sample Frame (Sample IDs)	Written record of school sampling frame and school sample selection (preferably submitted as a computer file with all relevant information included).
12	School Tracking Form	List of selected schools to keep track of the participation status of all sampled schools and replacement schools.

Note: See **Appendix V** for copies of the sampling forms.

4.1 Target population

The WEI-SPS was designed to collect data pertaining to two types of survey units: schools and teachers. The defining characteristics of these two target populations are described in this section.

Schools

The WEI-SPS international target population of schools was defined as “all schools with pupils enrolled in the fourth grade”. A school was defined as an administrative unit or a school site. All schools of educational sub-systems with pupils in the fourth grade were included in the international target population. Schools that did not contain any pupils in Grade 4 were excluded from the study.

A country’s desired target population may have differed from the international definition for a number of reasons. Countries were permitted to reduce the SPS national coverage for political, organizational or operational grounds. For example, the removal of a geographical region, an educational sub-system or even a language group from the nationally-desired target population was acceptable.

A nationally-desired population may have been further refined to exclude schools due to:

- Geographic inaccessibility (e.g. schools in remote areas).
- Extremely small size, which is subject to the following guidelines:
  – Countries were permitted to exclude extremely small schools provided the resulting exclusions were less than 2% of the total Grade 4 enrolments and the overall set of exclusions did not exceed 5% of the total Grade 4 enrolments.
  – If enrolment in small schools was above 2% but represented less than 10% of all national Grade 4 enrolment, then small schools remained on the school sampling frame and were subject to normal sampling procedures.
  – If the enrolment in small schools exceeded 10%, countries were requested to form an explicit stratum of small schools or use a double-level frame approach if operational costs were an issue.
- Exceptionally different curriculum or school structure.
- Provision of instruction only to pupils that were mentally or functionally disabled (e.g. schools for the blind).

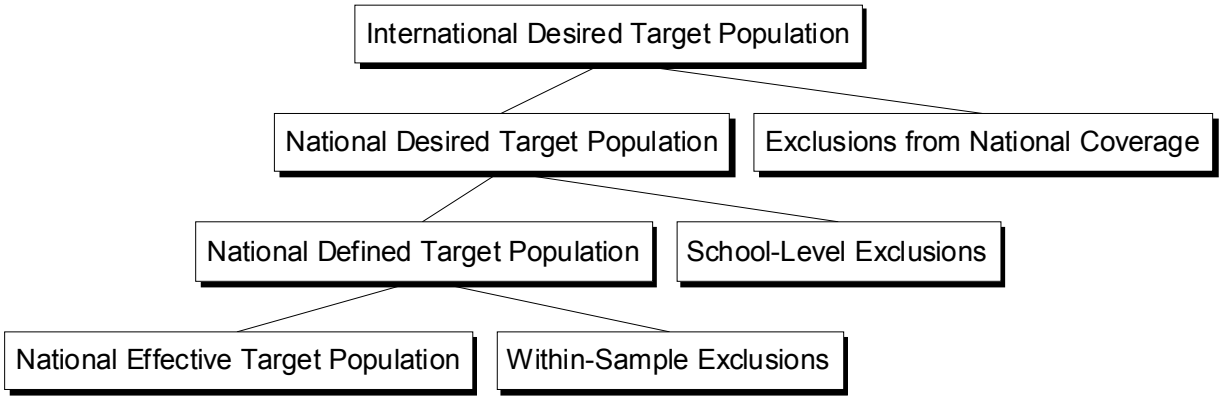
The exclusion of small schools was permissible because of the relatively high cost of data collection compared to the small ratio of teachers to Grade 4 pupils. Each country was instructed to create its own definition of a small school. Thus, the definition of a small school varied from one country to another.

After permissible exclusions, the nationally-defined target population of schools was in place. Each participating country was required to limit school exclusions to a maximum of 5% of the Grade 4 pupil population.

A nationally-defined target population of schools was restricted to, and defined by, the schools included in the available sampling frame. **Figure 2** illustrates the relationships among the levels of target populations and the possible reductions in coverage and exclusions. Ultimately, the *national effective target population* is represented by the sample of participating schools and teachers after all sources of exclusions have been taken into account.

Hence, the SPS weighted estimates are representative of the national effective target population of schools. The only within-sample exclusions were sampled schools that were deemed ineligible during data collection (i.e. schools with no pupils enrolled in the fourth grade).

Figure 2. Sample coverage and exclusions



Source: WEI-SPS Sampling Manual.

Teachers

The WEI-SPS international target population of teachers was defined as "all teachers, within the school target population, who were teaching <language> and/or mathematics/arithmetic to Grade 4 pupils". The language taught refers to the main language of instruction and does not include a foreign language taught as a second language.

The school exclusions described in the previous section also would have resulted in the exclusion of teachers from these excluded schools. In addition, exclusions from the target population may have included within-school exclusions as follows:

- Teachers of classes only attended by mentally disabled pupils: These were pupils who were considered to be mentally disabled in the professional opinion of the school principal or other qualified staff members, or who had been determined to be mentally disabled as a result of a psychological test or evaluation.
- Teachers of classes only attended by functionally disabled pupils: These were pupils with a permanent physical disability that prevented them from undertaking school testing.

A country's desired target population of teachers was restricted to, and defined by, the schools included in the available sampling frame, since only teachers within these schools were available for sampling. Individual teachers could not be excluded, hence the nationally-desired target population became the nationally-defined target population. Therefore, the SPS weighted teacher-based estimates are representative of this nationally-defined target population of teachers.

4.2 Sample design

As mentioned in Chapter 1, the objective of the study was to obtain cross-national data to satisfy information needs related to equity and quality issues in education. The WEI-SPS sampling objective was to use a sample design that would yield reliable survey estimates at the national level for each participating country.

A key sample design objective was to provide reliable pupil-based and school-based estimates for schools and teachers. Thus, there was a need for a sample of schools and a sample of teachers.

The general sample design strategy was determined at a meeting of experts organized by the UIS in January 2003. The document "Sampling Meeting-Final Summary, UIS-OECD-WEI-SCGSVY (2003)" summarized the main issues addressed at the meeting and the conclusions. The document states: "Since both the school and student are units of analysis, it was recommended that countries should use a disproportionate stratified sampling design with schools of different sizes having different probabilities of selection. In addition to being simple and easy to implement by countries, this design has also the advantage of providing a compromise precision on both student- and school-based estimates. The Probability Proportional to Size (PPS) technique would have been proposed if the unit of analysis was generally to be the child".

Schools

The WEI-SPS study employed a stratified systematic sample design. Countries used either a single-stage procedure whereby the sample of schools was selected directly from a list of eligible schools, or a two-stage procedure which first involved the selection of a number of Primary Sampling Units (PSUs), followed by the selection of the sample of schools from the list of eligible schools within the selected PSUs. For each defined stratum, schools were selected with equal probability using a systematic sampling technique.

Teachers

In each selected school, all teachers teaching the main language of Grade 4 instruction and/or mathematics/arithmetic to Grade 4 pupils were included in the national teacher sample.

Sampling precision and sample size

The WEI-SPS sampling precision required that each participating country achieve an effective sample size of at least 400 schools. This sample size ensured that the standard error of the SPS estimates would not be greater than those obtained from a simple random sample of 400 schools. In other words, final sample data were “effective” in achieving the prescribed precision if the country collected completed SPS questionnaires for at least 400 schools.

With an effective sample size of at least 400 schools, an approximate 95% confidence limit for sample estimates of population means and percentages can be expected:

- **Means**: m ± 0.1 s (where "m" is the mean estimate for schools and "s" is its estimated standard deviation);
- **Percentages**: p ± 5% (where "p" is a school percentage estimate).

The WEI-SPS study proposed the selection of schools with a single-stage procedure using a stratified sampling design, which was expected to be as efficient as a simple random sample. For countries that used this recommended approach, the precision criteria would be achieved. However, any country that used a two-stage procedure to select the sample of schools introduced a degree of sampling error due to the clustering of schools into first-stage sampling units. A two-stage procedure was appropriate when there was no comprehensive national list of schools or the costs to collect the data were high due to travel distances. In this case, a larger sample size was required to achieve the precision objective.

The sample of teachers was selected using a stratified multi-stage design. This design which involves the clustering of teachers by selected schools is generally less efficient than a simple random sample. Nevertheless, the selection of teachers from each selected school helped to minimize the data collection costs that would have been associated with a separate teacher sample, and it also enabled the linkage of the school data with the data for teachers and students. Furthermore, the inclusion of all teachers within a selected school resulted in a teacher sample that was considerably greater than 400, thus reducing the sampling error due to the cluster effect.

The student-based estimates were also derived from the stratified multi-stage design for teachers. Similar to the case with teachers, any increase in the sampling error of the student-based survey estimates due to the cluster sample is offset by a sample size that is much larger than the recommended 400 minimum sample size.

Stratification

Stratification was recommended as a key feature of the SPS sample design. It consists of grouping schools, and hence teachers, according to a characteristic or variable prior to the selection of the sample. In general, stratification is an important feature of a sample design for the following reasons:

- it improves the efficiency of the sample design, thus helping to minimize the standard error of the survey estimates;
- it ensures the representation of survey units by the variables considered important with respect to the survey estimation objectives;
- it permits the application of different sample designs, such as disproportionate sample allocations, to specific groups of schools, such as schools with varying numbers of

target population members or schools within geographic areas (e.g. states or provinces);

- it facilitates the production of survey estimates using the explicit stratification variables; and
- it enables the allocation of a sufficient sample to the explicit strata so that a country's precision objective for stratum-level estimates may be possible.

Countries were encouraged to use explicit and implicit stratification in the WEI-SPS.

Explicit stratification

Explicit stratification entails building separate school lists or sampling frames according to a set of explicit characteristics or variables. For example, the explicit stratification of the target population of schools by urbanization required the grouping of schools based on location (urban or rural area). It is possible that different sample designs or simply a constant sample size could then be applied to each school sampling frame to select the sample.

Explicit stratification was recommended as a sample design feature for SPS. In particular, it would apply a disproportionate allocation of the school sample to the explicit strata. For example, in a country where geographic region was an explicit stratification variable, the same number of schools could have been sampled from each region regardless of the relative size of the regions. The regional stratification in this situation would satisfy the objective to produce equally reliable school estimates for each region.

The minimum requirement for SPS explicit stratification was the grouping of target population schools by school size (measured according to the number of Grade 4 pupils), since it could vary considerably within a country or geographic region. It was anticipated that school size would affect the variance of at least some of the SPS school-based estimates. Therefore, the stratification strategy by school size avoided the possibility of including widely varying school sizes within the same stratum, helping to minimize the sampling error of the school-based estimates. It was suggested that as many as five school-size strata be formed so that each stratum comprised approximately 20% of the total Grade 4 pupil enrolment.

Other suggested stratification variables included geographic regions (e.g. states or provinces), urbanization (rural or urban areas), socio-economic status (low, medium or high income), and school type (public or private). Countries could choose which variable to use to define explicit strata or alternatively to implicitly stratify the list of schools. A country with an objective to produce sub-national estimates within a specified margin of error defined explicit strata corresponding to the sub-national domains of interest. Thus, the country was able to allocate its sample to these strata so that its specified precision could be achieved for the desired domain estimates. Of course, each country had to achieve a balance between any objective for sub-national estimates and the cost of achieving such an objective. For example, if survey estimates were required by region, then a country was required to ensure that each region's sample size was large enough to produce reasonably reliable regional estimates. In many cases, a goal to produce regional estimates to satisfy a country's desired precision objective may have resulted in a larger required sample size than was financially feasible.

Implicit stratification

Implicit stratification consists of sorting the school sampling frame within each explicit stratum by a set of variables to ensure a proportional sample allocation of schools across the implicit strata.

Therefore, in addition to stratifying by key variables explicitly, a country's sample design may have included the use of other relevant variables to implicitly stratify the school sampling frame. Since the sample of schools was systematically selected, this implicit stratification resulted in a sample of schools that was proportional to each implicit variable, thus potentially improving the reliability of the survey estimates.

4.3 Sample strategy for non-response

WEI-SPS countries were required to make every effort to have as many of the sampled schools participate as possible. Nonetheless, it was anticipated that some of the sampled schools would not take part in the study. In order to avoid the resulting sample size losses, each sampled school had first and second replacement schools designated in the sample frame. Replacement schools were contacted only when the corresponding sampled schools did not partake. If the first replacement school did not participate, then the designated second replacement school was contacted. The use of implicit stratification variables, and the subsequent ordering of the school sampling frame by size, helped to ensure that the replacement schools had similar characteristics to the original selected school. Although this approach does not necessarily completely eliminate any non-response bias, it tends to minimize the potential.

Sampled schools that did not contain any Grade 4 pupils were not replaced. In any event, this did not occur frequently (*refer to Table 7 for the number of ineligible schools).* Such occurrences were, for example, due to school closures after the sampling frame was created.

Participation rates

In order to minimize the potential for non-response bias, the WEI-SPS data quality standards required minimum participation rates for schools and teachers.

Schools

A minimum participation rate of 85% of sampled schools, excluding ineligible schools, was required. Although non-participating sampled schools were replaced to meet sample size requirements, the minimum participation rate of 85% was determined without the use of replacement schools.

Teachers

WEI-SPS also required a minimum participation rate of 85% of fourth grade teachers within participating schools. The substitution of non-responding Grade 4 teachers by other teachers was not permitted. Teacher participation rates were calculated over all participating schools, whether sampled or replacement schools. The teacher participation rate requirement of 85% was calculated at the national level, not necessarily for each participating school.

Refer to Section 5.1 for a detailed description of the calculation of response rates for schools and teachers.

Chapter 5. Sample implementation

This chapter summarizes the sample plans and implementation procedures for each WEI-SPS country. Also included are a summary of the school response rates, teacher response rates and a description of the general WEI-SPS weighting procedures.

The development and implementation of the national sampling plan was a collaborative and interactive exercise between each participating country and the UIS. Each participating country used a stratified probability sampling method to select its sample of schools and Grade 4 teachers. It should be noted that India's probability sample was limited to a selection from only four states and, hence, was not representative of the national target population of schools or Grade 4 teachers. For all other countries, the samples of schools and Grade 4 teachers were representative of the corresponding nationally-defined target populations.

Each country's stratification strategy included the recommended stratification by school size, whereby as many as five size strata were formed with each stratum having approximately 20% of the total student enrolment in schools offering Grade 4. In essence, the school size categories were formed by dividing the list of schools into approximately equal segments so that the first group or largest group of schools comprised about 20% of the Grade 4 population. The group of second largest schools comprised the next approximately 20% of the Grade 4 population and so on.

In **Table 5**, the target population and specified exclusions for each participating country are summarized.

Table 5. Summary of country target population

Country	Target population	Sample frame	Exclusions	No. of eligible schools	No. of Grade 4 pupils
Argentina	All schools teaching Grade 4 in Spanish	2002 Annual Survey Federal information network – DiNIECE, Ministry of Education, Science and Technology	4,681 schools with a total enrolment of less than 26 pupils. These schools comprised 1.5% of the Grade 4 pupil population and 1.4% of the total pupil population.	16,900	762,093
Brazil	All schools teaching Grade 4 in Portuguese	2003 enrolment data from Ministry of Education and the National Institute for Educational Studies and Research (MEC/INEP)	Small schools (only 1 or 2 Grade 4 pupils); 0.5% of total Grade 4 pupils; pupils with special needs in regular classrooms; 0.2% of all Grade 4 pupils.	127,441	4,179,470
Chile	All schools teaching Grade 4 in Spanish	2003 enrolment data from Ministry of Education Enrolment Database	2,236 very small schools (less than 6 pupils); 52 schools located in isolated or rural areas. These school-level exclusions accounted for 2.4% of Grade 4 pupils.	6,103	283,506
India	All schools with Grade 4 enrolment in the states of Assam, Madhya Pradesh, Rajasthan and Tamil Nadu	Provisional data from 7th All India School Education Survey, NCERT (reference date 30/9/2002)	No exclusions within the four surveyed states.	201,814	4,283,957

Country	Target population	Sample frame	Exclusions	No. of eligible schools	No. of Grade 4 pupils
Malaysia	All schools offering Grade 4 classes	2003 enrolment data from the Ministry of Education	Very small schools (i.e. schools with less than 10 Grade 4 pupils). There were 794 such schools that contained 0.93% of all Grade 4 pupils, and 1.09% of the entire pupil population.	6,796	505,008
Paraguay	All schools teaching Grade 4 in Spanish	Ministerio de Educación y Cultura - Dirección de Planificación, Estadística e Información - database 2001	Very small schools (i.e. schools with less than 6 Grade 4 pupils). There were 2,381 pupils in 664 such schools. Remote regions of Alto Paraguay and Boqueron resulted in exclusion of 1,364 Grade 4 pupils in 112 schools.	5,537	147,758
Peru	All schools teaching Grade 4 in Spanish	Ministry of Education Database (2004)	There were 21,755 excluded Grade 4 pupils. These exclusions accounted for about 3.1% of the Grade 4 population. The reasons for these exclusions were: schools without 2004 enrolment data (0.97%); geographically inaccessible schools (1.29%); schools for mentally and functionally disabled pupils (0.42%); extremely small schools (schools with one teacher and less than 15 primary pupils) (0.41%).	30,126	674,170
Philippines	All schools with Grade 4	Enrolment data for school year 2003-2004 provided by Basic Education Information System (BEIS), Department of Education	Schools with less than 15 Grade 4 pupils and schools with less than 3 teachers. These schools contain 5% of all Grade 4 pupils and 5% of all primary grades.	29,296	1,921,819
Sri Lanka	All schools with Grade 4 classes	2004 school census data, Ministry of Education	Schools with less than 10 Grade 4 pupils. These schools comprised 3.5% of the Grade 4 pupil population and 3.8% of the primary grade enrolment.	7,255	319,222
Tunisia	All public schools with Grade 4 classes	2002-2003 Statistics of Education and Vocational Training. BEPP, Ministry of Education and Training	No exclusions	3,758	239,482
Uruguay	All schools teaching Grade 4 in Spanish	Enrolment data for the year 2002 from the Administracion Nacional De Educacion Publica - Consejo De Educacion Primaria	No exclusions	1,453	55,939

All participating countries, except India, used a single-stage school sampling procedure whereby the sample was selected directly from a list of eligible schools. India employed a two-stage school sampling procedure which first involved the selection of a number of Primary Sampling Units (PSUs), namely school districts, followed by the selection of the sample from the list of eligible schools within the selected districts. The reference to India includes only the four states of Assam, Madhya Pradesh, Rajasthan and Tamil Nadu.

All participating countries, except Uruguay, exceeded the recommended effective sample size of 400 schools. Uruguay's sample size was 398 schools.

In all countries, an additional sampling stage was incorporated in the design *(see **Table 6**)* in order to create a teacher sample from each selected school. The teacher samples included all teachers from the selected schools teaching the main language of instruction and/or mathematics/arithmetic to Grade 4 pupils.

The effective teacher sample was in excess of 1,000 teachers in all countries, except in Sri Lanka with a teacher sample of 766 and Uruguay with a teacher sample of 725.

5.1 Response rates

School response rates

There were four possible types of responses among sampled schools:

i) Ineligible: A sampled school was declared ineligible if it contained no fourth grade pupils. Such schools were excluded from the response rate calculation.

ii) Participated: A sampled school was declared eligible and participated in the survey.

iii) Replacement: A sampled school did not participate but one of its two possible replacement schools did participate.

iv) Did not participate: A sampled school was declared eligible but did not participate nor did either of its replacement schools.

The school response rate, *Rsc*, was calculated as:

$$R_{sc} = \frac{\text{Participants} + \text{Replacements}}{\text{Participants} + \text{Replacements} + \text{Nonparticipants}} \times 100\%$$

The WEI-SPS study required each country to achieve a minimum participation rate of 85% of sampled schools without the use of replacement schools. All countries, except India and Sri Lanka, satisfied this participation rate standard *(see **Table 7**)*. Sri Lanka's participation rate for originally sampled schools was 62.6%, while India achieved a participation rate of 82.5%.

Sri Lanka's national response rate for schools was significantly affected by armed conflicts and the effects of a tsunami. Relatively low response rates were achieved in the Northern, Eastern and Uva provinces.

Table 6. Sample design summary

Country	Sample units	Stratification			Sample size
		No. of explicit strata	Explicit variables	Implicit variables	
Argentina	Schools	24	1. Region (Center, North, South) 2. School type (public, private) 3. School size (2-5 categories)	1. Provinces (24)	1,189
Brazil	Schools	47	1. Region (5 geographic regions) 2. Urbanization (urban, rural) 3. School type (public, private) 4. School size (5 categories)	1. States (27)	646
Chile	Schools	21	1. Urbanization (urban, rural) 2. School type (public, private government-dependent, private independent) 3. School-size (5 categories)	None	645
India	PSU - Administrative Districts SSU - Schools	40	1. State (Assam, Madhya Pradesh, Rajasthan, Tamil Nadu) 2. Urbanization (urban, rural) 3. School size (5 categories)	1. School type (3)	1,105
Malaysia	Schools	15	1. Language of instruction (Bahasa Malaysia, Chinese, Tamil) 2. School size (5 categories)	1. States (15) 2. Urbanization (2)	742
Paraguay	Schools	37	1. Region (5 geographic regions) 2. Urbanization (urban, rural) 3. School size (5 categories)	1. School type (3)	812
Peru	Schools	20	1. School type (public, private) 2. Urbanization (urban, rural) 3. School size (5 categories)	1. Region (26) 2. Number of grades per class 3. Socioeconomic status(3) 4. Language (2)	665
Philippines	Schools	32	1. Region (National Capital Region (NCR), Luzon w/o NCR, Visayas, Mindanao) 2. School type (public, private) 3. School size (5 categories)	None	676
Sri Lanka	Schools	32	1. Provinces (9) 2. School size (5 categories)	1. Urbanization (2) 2. Language of instruction (3)	612
Tunisia	Schools	30	1. Region (5 groups of governorates) 2. Urbanization (urban, rural) 3. School size (5 categories)	1. Governorates (24)	470
Uruguay	Schools	12	1. Department (Montevideo, other departments) 2. Urbanization (urban, rural) 3. School size (5 categories)	1. School type (2)	437

Note: For additional details, see **Appendix IV**.

Table 7. School response summary

Country	Initial sample size	Eligible schools	Participant schools – original sample	Response rate – original sample (%)	Participant replacement schools	Final sample size	Response rate including replacements (%)
Argentina	1,189	1,189	1,118	94.00	49	1,167	98.10
Brazil	646	641	577	90.00	62	639	99.70
Chile	668	668	580	86.80	8	588	88.00
India	1,105	1,105	912	82.50	143	1,055	95.50
Malaysia	742	739	736	99.60	0	736	99.60
Paraguay	812	785	785	100.00	0	785	100.00
Peru	665	665	638	95.90	25	663	99.70
Philippines	676	675	666	98.70	9	675	100
Sri Lanka	612	612	383	62.60	68	451	73.70
Tunisia	470	470	469	99.80	0	469	99.80
Uruguay	437	433	398	91.90	0	398	91.90

Teacher response rates

There were three possible types of responses for sampled teachers:

i) Ineligible: A sampled teacher was declared ineligible if he/she did not teach Grade 4 pupils in the subjects of interest (these cases were excluded from the response rate calculation).

Note: There were no ineligible teachers within participating schools.

ii) Participated: A sampled teacher was declared eligible and participated in the survey.

iii) Teacher did not participate: A sampled teacher did not participate.

Teachers could not be replaced with teachers from other grades or replacement schools.

The 'estimated' teacher response rate, R_{tc}, was calculated as:

$$R_{tc} = \frac{\text{Participants}}{\text{Participants} + \text{Non} - \text{participants}} \times 100\%$$

The WEI-SPS study required a minimum participation rate of 85% of fourth grade teachers within participating schools. These rates were calculated over all participating schools, whether sampled or replacement, at national level and not necessarily for each participating school. All participating countries satisfied the participation rate standard within participating schools *(see **Table 8**)*.

Table 8. Teacher response summary

Country	Initial sample size	Non-responding teachers	Final sample size	Teacher response rate (%)
Argentina	2,768	122	2,646	95.6
Brazil	1,454	34	1,420	97.7
Chile	1,231	21	1,210	98.3
India	1,433	2	1,431	99.9
Malaysia	3,358	108	3,250	96.8
Paraguay	1,049	3	1,046	99.7
Peru	1,254	18	1,236	98.6
Philippines	2,074	6	2,068	99.7
Sri Lanka	823	57	766	93.1
Tunisia	1,074	54	1,020	95.0
Uruguay	810	85	725	89.5

5.2 Sample weights

The WEI-SPS national samples were drawn using a stratified random sample design. This resulted in differential probabilities of selection and response rates for both sampled schools and teachers. Consequently, both types of sampling units required sampling weights that took into account differential probabilities and response rates.

It should be noted that India employed a two-stage sample design for the selection of schools, while other countries used a one-stage design. For that reason, the calculation of school weights for India has been presented separately in Section 5.3. However, since all eligible Grade 4 teachers in selected schools were included in the teacher sample for all countries, the process of determining the teacher weights was the same for all countries.

School weights

Basic school weight

The basic school weight was determined at the stratum level and was simply the inverse of the school selection probability. All sampled schools in a given stratum had the same basic school weight. The basic school weight for stratum "*h*" was computed as follows:

(1) $$BW_{sc}^{h} = \frac{N_{sc}^{h}}{n_{sc}^{h}}$$

where

N_{sc}^{h} was the total number of schools in stratum "h", and

n_{sc}^{h} was the number of schools sampled in stratum "h".

School response adjustment

The school sample size for stratum h, n_{sc}^{h}, is expressed as follows:

(2) $$n_{sc}^{h} = n_{sc.i}^{h} + n_{sc.s}^{h} + n_{sc.r}^{h} + n_{sc.n}^{h}$$

where

$n_{sc.i}^{h}$ was the number of ineligible schools found in stratum "*h*"

$n_{sc.s}^{h}$ was the number of sampled schools that participated in stratum "*h*"

$n_{sc.r}^{h}$ was the number of replacement schools that participated in stratum "*h*"

$n_{sc.n}^{h}$ was the number of schools that did not participate in stratum "*h*"

A school-level response adjustment was required to compensate for sampled schools that did not participate. The school response adjustment for stratum "*h*" was computed as follows:

(3) $$RA_{sc}^{h} = \frac{n_{sc.s}^{h} + n_{sc.r}^{h} + n_{sc.n}^{h}}{n_{sc.s}^{h} + n_{sc.r}^{h}}$$

Sampled schools that were found to be ineligible were removed from the calculation of this adjustment. All participating schools in a given stratum, both sampled and replacement schools, had the same response adjustment.

Final school weight

The final school weight for all schools in stratum "*h*" was simply the product of the basic school weight and the school response adjustment, as follows:

(4) $$FW_{sc}^{h} = BW_{sc}^{h} \times RA_{sc}^{h}$$

The sum of final school weights for all participating schools in a given stratum, both sampled and replacement, added up to the total number of eligible schools in that stratum. If no ineligible schools were found in a stratum, then this sum was equal to the total number of schools in that stratum in the sampling frame.

The final school weight was used for producing school-level estimates, such as the proportion of schools with a specific attribute.

Benchmark-adjusted final school weight for countries providing benchmark population counts

The purpose of benchmark adjustment, or benchmarking, is to ensure that weighted estimates are consistent with known population totals. Benchmarking sample weights to correspond with population counts from the most recent reliable source involves making adjustments to the sampling weights, so that when the resulting weights are summed across a particular population group, the resulting total agrees with a known population count of the size of that group. In general, benchmarking increases the precision of the survey estimates and reduces the bias due to survey coverage (such as non-response, deficiencies in the sampling frame or data collection operations).

Along with SPS data files, some countries provided updated known population counts for:

i) the number of schools in the SPS target population;

ii) the number of Grade 4 pupils in the target population of schools; and

iii) the number of primary grade pupils in the target population of schools.

All participating countries, except India, Peru, the Philippines and Uruguay, provided updated known population counts for use in benchmarking.

For countries that provided updated known population counts, the basic school weight and the school response adjustment were calculated as usual using equations (1) and (3). In addition, incorporated in the weight calculations was a benchmark adjustment for each category for which the known population school totals were provided, hereafter called a ‘benchmark category’.

The benchmark adjustment factor, KA_b, for each school “i” in the benchmark category “b” is calculated as follows:

(5) $$KA_b = N_b \Big/ \widehat{N}_b$$

where

N_b is the known count of the number of schools in the benchmark category 'b'

$\widehat{N}_b$ is the corresponding estimated count of the number of schools in the benchmark category 'b'

$$\widehat{N}_b = \sum_{i \in b} \left(BW^h_{sc} \times RA^h_{sc} \right)$$

For these countries, the final benchmark-adjusted school weight for all schools in stratum “h” is the product of the basic school weight and the school response adjustment and the benchmark adjustment factor as follows:

(6) $$AW^h_{sc} = BW^h_{sc} \times RA^h_{sc} \times KA_b \quad , \forall h \in b$$

The weight variables in the database include the final benchmark-adjusted school weight for the countries that provided the updated known population counts. For the other countries, the final school weight was used.

School-based Grade 4 pupil weights

For the purpose of producing school-based pupil-level estimates relative to the Grade 4 pupil population, a 'school-based Grade 4 pupil weight' was calculated by multiplying each sampled school's final school weight by a suitable estimate of the number of Grade 4 pupils in school "i". Thus:

(7) $$FW_{sc.st4}^{h,i} = FW_{sc}^{h} \times \hat{N}_{st4}^{h,i}$$

where

$\hat{N}_{st4}^{h,i}$ was the estimated number of Grade 4 pupils in school "*i*" of stratum "*h*".

The school-based Grade 4 pupil weight was appended to the school file.

Benchmark-adjusted school-based Grade 4 pupil weight for countries providing benchmark population counts

For countries that provided update counts for the number of Grade 4 pupils in the school target population, the benchmark-adjusted school-based pupil weight (relative to Grade 4 pupils) was calculated as follows:

(8) $$AW_{sc.st4}^{h,i} = AW_{sc}^{h} \times \hat{N}_{st4}^{h,i} \times Q_b$$

Where $Q_b = N_b^{st4} \Big/ \widehat{N}_b^{st4}$

N_b^{st4} was the known count for the number of Grade 4 pupils in the benchmark category "b"

$\widehat{N}_b^{st4}$ was the corresponding estimated count for the number of Grade 4 pupils in the benchmark category "b", that is

$$\widehat{N}_b^{st4} = \sum_{i \in b} AW_{sc}^{h} \times \widehat{N}_{st4}^{h,i}$$

School-based primary grade pupil weight

For the purpose of producing school-based pupil-level estimates relative to the pupil population of primary grades, a 'school-based primary grade pupil weight' was calculated by multiplying each sampled school's final school weight by a suitable estimate of the number of primary grade pupils in school "i". Thus:

(9) $$FW_{sc.st}^{h,i} = FW_{sc}^{h} \times \hat{N}_{st}^{h,i}$$

where

$\hat{N}_{st}^{h,i}$ is the estimated number of primary grade pupils in school "*i*" of stratum "*h*".

The school-based primary grade pupil weight was appended to the school file.

Benchmark-adjusted school-based primary grade pupil weight for countries providing benchmark population counts

For countries that provided update counts for the number of primary grade pupils in the school target population, the benchmark-adjusted school-based pupil weight (relative to primary grade pupils) was calculated as follows:

(10) $$AW_{sc.st}^{h,i} = AW_{sc}^{h} \times \hat{N}_{st}^{h,i} \times P_b$$

Where $P_b = N_b^{st} \Big/ \widehat{N}_b^{st}$

N_b^{st} is the known count for the number of primary grade pupils in the benchmark category "b"

$\widehat{N}_b^{st}$ is the corresponding estimated count for the number of primary grade pupils in the benchmark category "b", that is

$$\widehat{N}_b^{st} = \sum_{i \in b} AW_{sc}^{h} \times \widehat{N}_{st}^{h,i}$$

Teacher weights

Basic teacher weight

The basic teacher weight is determined at the school level and is the inverse of the teacher selection probability. All sampled teachers in a given school have the same basic teacher weight. The basic teacher weight for all teachers from school "*i*" in stratum "*h*" was computed as follows:

$$BW_{tc}^{h,i} = \frac{N_{tc}^{h,i}}{n_{tc}^{h,i}} \quad (11)$$

where

$N_{tc}^{h,i}$ is the total number of eligible teachers in school "*i*" of stratum "*h*"

$n_{tc}^{h,i}$ is the number of teachers sampled in school "*i*" of stratum "*h*"

Since all eligible teachers in a sampled school were sampled, the basic teacher weight was equal to 1.0 (unity).

Teacher response adjustment

The teacher response adjustment was carried out as follows:

i) For strata where there was at least one responding teacher in each responding school, the teacher response adjustment was carried out at the school-level; and

ii) For strata where there was at least one responding school where no teacher had responded, the teacher response adjustment was carried out at the stratum level (i.e. no school-level teacher response adjustment was carried out).

Although three types of responses among sampled teachers were possible, the actual survey yielded no ineligible teachers within the selected schools. Therefore, there is no mathematical term for ineligible teachers in the following description of teacher weights.

Consequently, the following result was obtained for n_{tc}^{i}, the number of sampled teachers from school "i":

$$n_{tc}^{i} = n_{tc.s}^{i} + n_{tc.n}^{i} \quad (12)$$

where

$n_{tc.s}^{i}$ is the number of sampled teachers that participated in school "i"

$n_{tc.n}^{i}$ is the number of teachers that did not participate in school "i"

School-level teacher response adjustment

In each stratum where there is at least one responding teacher in each responding school, the teacher response adjustment for each teacher record was computed at the school level as follows:

(13) $$RA_{tc}^{i} = \frac{\text{total number of sampled teachers within sample school}}{\text{total number of participating teachers within sampled school}} = \frac{n_{tc.s}^{i} + n_{tc.n}^{i}}{n_{tc.s}^{i}}$$

All participating teachers in a given school had the same teacher response adjustment.

Stratum-level teacher response adjustment

There were cases where no sampled teacher responded from a responding school. In other words, a teacher questionnaire was distributed to the teacher(s), but no completed questionnaire was received. The teacher response adjustment was done at the stratum level when at least one school lacked a teacher response. The response adjustment for stratum "*h*" was computed as follows:

(14) $$RA_{tc}^{h} = \frac{total\ number\ of\ sampled\ teachers\ within\ stratum\ 'h'}{Number\ of\ participating\ teachers\ within\ stratum\ 'h'}$$

Final teacher weight for countries without an update to total school population

The final teacher weight for all teachers in school "*i*" of stratum "*h*" was the following product:

(15) $$FW_{tc}^{h,i} = BW_{sc}^{h} \times RA_{sc}^{h} \times BW_{tc}^{h,i} \times RA_{tc}$$

where RA_{tc} = RA_{tc}^{i} if all sampled schools in stratum "h" contained at least one responding teacher;

or

RA_{tc}^{h} if stratum "h" contained at least one school with no responding teacher

Benchmark-adjusted final teacher weight for countries providing benchmark population counts

For countries which provided a known count for specific populations, the benchmark-adjusted final teacher weight for all teacher records in school "i" of stratum "h" was computed as follows:

(16) $$AW_{tc}^{h,i} = AW_{sc}^{h} \times BW_{tc}^{h,i} \times RA_{tc}$$

where $$AW_{sc}^{h} = BW_{sc}^{h} \times RA_{sc}^{h} \times KA_{b} \quad , \forall h \in b$$

For all countries that did not provide benchmark population counts, the benchmark-adjusted final teacher weight is equal to the final teacher weight.

Teacher-based Grade 4 pupil weights

For the purpose of producing pupil-level estimates based on teacher variables relative to the Grade 4 pupil population, two subject-specific teacher-based Grade 4 pupil weights were calculated – one each for language of instruction and mathematics/arithmetic.

The subject-specific teacher-based pupil weights were estimated by multiplying each sampled teacher's benchmark-adjusted final weight by the number of Grade 4 pupils reported to be taught by the teacher in the given subject. Thus, for teacher "*j"* and subject "*sbj":*

(17) $$FW_{tc.st4}^{h,i,j,sbj} = AW_{tc}^{h,i} \times \hat{N}_{st4}^{h,i,j,sbj}$$

where

$\hat{N}_{st4}^{h,i,j,sbj}$ is the number of Grade 4 pupils taught in subject *"sbj"* by teacher *"j"* in school "*i*" of stratum "*h*"

The subject-specific teacher-based pupil weights for teachers not teaching a given subject is zero, since $\hat{N}_{st4}^{h,i,j,sbj}$ is zero.

Even though these weights are not sampling weights in the strict sense but multipliers, these weights allow the calculation of pupil-level estimates, such as the proportion of pupils having mathematics/arithmetic or language of instruction teachers with a specific attribute. Since some pupils were taught by the same teacher in mathematics/arithmetic and language of instruction, while others have different teachers for the two subjects, no overall teacher-based Grade 4 pupil weights can be estimated. Statements on attributes of teachers can only be made by subject. However, in countries where no pupils are taught by different teachers, the results for language of instruction and mathematics/arithmetic will be identical.

5.3 India school weights

India employed a two-stage sample design for the selection of schools by first selecting a sample of school districts from four Indian states and, subsequently, selecting a sample of district schools within each stratum. The computation of a final school weight for India was carried out as follows:

i) Determine the final first-stage district weight by computing:
   - The theoretical basic district weight based on the probability of selection for the sampled school district.
   - A district response adjustment factor to account for non-responding school districts.

ii) The final school district weight is the product of the basic district weight and the district response adjustment factor.

iii) Determine the final second-stage school weight by computing:
   - The theoretical basic school weight based on the probability of selection of the sampled schools within the selected school districts.
   - A school response adjustment factor to account for non-responding schools within the selected school districts.
   - A school response adjustment factor to ensure that the number of schools sums to the district count of schools

iv) The final second-stage school weight is the product of the basic second-stage school weight and the two school response adjustment factors.

v) The school weight for the two-stage stratified sample design employed by India is the product of the first-stage district weight and the second-stage school weight.

Since India did not provide benchmark totals, no benchmark adjustment was carried out.

First-stage district weight

First-stage basic district weight

The first-stage sampling units for India are school districts. At the first stage of sampling, a sample of school districts was selected independently from each of the four states that India identified for the survey. The first stage basic district weight 'BW_{DA}' is the inverse of the probability of selection of a school district, say D_A, from a state "A". That is:

(18) $$BW_{D_A} = 1 \Big/ p(D_A)$$

In each of the four states, a sample of school districts was systematically selected with probability proportional to size, where the number of Grade 4 pupils in a school district was the measure of size (mos). Therefore, the probability of selection based on the mos is as follows:

$$(19)\quad p(D_A)=\begin{cases} 1, \quad if \quad U_{D_A} \geq sampling\ \text{int}erval=\dfrac{\sum\limits_{D\in A} U_{D_A}}{d_A} \\ \dfrac{U_{D_A}\times\left(d_A-\sum\limits_{D_A\in C} d_{A,C}\right)}{\left(\left(\sum\limits_{D\in A} U_{D_A}\right)-\left(\sum\limits_{D_A\in C} U_{D_A,C}\right)\right)}, \quad otherwise \end{cases}$$

where

U_{D_A} is the number of grade 4 students in District 'D' in state 'A'

$\sum\limits_{D\in A} U_{D_A}$ is the total number of grade 4 students in state 'A'

d_A is the number of districts sampled in state 'A'

$\sum\limits_{D\in C} d_{A,C}$ is the number of districts selected with certainty

$\sum\limits_{D\in C} U_{D_A,C}$ is the total number of grade 4 students in the certainty districts

Therefore, the first-stage basic district weight (expressed relative to the number of Grade 4 pupils) is given by the following equation:

$$(20)\quad BW_{D_A}=\frac{1}{p(D_A)}=\begin{cases} 1, \quad if \quad U_{D_A} \geq \dfrac{\sum\limits_{D\in A} U_{D_A}}{d_A} \\ \dfrac{\left(\sum\limits_{D\in A} U_{D_A}\right)-\left(\sum\limits_{D_A\in C} U_{D_A,C}\right)}{U_{D_A}\times\left(d_A-\sum\limits_{D_A\in C} d_{A,C}\right)}, \quad otherwise \end{cases}$$

Note: The basic district weight is expressed relative to the number of Grade 4 pupils in a district. However, since the eventual goal is to relate the survey weights to the eligible schools in a district, the district weight may be expressed relative to the number of eligible schools as follows:

$$BW_{D_A} = \begin{cases} 1, \quad if \quad U_{D_A} \geq \dfrac{\sum\limits_{D \in A} U_{D_A}}{d_A} \\ \dfrac{\left(\sum\limits_{D \in A} N_{D_A}\right) - \left(\sum\limits_{D_A \in C} N_{D_A,C}\right)}{N_{D_A} \times \left(d_A - \sum\limits_{D_A \in C} d_{A,C}\right)}, \quad otherwise \end{cases} \tag{21}$$

where

N_{D_A} is the number of eligible schools in District 'D' in state 'A'

$\sum\limits_{D \in A} N_{D_A}$ is the total number of eligible schools in state 'A'

d_A is the number of districts sampled in state 'A'

$\sum\limits_{D_A \in C} d_{A,C}$ is the number of districts selected with certainty

$\sum\limits_{D_A \in C} N_{D_A,C}$ is the total number of eligible schools in the certainty districts

First-stage district response adjustment (i.e. adjustment for non-responding districts)

There are two possible types of responses among sampled school districts “D”:

i) Participates: A participating school district “p” is an eligible sampled school district where at least one school provides sufficient data to be considered a participant in the survey; and

ii) Does not participate: A non-participating school district “z” results when an eligible sampled school district does not yield at least one participating school.

A school district response adjustment is required to compensate for sampled school districts that do not participate. The school district response adjustment for state “A” is computed as follows:

(22) $$RA_{D_A} = \begin{cases} 0, & \text{if 'D' does not participate} \\ \dfrac{\sum_{D \in C} N_{hD_A}}{\sum_{D \in (C \cap P)} N_{hD_A}}, & \text{for each participating 'D' in stratum 'h' where } BW_{D_A} = 1 \\ \dfrac{\sum_{D \notin C} N_{hD_A}}{\sum_{D \in P} N_{hD_A}}, & \text{for each participating 'D' in stratum 'h' where } BW_{D_A} \neq 1 \end{cases}$$

where

C indicates the group of districts that were selected with certainty

P indicates the group of participating districts

First-stage final district weight

The final first-stage weight for the selected school districts in India is computed as follows:

(23) $$FW_{D_A} = BW_{D_A} \times RA_{D_A}$$

Second-stage school weight

Second-stage basic school weight

The basic second-stage school weight for the two-stage stratified sample design employed by India is determined at the district level within each stratum. It is the inverse of the school selection probability. All sampled schools in a given district have the same basic school weight. The basic school weight for school “s” in district “D_A” of stratum “h” is computed as follows:

(24) $$BW_{hD_As} = \frac{N_{hD_A}}{n_{hD_A}}$$

where

N_{hD_A} is the total number of sample frame schools in district 'D_A' of stratum 'h', and

n_{hD_A} is the number of schools sampled from district 'D_A' of stratum 'h'.

Second-stage school response adjustments

Based on the four possible types of responses among sampled schools, the following results for the total number of sampled schools in district "A" of stratum "h":

$$(25) \quad n_{hD_As} = n_{hD_Ax} + n_{hD_Ap} + n_{hD_Aq} + n_{hD_Az}$$

where

n_{hD_Ax} is the number of ineligible schools found in district 'D_A' of stratum 'h'

n_{hD_Ap} is the number of sampled schools that participate in district 'D_A' of stratum 'h'

n_{hD_Aq} is the number of replacement schools that participate in district 'D_A' of stratum 'h'

n_{hD_Az} is the number of schools that do not participate in district 'D_A' of stratum 'h'.

A school response adjustment is required to compensate for sampled district schools that do not participate. The school response adjustment for district "D_A" of stratum "*h*" is computed as follows:

$$(26) \quad {}_1RA_{hD_As} = \begin{cases} 0, if \left(n_{hD_Ap} + n_{hD_Aq}\right) = 0 \\ \dfrac{n_{hD_Ap} + n_{hD_Aq} + n_{hD_Az}}{n_{hD_Ap} + n_{hD_Aq}}, otherwise \end{cases}$$

Sampled schools that are categorized as ineligible are removed from the calculation of this response adjustment.

Applying the school response adjustment to the basic second-stage school weight yields a second-stage weight, say FW, that takes into account school non-response within school district "D" of stratum "h":

$$(27) \quad {}_0FW_{hD_As} = BW_{hD_As} \times {}_1RA_{hD_As}$$

In addition to the above second-stage school response adjustment, an adjustment to the second-stage school weight is required to ensure that the sum of the second-stage school weights (summed across all strata) for a district is equal to the total number of schools in the sampled district. This second adjustment factor is the ratio of the total number of schools in a selected district to the estimated number of schools in the selected district:

$$(28) \quad {}_2RA_{hD_As} = \begin{cases} 0, if\ n_{hD_Ap} = 0 \\ \dfrac{N_{D_A}}{\sum_h ({}_0FW_{hD_As} \times n_{hD_Ap})}, otherwise \end{cases}$$

where

N_{D_A} is the number of eligible schools in sampled District 'D' in state 'A'

n_{hD_Ap} is the number of participating schools in sampled District 'D' in stratum 'h'

Final second-stage school weight

The final second-stage weight for the selected schools within a school's district is computed as follows:

(29) $$_2FW_{hD_As} = BW_{hD_As} \times {}_1RA_{hD_As} \times {}_2RA_{hD_As}$$

Final school weight for India

The final school weight for a sampled school in India is the product of the final first-stage district weight and the final second-stage school weight. That is:

(30) $$FW_{hs} = FW_{D_A} \times {}_2FW_{hD_As}$$

This final school weight was used to derive the school-based Grade 4 pupil weight and the school-based primary grade pupil weight for India in the same way as for other countries.

Chapter 6. Survey operations

The survey operations for WEI-SPS were designed by the UIS, in close cooperation with the OECD, members of the Steering Committee and National Programme Managers. They were based on procedures successfully implemented in other surveys, notably IEA and OECD surveys, and adapted to meet the specific requirements and needs of the WEI-SPS study.

It is important to implement survey operations that are both sufficiently standardized to ensure comparable international data yet flexible enough to allow an efficient workflow in participating countries. The geographical, cultural and economic diversity found in the group of WEI-SPS countries presented a challenge in establishing international standards; hence, the *Operations Manual* was thoroughly reviewed. A pilot study conducted in 2004[3] helped to refine the procedures and identify issues. This led to an update of the *Operations Manual*, particularly in regards to tracking forms and school contacts. It was mandatory for countries to follow the procedures as described in the revised manual.

This chapter describes the survey operations of the main survey, including responsibilities, school contacts, delivery of survey materials and the data collection process. A detailed overview by country is also provided.

6.1 Survey design

Since the countries participating in WEI-SPS were very diverse, standardizing survey operations was an important yet difficult task. Together with survey experts, the UIS produced a *Survey Operations Manual* (UNESCO-UIS, 2005c), which described the necessary steps throughout the survey.

In each country, the NPM was responsible for the implementation of WEI-SPS. In most countries, this was the person responsible for the regular WEI data collection. The familiarity of the NPMs with the education data of their country greatly facilitated the implementation of the survey.

NPM responsibilities included:

- staffing and budgeting of the project in the country;
- identifying the national target population (including explicit and implicit stratification criteria) and providing the data source(s) for the school sampling frame;
- translation of the source documents into the appropriate national language(s);
- negotiating national deviations with the UIS;
- communication with the UIS regarding translation verification;
- printing and distribution of national questionnaires;
- training of surveyors and national quality monitoring teams as applicable;
- training of data entry staff and quality assurance of data sets;
- the timely submission of all data sets to the UIS; and
- submitting a Survey Activities Report to the UIS and verification of the results.

[3] Argentina conducted the pilot in early 2005 due to scheduling problems in 2004.

Countries and their representatives were asked to have all planned deviations from this procedure approved by the WEI-SPS Steering Committee. The committee then had to decide whether a deviation was essential for successful implementation and what degree of risk might be incurred in terms of losing the ability to compare results with those of other countries (e.g. the results for some questions could be significantly different if, due to procedures, questionnaires completed by teachers could be revised by school heads in some countries and not in others).

The importance of this balance was stressed in several meetings and in the WEI-SPS manuals, i.e. *Survey Operations Manual* (UNESCO-UIS, 2005c), *Sampling Manual* (UNESCO-UIS, 2005a), *Translation Manual* (UNESCO-UIS, 2005b) and *Data Entry Manual* (UNESCO-UIS, 2005d). The protocol signed by the participating countries included a section concerning any anticipated deviation from these procedures specifying that they should be brought to the attention of the technical staff at UIS/OECD prior to implementation. In addition, the international survey design called for an effective sample size of at least 400 schools.

6.2 School contacts

NPMs were expected to contact all sampled schools with information material. The first contact to the schools was seen as critical to obtain high response rates. Replacement schools were only to be used if the sampled school could not be convinced to participate. NPMs were asked to obtain support from all relevant sources, institutions or organizations in their country. This included getting official letters of support from the Ministry of Education, teacher unions, private school associations and parent associations. In some countries, NPMs had to get prior approval from regional or local authorities. The letter, a sample of which was included in the *Survey Operations Manual* (UNESCO-UIS, 2005c), should be signed by high-level government officials to underline the importance of the survey. Non-responding schools had to be re-contacted by mail, phone or in person to heighten the response rates.

NPMs had to track school participation using School Tracking Forms, a sample of which was provided in the *Survey Operations Manual.* Brazil and Chile used electronic formats to track the schools sampling status and other requested information.

6.3 Delivery of survey material

Discussions held in WEI-SPS meetings indicated that it would be preferable if a delivery/pick-up mechanism was adopted by all countries. Therefore, it was strongly recommended that questionnaires be delivered and collected using a surveyor who could perform a preliminary verification upon collection.

Each country had to determine the most efficient and effective means of distribution, which sometimes involved more than one method, i.e. when dealing with remote schools. The surveyor could be a staff member from the National Statistical Office, university student or someone from a private agency. Personnel connected to an organization or panel that reviews school heads and teachers, however, were not allowed to fill the role of surveyor as this might have jeopardized the response rate of school heads and/or teachers.

A Teacher Tracking Form had to be filled in at the time the survey was implemented, listing the number of pupils and the subjects taught by each teacher. Since this information was crucial for the calculation of teacher weights, the surveyors had to be verify this while at the school and allow for no missing information.

The survey operations were outsourced to private companies in Brazil, Chile and Peru, while in India, the Philippines and Sri Lanka, staff members from other ministries, departments or institutions were charged with carrying out the survey. In Tunisia, regional coordinators implemented the survey. In the remaining countries, surveyors were hired, trained and supervised directly by the NPMs.

The actual mechanisms of delivery and pick-up of survey materials varied. The most common practices were face-to-face interviews, administering the questionnaire to school heads and teachers who were gathered in a school or district office centre, and delivering the questionnaires to the schools. Some countries mailed questionnaires to remote schools to save on surveyor costs.

Questionnaires were either picked up directly at the school or submitted to regional or local offices. In some countries, it was important for teachers to be able to send the questionnaires directly to the collecting agency or institution, as they felt uncomfortable answering if there was a chance that the school head would have access. Providing envelopes to seal off the questionnaires was strongly recommended in all submission scenarios and used in many countries.

6.4 Verification of responses

Upon reception at the designated centre, the questionnaires were then reviewed for missing information and compared to Teacher and School Tracking Forms to ensure completeness. Crucial information had to be followed up with the respondents. However, not every school could be contacted again – in some cases, the school may have been too remote to resend a surveyor or there may not have been a telephone or fax available at the school.

6.5 Data collection in participating countries

Data collection should have taken place at the end of the school year, at which time teachers would be familiar with their pupils and able to meaningfully answer questions regarding their personal backgrounds. However, overlap with final examinations had to be avoided, as this may have jeopardized the response rates.

Table 9 presents an overview of the school years and survey dates of the main survey. The numbers in the dark bars indicate the school months, while "MS" denotes the window of time when the main survey was conducted.

Table 9. School year and survey dates

	Sept - Dec 2004	Jan 2005	Feb	Mar	Apr.	May	June	July	August	Sept.	Oct	Nov	Dec	Jan 2006	Feb	Mar	Apr.
Tunisia		5	6	7	MS	9	10										
Malaysia			2	3	4	MS			8	9	10	11					
Sri Lanka			2	3	4	5	6	7	MS	9	10	11	12		Tamil:	MS	
Brazil				2	3	4	5	6	7	8	MS						
Paraguay					2	3	4	5	6	MS	8	9					
Uruguay					2	3	4	5	6	7	8	MS					
Argentina					2	3	4	5	6	7	MS		10				
Chile					2	3	4	5	6	MS			10				
Peru					2	3	4	5	MS			8	9				
Assam:					India2	2	3	4	5	6	7	8	9	10	11	12	MS
3 other states (MP, TN, R):							India1	2	3	4	5	6	7	8	9	10	MS
							Philippines	2	3	MS				8	9	10	11

6.6 Argentina

The survey in Argentina was carried out by provincial teams. Some provinces encountered delays in delivery due to the organization of the provincial staff responsible for the survey. Consequently, some provinces started the field survey a month later than the national schedule.

Pick-up mechanisms were delayed in some provinces due to teacher strikes. As a result, the survey ended with delays of one month in a few provinces.

Confidentiality is important in all statistical surveys held in Argentina. Surveyors were trained to ensure respondents that their answers would remain confidential. Questionnaires were returned to the surveyors in sealed envelopes.

Data entry comprised of daily verifications of over 10% of each data entry lot (double entry). Error rates never exceeded 1%.

6.7 Brazil

The following survey administration duties were outsourced:

- Central coordination for the operation, regional supervisory and surveyors' staff;
- Call centre to confirm participation and schedule surveyor visits; and
- Data entry and data verification, including double entry.

A one-day training session was conducted in each region for call centre staff. The *Survey Operations Manual* was translated into Portuguese and given to all surveyors.

Each school received a kit with:

- Surveyor introductory letter;
- Copies of the documents sent by INEP/DTDIE (School Head, Local Education Secretary and Local Government Official);
- Newsletter about the survey;
- Thank you letters to the school head(s) and teacher(s);
- Sample of the *School Questionnaire*, *Teacher Questionnaire* and Annex (also called the *Opportunity to Learn, OTL*);
- School Tracking Form and Teacher Tracking Form;
- Envelopes in case respondents preferred to have the completed questionnaires sealed in their presence;
- Additional copies of the instruments for collecting data;
- Checklist for the contents of the application kit; and
- Evaluation form for the questionnaire applications.

The surveyors experienced some difficulties reaching remote schools, and some delays were encountered due to natural causes (heavy rains, droughts, etc.).

6.8 Chile

The following survey operations were outsourced:

- Contacting schools, school heads and Grade 4 teachers, then administering the corresponding questionnaires to each of them. The questionnaire administration was self-applied but in the presence of a surveyor;
- Checking questionnaire responses and completeness;
- School replacement, when needed;
- Filling School and Teacher Tracking Forms; and
- Data entry.

The institution appointed with these duties was requested to provide a report detailing the development of and information on the administration process.

The NPM sent a letter signed by the Minister to each school and local ministry-level administration. The letter contained the main survey information and introduced the institution charged with the survey administration that would be contacting them.

Some problems were encountered during survey administration when school heads or Grade 4 teachers did not fill in questions completely or misunderstood either the question or the timescale (e.g. some answers were in hours instead of days). This occurred mostly with open-ended questions.

Double entry of data was performed on 20% of the questionnaires. The error rates were below the requested 1% threshold.

6.9 India

In India, the National Council of Education Research and Training (NCERT) coordinated the WEI-SPS activities. NCERT provided the school sampling frame for each participating state. The list of districts, along with the sampled and replacement schools, was sent to each State Council of Educational Research and Training (SCERT) to facilitate the collection of data for the main survey. The responsibility for data collection was given to SCERT and the respective District Institutes of Education and Training (DIET) where the data were to be collected.

A two-day training programme was organized in each state for the DIET principals. They were informed of all items contained in the questionnaires, the coding plan and how to fill the tracking forms. They were also informed that the data had to be collected from sampled schools only and replacement schools were only to be used if sampled schools refused to provide data. The principals of DIET, in turn, explained to school heads of sampled schools how to fill in the questionnaires. Several days later, the heads of the primary schools returned the completed questionnaires to DIET. In some cases, DIET faculty went to the schools to collect the data. The data was then scrutinized at the state level by SCERT on a sample basis. It was then forwarded to NCERT for data entry.

Data entry and data verification was outsourced.

6.10 Malaysia

The NPM appointed 20 researchers from the Ministry of Education and public universities, in addition to 80 state and district officers as co-researchers. A three-day training session to brief all state and district officers was held. They were given the final translated questionnaires and were organized into six groups to discuss the implementation process, budget, questionnaires and manuals.

The study was conducted in two modes, namely using a centralized method (83% of schools) and conventional method (17% of schools). The centralized method entailed gathering school heads and teachers to a center (school or district office) where the questionnaires were administered. The conventional method meant that a surveyor administered the questionnaires to school heads and teachers in sampled schools.

Some logistical problems were encountered in the administration process (i.e. delays in printing, problems with shipping, not enough hard copies due to increased enrolment compared to earlier statistics in some states, etc.), which led to a slight delay in implementation. Due to a high number of respondents per surveyor, verification of responses immediately after the survey took up to one hour and was perceived as inconvenient by the respondents. Contacting the respondents after the survey was difficult in some cases.

The Survey Activities Report (SAR) also stated problems with the scope of the school head questionnaire and instructional text, which were not clear enough in all cases. It was also felt that school heads and teachers might have been wary when answering questions that indirectly revealed the weaknesses and shortcomings of their schools.

Double entry of data first exceeded the maximum allowed 1% error rate for the *Teacher* and *OTL Questionnaire*. The data were later corrected.

6.11 Paraguay

The general supervision of the survey administration – including coordination, evaluation, monitoring and control of all operations – was performed by a team consisting of staff from the Statistic Directorate of the General Directorate of Educational and Cultural Planning *(Dirección General de Planificación Educativa y Cultural, DGPEC)* and the Directorate of Educational Evaluation of the General Directorate of Educational Development *(Dirección General de Desarrollo Educativo, DGDE)*.

191 staff members from the Departmental Units of Statistic were contracted as surveyors. These surveyors were charged with compiling the information through direct interviews with all school heads and Grade 4 teachers, codification and the first evaluation for questionnaire consistency.

27 staff members from the DGPEC and DGDE were contracted as field work supervisors. They were charged with quality assurance through continuous supervision and evaluation. The field work supervisor served as the link between general coordination and surveyors' team.

There were two training sessions for field work supervisors in Asunción, followed by five training sessions for surveyors in different parts of the country. Two manuals were developed, one for the field work supervisor and another for the surveyor. They presented the operation processes, obligations of the supervisors and surveyors, as well as the instructions for verification and codification of questionnaires and survey forms.

2,000 posters and 2,000 leaflets were printed about the survey. These were distributed throughout the country in participating schools, among administrative and pedagogical supervisors and in the department in charge of coordinating the supervision. Certificates of acknowledgement and gratitude were awarded to all participating schools.

In some departments, the duration of the survey had to be extended due to climate conditions or other reasons – especially in rural areas that were difficult to access. Some problems understanding the questionnaires were reported, despite cognitive interviews conducted during the pilot study to detect issues with wording.

Before data entry, the questionnaires were verified, analyzed and checked for consistency. A few problems were found (i.e. questionnaire inconsistencies, lack of data, etc.). The school directors and teachers were contacted via telephone or visited a second time to solve such problems. Data entry and data verification were also performed by the team of DGPEC and DGDE staff.

6.12 Peru

The Peruvian Unit of Educational Statistics *(Unidad de Estadistica Educativa, UEE)* coordinated the WEI-SPS survey. The following responsibilities were outsourced:

- Coaching the surveyors;
- Contacting schools;
- Survey administration; and
- Data entry and verification.

The surveyor company arranged for a pilot test of the survey administration procedures. They found that surveyors needed better instructions on how to fill in the tracking forms and heads of private schools needed to be contacted ahead of time to schedule an interview. The surveyors picked up the completed questionnaires as soon as they were available at the school. In a few cases, some questionnaires were delivered by the school heads to the surveyors.

There were no confidentiality issues in Peru. Teacher respondents stated that they thought the survey to be very important in learning more about their teaching. However, teachers did encounter some difficulties in answering certain questions towards the end of the questionnaires as they grew too fatigued to finish them.

Some technical difficulties occurred during data entry when WinDEM was used in a network. Nevertheless, the error rate obtained during double entry was between 0.57% *(School Questionnaire)* and 0.80% *(OTL Questionnaire)*.

6.13 Philippines

The survey was conducted by the regional and division planning officers and technical staff from the Research and Statistics Division (RSD) of the Central Office. RSD staff joined the field personnel in 28 divisions, representing 17% of the sample divisions and 20% of the sample schools. In the remaining 83%, the survey was administered by the division and regional planning officers.

A survey schedule was prepared by the planning officers and was disseminated to the school heads of sample schools. The primary concern of the surveyors was to avoid disrupting classes, so teachers were given the questionnaires before or after class hours.

During the school visit prior to the administration of the questionnaires, the planning officers explained the purpose and importance of the survey, how the schools were selected and the general content of the questionnaires. Confidentiality of the responses and identity of the respondents were emphasized during the briefing.

On average, it took three hours for the respondents to answer the questionnaire. The surveyors reviewed the completeness of the responses before the teachers were dismissed from the venue.

Survey questionnaires were distributed during orientation to all planning officers, with the exception of those from nearby divisions who picked up the questionnaires in person from the central office. The questionnaires were bundled by division, and each division was given additional copies (computed at 10% of sample schools) in case questionnaires were misplaced or lost.

The questionnaires were retrieved immediately after the survey, except in cases where the respondents were absent or did not complete the survey. These were retrieved the following day or on the day when the survey was completed. The division planning officers delivered the completed questionnaires to the central office by courier service or in person in the case of nearby divisions.

A few problems were encountered during the survey administration. Some teachers' schedules conflicted with the survey administration and the schedule had to be changed. Other respondents perceived the questionnaires as being too long.

The certificates awarded to the respondents inspired a feeling of pride in having participated in the survey. School heads and teachers expressed their appreciation for being selected as a sample school. This is especially true for schools located in remote and difficult to reach areas. This was the first time that the RSD and field personnel were implicated in an international survey, and the activity proved to be a rewarding experience for them.

There were no major problems encountered in the data entry and verification procedures. The error rate found during the verification process was less than 1% (i.e. 0.54% for the school questionnaire, 0.28% for the teacher questionnaire and 0.36% for the annex to the teacher questionnaire).

6.14 Sri Lanka

The survey was carried out by the Planning and Performance Review Division of the Ministry of Education, with funding from UNICEF Sri Lanka. Primary In-Service Advisors (ISAs) were selected as surveyors for conducting the main survey. All Sinhala medium ISAs were trained through one-day workshops.

The survey was implemented by primary ISAs under the supervision of primary education officers in eight provinces, with enthusiastic support and participation from provincial- and school-level officers. Conducting this international survey also provided the participating and conducting officers with the chance to develop professional skills.

The implementation was mainly a problem in the Northern and Eastern provinces due to a conflict situation. It took a long time to collect Tamil medium questionnaires from these provinces. The tsunami disaster also affected field work.

Data entry presented no major problems, except for some instances of incompatibilities in both tracking forms and completed questionnaires. These problems were resolved by referring to the school census data. Some problems occurred because the data from the Northern and Eastern provinces were delayed due to data collection problems. Fortunately, all these issues could be resolved using the School and Teacher Tracking Forms. Data entry errors were corrected through the double entry process at an error level of 0.54%.

6.15 Tunisia

In Tunisia, the central office of the Ministry of Education (*Bureau des Études, de la Planification et de la Programmation, BEPP*) was responsible for the survey, which included schools from all 24 administrative districts of the Tunisian territory (governorates). Within each region, an operation manager was responsible for delivery and pick-up procedures. Instructions and directives were sent to regional project managers with the support of the NPM.

The list of sampled schools was sent to the regional districts by the BEPP. The survey instruments were sent to the regional boards of education, with a letter of invitation to the participating schools within each region. The letter was jointly signed by the NPM and the general manager of the first cycle of basic education, and it outlined the general aspects of the SPS survey and declared its main objective to achieve international comparability.

Once questionnaires were collected within any one region, data entry took place in the regional centers. Staff from the central office provided training in data entry and quality control. After the finalization of data entry, materials were returned to the central office (BEPP) in the Ministry.

A few problems were encountered during data entry. It was found that respondents sometimes misinterpreted questions, probably because they were unfamiliar with the issues. Also, it was assumed that some omitted questions should have been filled with zeros. In a few cases, the answers were replaced with data from administrative sources *(see Appendix VI for national deviations)*.

6.16 Uruguay

The survey was conducted by the Ministry of Education and Culture (MEC), Department for Statistics, with support from the National Administration of Public Education, Primary Education Board *(Consejo de Educacion Primaria, CEP).*

Letters were sent to all schools prior to the survey to motivate school heads and teachers. At the end, letters were sent to participating schools to thank them for their participation. Surveyors were hired to carry out the survey. They had to be active or retired primary education teachers or school heads with extensive hourly availability. The MEC created an instruction manual for surveyors and held a one-day training session to explain the objectives of the survey, its administration, instructions for completing the questionnaires, etc.

14 surveyors administered the survey in the schools. The questionnaires were then either collected by the surveyors in person or sent back by post. Each school head and teacher was provided with a label to stick on the envelope containing the filled questionnaires for the return by mail. To ensure the confidentiality of the answers, each school head and teacher was responsible for sending in the answers in their own sealed envelope.

Incoming questionnaires were tracked by school ID and zone. The surveyors monitored the return of questionnaires through continuous phone calls. All questionnaires were returned – complete or blank.

A national postal strike delayed data entry by two weeks. It was performed at the MEC, and no problems were encountered during entry or verification.

Chapter 7. Data processing procedures

This chapter describes the data entry and verification tasks undertaken at all steps of the survey. The most important goals of data processing for WEI-SPS were to confirm the accuracy of national data, verify their international comparability, and ensure the validity of the international database. This chapter further outlines the handling of item non-response, data privacy and creation of the international database.

7.1 Ensuring data quality at the national level

In order to ensure high data quality, the UIS supported the NPMs by providing software[4] for data entry and basic data editing, as well as training sessions for the use of the software for WEI-SPS data. In addition, the UIS provided a *Data Entry Manual* (UNESCO-UIS, 2005d), which described in detail the data sources, entry and verification to be undertaken at the country level. The Institute also provided standard codebooks, which contained all the information needed about each variable, in electronic format for all data files.

The NPMs adapted the international standard codebooks to match the national versions of the questionnaires and to facilitate editing in the country. For example, the question about years of teacher education had to be adapted to specific circumstances in countries. The UIS verified the national codebooks, comparing them to the national questionnaire versions, before data entry began. This ensured that the electronic codebooks matched the national questionnaire formats and included meaningful outlier detection at the national level during data entry. In addition, the software ensured that no duplicate records were entered for schools or teachers.

Countries were strongly encouraged to use WinDEM for data entry and run the verification steps outlined in the *Data Entry Manual*. The NPMs submitted the data sets, copies of the administrative forms and a Survey Activities Report to the UIS. All countries participated in the training sessions, and all countries used WinDEM for data entry and the inherent quality control tools for verification.

To check that the WEI-SPS data had been entered with the requested precision, the NPMs were asked to organize double entry of data. A minimum of 10% or at least 50 copies of each questionnaire were to be entered twice and the resulting files compared. The differences between the two files had to stay below 1%. Where the difference exceeded this threshold, the NPMs were requested to review their data entry procedures and re-train their personnel.

[4] The software used was WinDEM. The copyright for this software and the accompanying documents belong to the IEA Data Processing Center, Germany and were provided to the UIS for the WEI Survey of Primary Schools.

7.2 Data processing at the UIS

Data processing for an international survey like WEI-SPS requires a set of standardized procedures to ensure comparability, while being flexible to cater to nationally-adapted questionnaires.

To meet these requirements, the UIS designed a data processing framework which was thoroughly tested during the pilot stage and further improved for the main survey. Data processing was organized in a way that:

- allowed the activation or deactivation of verification steps for countries. This enabled the UIS to re-run single verification steps upon each change undertaken to a national database;
- created easy-to-read error reports, which were sent back to countries for review and comment;
- permitted the automatic correction of errors in the data files; and
- allowed an easy re-run of the whole programme or specific verification steps after the implementation of feedback from countries.

7.3 Data verification procedures

Verification of data structure

The UIS checks ensured that all international variables were included in the national data file and that national variables were clearly labelled as such. National variables were not included in the international database but returned separately to the NPMs.

Any changes to the data file structure as a result of adapted questionnaires were discussed with the UIS during codebook verification. Such adaptations led to country-specific recoding, which was reviewed with the NPMs before implementation. For example, adaptations were made for questions about educational levels both in the school and teacher questionnaires. Every country asked these questions in a form that had been adapted to their national education system and programmes. Then the UIS recoded the data to fit them into the ISCED classification of educational programmes.

Verification of school and teacher identities

Every record in the WEI-SPS data sets had a unique ID. The uniqueness of each record was verified at the data entry stage in order to ensure that no record was duplicated in the data files.

The UIS verified that the sample status of the school had been correctly identified, and replacement schools were only entered if originally sampled schools did not participate. The school information was also cross-checked with the administrative forms and sampling files provided by the NPMs.

To ensure that all school IDs in the teacher file were also in the school file and vice versa, a set of link-checks was run between the school file and teacher file. Furthermore, the correct link between the teacher file and the *OTL Questionnaire* was verified. The administrative forms submitted by countries were compared against the information in the data files to ensure that no ID had been changed or records forgotten.

Valid values

For categorical variables (i.e. discrete variables), the data processing programmes checked whether frequencies came up with the answers only within the specified range. No value smaller or greater than the options specified in the questionnaire was allowed. The frequency distribution was also checked manually. For example, in the case where a question had four answer options, all four options had to be present in the data file. A frequency of zero for one particular option could indicate a problem during data entry or an inadequate national adaptation.

For numerical variables, outlier detection using both nationally and internationally defined thresholds was run.

Wrongly entered missing codes present another source of error in the data. The codes for missing or not applicable data, if entered incorrectly, were interpreted as valid data in the data file. Such cases were detected by running outlier detection programmes and, in some cases, by individual review of all cases containing codes similar to missing codes.

Consistency tests

Consistency tests included the validation of logical dependencies, verification of sums and percentages, and tests for answer patterns. In order to avoid having too many error records, cut-off points were set somewhat liberally. For example, verification between a teacher's age and the number of years of experience allowed for a teacher to start teaching at the age of 17 – an occurrence that was not the case in any country. Consistency tests were performed within and between files but only at the country level.

Following experiences with the pilot data, most questions were rephrased to remove the need for calculation by the respondents. All sums not equal to 100% were listed in an output, which had to be reviewed by NPMs. For the final data sets, sums between 95% and 105% were accepted. If a sum was below 95% or exceeded 105%, the answers to the entire question were recoded as missing data.

7.4 Quality assurance procedures at the UIS

To obtain high-quality, internationally-comparable data and to ensure the validity of the international database, the data underwent further tests after being compiled in an international data set.

The UIS produced tables containing univariate statistics for each variable, broken down by country. These tables were verified at the UIS for any exceptional results, which were addressed in close cooperation with the NPM. In a few cases, the exceptional results were due to ambiguous translations or concepts which were not well understood by teachers or school heads. In such cases, the variable was recoded as "not applicable". Any such occurrences were documented in the national deviations database *(see Appendix VI).*

Reports of inconsistencies and implausible values were sent to NPMs, who checked the data against the original instruments. Although all efforts were undertaken to go back to the source for checking and verification, it was not possible to go back to the schools in all cases. When such a complete verification was not possible, NPMs picked a sample of cases for further validation. If the inconsistencies were due to data entry problems, the NPM and the UIS determined the next course of action. For some countries and variables, answers were replaced with missing codes or data taken from administrative data sources. In some cases, the inconsistencies were deemed to be negligible and left in the data set.

Finally, all changes to national data were controlled by comparing the last version of the national data set with the version received from countries. In the case of multiple submissions, the latest national version was used for the comparison.

7.5 Data loss

The goal of the WEI-SPS was to create a complete database with few missing data. During data processing, the objective was to solve as many problems as possible and retrieve the ‘true value’, wherever feasible. However, where this was not achievable, the UIS data processing guidelines stipulated that the faulty data had to be replaced with missing codes: "omitted" for unit-based recoding and "not applicable" if an entire variable was replaced.

Furthermore, questionnaires containing too few data (ten variables on the school head or teacher questionnaires and three variables on the OTL) were entirely set to "not applicable". For all countries, five such cases were found.

Variables with a high percentage of "omitted" data were also set to "not applicable", as they could cause a non-response bias and threaten the international comparability of the variable. The threshold was 20% on the weighted data set. Tests using different weights for the variables in the school head file showed that the results hardly changed at all. Therefore, the same weight (school weight) was used for all variables in the school head file.

7.6 Data privacy

As there is no internationally agreed standard for privacy on school-related data, it was the responsibility of every NPM to point out any issues in their country. Generally, all national school IDs were deleted from the international database, so that identification of a specific school was not possible. Similarly, strata which contained only one school were collapsed with other strata to discourage identification.

For Malaysia, variables allowing the identification of the language of instruction and the school sector (public or private) were recoded as "not applicable" at the request of the NPM.

7.7 Creation of the international database

The international database contains the records for all sampled and replacement schools in participating countries, in addition to records for all Grade 4 teachers in participating schools. Apart from the international variables, the database contains the derived variables, composite variables *(see **Appendix III**)* and indices used in the main report, stratification variables and weight variables.

Schools which were not sampled by the procedures laid out in the sampling manual and approved by the sampling experts were removed from the database.

National variables were not included into the database. Countries were provided with their national variables in separate files.

Appendix I

Members of the WEI-SPS Steering Committee

Country representatives
Vivian Heyl (Chile)
Khalijah Mohamad (Malaysia)
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International experts
Aletta Grisay
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Raynald Lortie

Appendix II

Example of the National Adaptation and Translation (NAT) form

1	2	3	4	5	6	7	8	9	10	11
International Question Number and Answer Number (where applicable)	STEM of QUESTION and INSTRUCTIONAL TEXT	ANSWERS / ANSWER CATEGORIES	COLUMN HEADERS (where applicable)	Question Number in national version and Answer Number (where applicable)	STEM of QUESTION and INSTRUCTIONAL TEXT (after translation and adaptation)	ANSWERS / ANSWER CATEGORIES (after translation and adaptation)	COLUMN HEADERS (where applicable) (after translation and adaptation)	Back-translation of the national version	Justification for proposed changes	Queries/ Approval from the UIS/OECD
4	How far in <kilometres>, is your school from the following facilities?			4	¿A qué distancia en kilómetros, se encuentra su escuela de las siguientes instalaciones?					Ok
4.1		The nearest health centre/clinic		4.1		La clínica o centro médico más cercano		The nearest clinic or medical center		Ok
4.2		The nearest public library		4.2		La biblioteca pública más cercana		The nearest public library		Ok
4.3		The nearest school offering <lower-secondary education or equivalent (ISCED 2)> to which most of your students completing <primary education or equivalent (ISCED 1)> go		4.3		El centro educativo más cercano que ofrece Ciclo Básico de Educación Media a la cual asiste la mayoría de los estudiantes que tienen completada educación primaria		The nearest school offering Basic cycle of Middle Education to which most of your students completing primary education go	"Lower secondary education (ISCED 2)" is Basic Cycle of Middle Education	Ok

Note: Adapted from the OECD Programme for International Student Assessment (PISA) by Aletta Grisay.

Appendix III

Construction of composite scales from variables in the school and teacher questionnaires

Composite indices were used to summarize various responses given by school heads and teachers. The questions were selected on the basis of theoretical considerations and previous research. This appendix provides information on how the various responses were used to derive the indices presented in this report.

Some indices were nationally standardized so that the mean of the index for each country was 0 and the standard deviation was 1. Some other indices were internationally standardized so that the mean of the index value for all WEI-SPS countries was 0 and the standard deviation was 1. In the latter case, countries were given equal weight in the standardization process. The following is a list of indices used in the school and teacher questionnaires, along with explanations on how survey responses were used to derive them.

A. School questionnaire

Index of *Pupil's school engagement*

Schools heads were asked to provide their perceptions of how many of their primary pupils had the following characteristics:

- Enjoy being at school
- Work with enthusiasm
- Take pride in this school
- Value academic achievement
- Are cooperative
- Are respectful
- Value the education they receive
- Do their best to learn as much as possible
- Have high respect for their classroom teachers
- Have positive student-teacher relationships.

Responses to these questions were assigned a score of 1 for "none or few students", 2 for "most students" and 3 for "all students". The index of *Pupil's school engagement* was derived as a mean across these ten variables. Greater values indicate higher levels of school engagement and vice versa.

Table III.1. Variables of the index of *Pupil's school engagement*

Country	Pupils enjoy being at school	Pupils work with enthusiasm	Pupils take pride in this school	Pupilss value academic achievement	Pupils are cooperative	Pupils are respectful	Pupils value the education they can receive in this school	Pupils do their best to learn as much as possible	Pupils have high respect for their classroom teachers	Pupil-teacher relationships are positive	Explained Variance	Reliability of the index
Argentina	0.601	0.765	0.714	0.753	0.725	0.769	0.808	0.724	0.780	0.738	54.69	0.906
Brazil	0.551	0.704	0.623	0.782	0.673	0.741	0.809	0.721	0.766	0.781	51.71	0.893
Chile	0.650	0.691	0.739	0.717	0.724	0.770	0.779	0.663	0.754	0.764	52.75	0.900
India	0.750	0.724	0.719	0.723	0.742	0.744	0.763	0.765	0.777	0.687	54.71	0.907
Malaysia	0.679	0.676	0.772	0.732	0.793	0.786	0.789	0.744	0.749	0.753	56.00	0.912
Paraguay	0.689	0.717	0.694	0.712	0.666	0.678	0.792	0.722	0.739	0.762	51.56	0.895
Peru	0.668	0.745	0.773	0.770	0.606	0.725	0.817	0.723	0.753	0.726	53.71	0.903
Philippines	0.632	0.733	0.725	0.764	0.780	0.762	0.792	0.705	0.685	0.730	53.63	0.903
Sri Lanka	0.619	0.722	0.685	0.681	0.708	0.790	0.810	0.742	0.752	0.759	53.11	0.901
Tunisia	0.653	0.674	0.692	0.811	0.783	0.823	0.837	0.822	0.771	0.781	58.85	0.921
Uruguay	0.598	0.689	0.702	0.722	0.700	0.728	0.778	0.694	0.751	0.704	50.13	0.888

Index of *Pupil's positive behaviour*

School heads were asked to give their opinions on the extent to which their schools had to deal with a number of behavioural problems among primary grade pupils. Such behaviours included:

- Students arriving late at school
- Absenteeism
- Classroom disturbance
- Use of abusive language
- Vandalism
- Intimidation or bullying of students.

Responses were assigned a score of 1 for "a lot", 2 for "to some extent", 3 for "very little" and 4 for "not at all". The index of *Pupil's positive behaviour* was derived as a mean of these six recoded variables. Greater values indicate higher levels of positive behaviour perceived by school heads.

Note: Responses to these questions were originally reversed (i.e. low values representing more positive behaviours and vice versa).

Table III.2. Variables of the index of *Pupil's positive behaviour*

Country	Pupils arriving late at school	Pupils absenteeism	Classroom disturbance by pupils	Use of abusive language by pupils	Vandalism by pupils	Intimidation or bullying of pupils by pupils	Variance explained	Reliability of the index
Argentina	0.609	0.660	0.818	0.851	0.802	0.799	58.03	0.851
Brazil	0.639	0.678	0.807	0.830	0.756	0.805	57.12	0.851
Chile	0.697	0.798	0.859	0.867	0.859	0.878	68.66	0.908
India	0.544	0.595	0.650	0.821	0.796	0.731	48.56	0.776
Malaysia	2.355	1.216	0.740	0.633	0.561	0.495	39.26	0.687
Paraguay	0.760	0.750	0.867	0.888	0.898	0.886	71.17	0.917
Peru	0.564	0.456	0.705	0.764	0.753	0.781	46.42	0.748
Philippines	0.840	0.837	0.902	0.879	0.896	0.896	76.64	0.938
Sri Lanka	0.523	0.364	0.685	0.811	0.780	0.807	46.54	0.749
Tunisia			0.763	0.845	0.861	0.841	68.63	0.847
Uruguay	0.568	0.721	0.849	0.872	0.825	0.850	62.12	0.876

Index of *Teacher behavioural problems*

School heads were asked to what extent their schools had to deal with various behaviours of primary-level teachers. Such behaviours included:

- Arriving late at school
- Absenteeism
- Skipping classes.

Responses to these questions were assigned a score of 1 for "not at all", 2 for "very little", 3 for "to some extent" to 4 for "a lot". The index of *Teacher behavioural problems* was derived as a mean of these three variables. A high score indicates that school heads perceived teacher behaviour to be problematic and vice versa.

Table III.3. Variables of the index of *Teacher behavioural problems*

Country	Arriving late	Absenteeism	Skipping classes	Variance explained	Reliability of the index
Argentina	0.732	0.870	0.861	67.81	0.761
Brazil	0.840	0.862	0.744	66.70	0.741
Chile	0.865	0.906	0.902	79.47	0.870
India	0.826	0.791	0.834	66.82	0.750
Malaysia	0.755	0.730	0.794	57.80	0.632
Paraguay	0.922	0.950	0.957	89.01	0.938
Peru	0.794	0.797	0.804	63.75	0.711
Philippines	0.956	0.945	0.908	87.65	0.921
Sri Lanka	0.793	0.804	0.797	63.72	0.715
Tunisia	0.907	0.795	0.523	57.57	0.607
Uruguay	0.835	0.688	0.728	56.68	0.567

Index of *School head's instructional leadership*

School heads were asked how often they carried out other activities apart from teaching. These activities included:

- Observing teachers teaching and advising them on their technique
- Organising activities aimed at the professional development of teachers
- Supporting classroom teachers in lesson preparation and execution of school tasks
- Discussing the use of textbooks with classroom teachers
- Evaluating classroom teachers' records on progress of students
- Discussing new teaching methods with classroom teachers
- Providing suggestions and recommendations to classroom teachers as to how to improve student performance
- Stimulating classroom teachers to initiate instructional innovations
- Attending lessons given by classroom teachers
- Discussing impressions of classroom visits with classroom teacher.

Responses were assigned a score of 1 for "never or a few times a year", 2 for "about once a month", 3 for "about once a week" and 4 for "daily". The index of *School head's instructional leadership* was derived as a mean of these ten variables. The higher the index value, the more often school heads reported to carry out activities related to instructional leadership.

Table III.4. Variables of the index of *School head's instructional leadership*

Country	Observing teachers' teaching and advising them	Organising activities aimed at the professional development of teachers	Support classroom teachers in lesson preparation	Discuss the use of textbooks with teachers	Evaluate teachers records on pupils' progress	Discuss new teaching methods with teachers	Provide suggestions and recommendations to teachers as to how to	Stimulate classroom teachers to initiate instructional innovations	Attend lessons given by classroom teachers	Discuss impressions of classroom visits with teacher	Variance explained	Reliability of the index
Argentina	0.660	0.568	0.656	0.623	0.594	0.681	0.704	0.689	0.758	0.747	44.96	0.863
Brazil	0.696	0.535	0.733	0.719	0.726	0.757	0.776	0.722	0.619	0.722	49.52	0.882
Chile	0.689	0.476	0.694	0.656	0.729	0.746	0.761	0.742	0.732	0.767	49.56	0.882
India	0.582	0.532	0.586	0.719	0.517	0.744	0.670	0.748	0.626	0.702	41.96	0.843
Malaysia	0.679	0.676	0.634	0.751	0.662	0.810	0.802	0.769	0.690	0.719	52.04	0.894
Paraguay	0.675	0.372	0.599	0.591	0.591	0.699	0.742	0.716	0.638	0.675	40.67	0.833
Peru	0.522	0.572	0.602	0.637	0.571	0.726	0.628	0.711	0.645	0.714	40.45	0.831
Philippines	0.524	0.523	0.672	0.629		0.711	0.779	0.789	0.721	0.770	42.99	0.838
Sri Lanka	0.503	0.627	0.558	0.743	0.684	0.796	0.719	0.698	0.726	0.664	45.84	0.862
Tunisia	0.545		0.500	0.512	0.561	0.571	0.711	0.639	0.777	0.778	35.99	0.778
Uruguay	0.643	0.492	0.628	0.659	0.532	0.645	0.672	0.667	0.709	0.786	42.00	0.842

Index of *School head's administrative support*

School heads were asked how often they carried out the following activities:

- Public relations with the local community
- Keeping student progress records
- Dealing with disciplinary problems
- Organising extra-curricular activities for students
- Managing school facilities and resources
- Keeping the school accounts and budgeting
- Taking care of administrative and clerical duties
- Participating in other officially assigned activities (e.g. attending meetings away from school, mobilizing the community, elections, census and surveys)
- Coordinating the lesson programmes of different classes and grades
- Discussing student performance with classroom teachers
- Monitoring the progress of instructional innovations
- Coordinating special measures for students with learning problems.

Responses were assigned a score of 1 for "never or a few times a year", 2 for "about once a month", 3 for "about once a week" and 4 for "daily". The index of *School head's administrative support* was constructed as a mean of these 12 variables. The higher the index value, the more often school heads reported carrying out tasks related to administrative support.

Table III.5. Variables of the index of *School head's administrative support*

Country	Public relations	Keep student progress records	Deal with disciplinary problems	Organizing extra curricular activities	Manage school facilities	Keep school accounts	Administrative and clerical duties	Other official duties	Coordinate the lesson programmes	Discuss student performance	Monitor progress of instructinal innovations	Coordinate special measures for pupils with learning problems	Variance explained	Reliability of the index
Argentina	0.453	0.622	0.319	0.574	0.495	0.503	0.335	0.466	0.581	0.642	0.585	0.672	28.28	0.755
Brazil	0.481	0.577	0.424	0.709	0.440	0.428		0.367	0.681	0.666	0.694	0.599	29.90	0.775
Chile	0.458	0.643	0.492	0.495	0.367	0.359	0.355	0.487	0.710	0.683	0.597	0.699	29.61	0.760
India		0.465	0.486	0.640	0.609	0.450	0.383	0.332	0.433	0.587	0.578	0.546	24.39	0.702
Malaysia	0.364	0.504	0.451	0.515	0.572	0.569	0.576	0.412	0.734	0.692	0.667	0.733	33.41	0.805
Paraguay	0.403	0.587	0.446	0.555	0.555	0.443		0.394	0.589	0.641	0.652	0.627	27.56	0.751
Peru	0.444	0.440		0.646	0.436	0.388		0.466	0.540	0.628	0.619	0.524	23.19	0.675
Philippines	0.536	0.531		0.562	0.658	0.516	0.573	0.515	0.672	0.595	0.639	0.662	31.96	0.776
Sri Lanka	0.345	0.552	0.590	0.748	0.567	0.632		0.388	0.732	0.521	0.680	0.694	33.53	0.808
Tunisia	0.418	0.551			0.676	0.687	0.611		0.478	0.636	0.585	0.610	27.21	0.722
Uruguay	0.460	0.438	0.353	0.590	0.490	0.492	0.515	0.471	0.590	0.497	0.593	0.559	25.87	0.731

Index of *Social advantage of school intake*

Information used to construct this index came from both school heads and teachers. School heads were asked how many pupils in their primary grades were estimated to:

- Receive support for school attendance (e.g. a school uniform, textbooks, meals, financial support, etc.)
- Have parents with less-than-complete primary education.

Teachers also responded to questions about how many students in their primary grades were estimated to:

- Receive support for school attendance (e.g. a school uniform, textbooks, meals, financial support, etc.)
- Have not eaten (breakfast, lunch) when they come to school
- Are likely to have fewer than 25 books at home
- Have to work long hours to support their family income
- Have heavy housework duties at home
- Have serious problems in the home or neighbourhood (e.g. unemployment, alcoholism, drug abuse, violence etc.).

Responses were assigned a score of 1 for “no students”, 2 for “some students”, 3 for “most students” to 4 for “all students”.

In addition, school heads were asked how they would compare the family income of their pupils in primary grades with the national GDP per capita. Responses varied from “the average family income of my students is more than 4 times GDP per capita” (score of 1), “about twice GDP per capita” (score of 2), “about the same as GDP per capita” (score of 3), “about half GDP per capita” (score of 4) or “below the national poverty line” (score of 5).

Three steps were taken to construct the index of *Social advantage of school intake*. The first step was to reverse-code the responses so that, the higher the value, the lower the percentage of pupils with these characteristics. Secondly, the teacher responses were aggregated to obtain the mean values at the school level. Finally, factor analyses were conducted for each country using the recoded responses and these scores were used as the values of the index. A negative value indicates that social advantage of pupil intake of a school was below average in that country and vice versa.

Table III.6. Variables of the index of *Social advantage of school intake*

Country	Receive support for school attendance	Have not eaten when they come to school	Are likely to have fewer than 25 books at home	Have to work long hours to support their family income	Have heavy housework duties at home	Have serious problems in the home or neighbourhood	Student characteristic/support	Student characteristic/Parents Education	Family income in "GDP" per capita	Variance explained	Reliability of the index
Argentina	0.710	0.697	0.660	0.719	0.753	0.798	0.621	0.649	0.774	50.54	0.865
Brazil	0.682	0.492	0.509	0.559	0.580	0.528	0.654	0.678	0.611	35.04	0.764
Chile	0.573	0.741	0.748	0.510	0.663	0.788	0.504	0.651	0.713	43.81	0.834
India	0.575	0.467	0.542	0.658	0.684	0.606	0.561	0.384	0.457	30.91	0.714
Malaysia	0.580	0.413	0.580	0.611	0.693	0.470	0.580	0.526	--	31.64	0.682
Paraguay	0.561	0.464	0.115	0.561	0.624	0.503	0.536	0.520	0.557	26.30	0.603
Peru	0.723	0.359	0.448	0.494	0.675	0.382	0.721	0.681	0.747	35.99	0.761
Philippines	0.149	0.632	0.409	0.755	0.781	0.678	-0.031	0.460	0.561	30.62	0.600
Sri Lanka	0.437	0.687	-0.006	0.556	0.725	0.668	0.407	0.417	0.526	28.43	0.585
Tunisia	0.332	0.612	0.295	0.583	0.674	0.571	0.340	0.570	0.620	27.97	0.641
Uruguay	0.685	0.651	0.787	0.558	0.669	0.761	0.595	0.703	0.761	47.52	0.853

Indices of *School autonomy*

The *School Questionnaire* included questions about whether the school had significant responsibility in four areas: teacher hiring and compensation, school budget, student affairs, and instructional content. These groups of responses were used to construct four indices of *School autonomy*. Responses included four options to identify the responsible party: school's governing board; school head; classroom teacher or no responsibility of the school. If any of first three options were checked then a new variable was created and recoded as "1", meaning that the school had some kind of responsibility over this issue. If the last option was checked, then this new variable was recoded as "0", meaning the school had no responsibility over the issue.

The first index was *School autonomy on teacher hiring and compensation*, which compiled the mean values from responses about whether the school had significant responsibility for decisions related to teaching staff, such as:

- Selecting teachers for hire
- Firing teachers
- Establishing teachers' starting salaries
- Determining teachers' salary increases.

Table III.7. Variables of the index of *School autonomy on teacher hiring and compensation*

Country	Selecting teachers for hire	Firing teachers	Establishing teachers' starting salaries	Determining teachers' salary increases	Variance explained	Reliability of the index
Argentina	0.829	0.852	0.848	0.782	68.61	0.830
Brazil	0.752	0.770	0.881	0.884	67.95	0.805
Chile	0.858	0.900	0.912	0.901	79.67	0.913
India	0.933	0.955	0.964	0.947	90.22	0.964
Malaysia	0.804	0.866	0.861	0.552	61.04	0.679
Paraguay	0.676	0.814	0.914	0.897	69.02	0.819
Peru	0.557	0.754	0.882	0.872	60.40	0.750
Philippines	0.531	0.785	0.848	0.831	57.71	0.723
Sri Lanka	0.836	0.836	0.813	0.424	55.98	0.635
Tunisia		0.783	0.936	0.881	75.54	0.732
Uruguay	0.979	0.984	0.984	0.963	95.56	0.984

The second index, *School autonomy on school budget*, was created using responses about whether the school had significant responsibility for decisions related to:

- Formulating the school budget
- Deciding on budget allocations within the school.

Table III.8. Variables of the index of *School autonomy on school budget*

Country	Formulating the school budget	Deciding on budget allocations within the school	Variance explained	Reliability of the index
Argentina	0.938	0.938	88.04	0.863
Brazil	0.862	0.862	79.80	0.651
Chile	0.933	0.933	86.96	0.850
India	0.957	0.957	91.58	0.908
Malaysia	0.911	0.911	83.04	0.795
Paraguay	0.953	0.953	90.81	0.899
Peru	0.893	0.893	79.73	0.746
Philippines	0.915	0.915	83.73	0.806
Sri Lanka	0.893	0.893	74.38	0.743
Tunisia	0.813	0.813	66.14	0.482
Uruguay	0.910	0.910	82.86	0.793

The third index was *School autonomy on student affairs,* which was constructed using responses on whether the school had significant responsibility for decisions related to:

- Establishing student disciplinary policies
- Establishing student assessment policies
- Approving students for admittance to school.

Table III.9. Variables of the index of *School autonomy on student affairs*

Country	Establishing student disciplinary policies	Establishing student assessment policies	Approving students for admittance to the school	Variance explained	Reliability of the index
Argentina	0.840	0.854	0.534	57.38	0.593
Brazil	0.756	0.744	0.473	44.95	0.267
Chile	0.731	0.791	0.616	51.31	0.448
India	0.818	0.807	0.829	66.91	0.734
Malaysia	0.906	0.925	0.503	64.27	0.691
Paraguay	0.756	0.706	0.612	48.15	0.409
Peru	0.570	0.761	0.646	44.09	0.346
Philippines	0.635	0.735	0.651	45.60	0.393
Sri Lanka	0.441	0.801	0.758	47.03	0.423
Tunisia	0.755	0.841	0.733	60.48	0.671
Uruguay	0.860	0.816	0.664	61.53	0.660

The last index, *School autonomy on instructional content*, was created using responses on whether the school had significant responsibility for decisions related to:

- Choosing which textbooks are used
- Determining course content
- Deciding which courses to offer.

Table III.10. Variables of the index of *School autonomy on instructional content*

Country	Choosing which textbooks are used	Determining course content	Deciding which courses are offered	Variance explained	Reliability of the index
Argentina		0.883	0.879	54.58	0.580
Brazil	0.645	0.776	0.669	48.86	0.428
Chile	0.553	0.802	0.772	51.50	0.524
India	0.935	0.954	0.939	88.85	0.937
Malaysia	0.810	0.863	0.787	67.30	0.751
Paraguay	0.755	0.911	0.823	69.24	0.776
Peru	0.765	0.835	0.816	64.93	0.728
Philippines	0.847	0.910	0.860	76.12	0.842
Sri Lanka	0.713	0.902	0.896	70.81	0.791
Tunisia	0.828	0.923	0.885	77.38	0.853
Uruguay	0.782	0.869	0.841	69.13	0.776

Years of education of school staff

School heads were asked about the levels of educational attainment of school staff. The levels of education were converted into years of education using the following table:

Table III.11. Conversion of ISCED levels into years of education

Country	ISCED Levels				
	1	2	3	4	5
Argentina	6	9	12		17.5
Brazil	4	8	11		18
Chile	6	8	12		18
India	5	8	12	14	17
Malaysia	6	9	13	12	17
Paraguay	6	9	12	13.5	17.725
Peru	6	9	11		16.725
Philippines	6	9	10	12	15
Sri Lanka	5	9	12		16
Tunisia	6	10	13	15	17.5
Uruguay	6	9	12	13.5	16.7

The index of *Years of education of school staff* was created by multiplying the years of schooling and the percentage of school staff with the corresponding level of education.

B. Teacher questionnaire

Index of *Social advantage of classroom intake*

Teachers were asked to assess characteristics of their Grade 4 pupils, such as:

- Have serious problems in the home or neighbourhood (e.g. unemployment, alcoholism, drug abuse, violence etc.)
- Have heavy housework duties at home
- Have to work long hours to support their family income
- Are likely to have fewer than 25 books at home
- Have not eaten (breakfast, lunch) when they come to school
- Receive support for school attendance (e.g. a school uniform, textbooks, meals, financial support etc.).

Responses were assigned a score of 1 for "no students", 2 for "some students", 3 for "most students" to 4 for "all students". All variables were reverse-coded so that the higher the value, the lower the percentage of pupils perceived to have each of these characteristics. Factor scores were obtained by conducting an analysis of these variables for each country separately, which were then used as the values of the index of *Social advantage of classroom intake*. This index was nationally standardized so that it has a value of 0 and standard deviation of 1.

Table III.12. Variables of the index of *Social advantage of classroom intake*

Country	Have serious problems in home or neighbourhood	Have heavy housework duties at home	Have to work long hours to support their family income	Are likely to have fewer than 25 books at home	Have not eaten (breakfast, lunch) when they come to school	Receive support for school attendance	Variance explained	Reliability of the index
Argentina	0.644	0.684	0.634	0.726	0.771	0.795	50.63	0.787
Brazil	0.472	0.567	0.533	0.653	0.700	0.632	35.74	0.621
Chile	0.551	0.739	0.702	0.574	0.708	0.791	46.66	0.761
India	0.380	0.555	0.499	0.768	0.777	0.666	38.97	0.638
Malaysia	0.358	0.449	0.514	0.718	0.789	0.640	35.70	0.597
Paraguay	0.438	0.456	0.172	0.660	0.729	0.666	30.66	0.466
Peru	0.600	0.498	0.505	0.527	0.659	0.518	30.75	0.531
Philippines	0.237	0.689	0.404	0.766	0.775	0.727	40.19	0.619
Sri Lanka	0.233	0.654	0.132	0.626	0.804	0.750	35.02	0.461
Tunisia	0.178	0.638	0.247	0.674	0.773	0.641	32.72	0.473
Uruguay	0.656	0.648	0.739	0.564	0.687	0.754	45.92	0.759

Index of *Teacher complaints*

Teachers were asked how strongly they agreed or disagreed with the following statements:

- The level of student misbehaviour in my school interferes with my teaching
- Routine duties and paperwork interfere with my teaching
- Students coming late and skipping classes interfere with my teaching.

Responses were assigned a score of 1 for "strongly disagree", 2 for "disagree", 3 for "agree" and 4 for "strongly agree". The index of *Teacher complaints* was based on a mean of these three variables, so a greater value indicates that the level of perceived complaints was high and vice versa.

Table III.13. Variables of the index of *Teacher complaints*

Country	The level of student misbehaviour in my school interferes with my teaching;	Routine duties and paperwork interfere with my teaching;	Students coming late and skipping classes interfere with my teaching	Variance explained	Reliability of the index
Argentina	0.738	0.647	0.729	49.86	0.493
Brazil	0.784	0.578	0.722	49.01	0.475
Chile	0.745	0.649	0.745	51.05	0.513
India	0.679	0.739	0.725	51.08	0.520
Malaysia	0.700	0.564	0.755	45.93	0.395
Paraguay	0.724	0.714	0.678	49.81	0.495
Peru	0.785	0.701	0.651	51.04	0.517
Philippines	0.790	0.634	0.749	52.88	0.548
Sri Lanka	0.758	0.554	0.765	48.87	0.467
Tunisia	0.784	0.671	0.693	51.47	0.535
Uruguay	0.708	0.525	0.717	43.04	0.331

Index of *Emphasis on academic achievement*

Teachers were asked how strongly they agreed or disagreed with the following statements:

- Our school puts great emphasis on cognitive outcomes in basic school subjects
- Most of the classroom teachers in this school do their best to help students attain high achievement results
- Most of the classroom teachers in this school strive to ensure that all students do well
- It is important in our school that each student reaches his/her full potential
- The school head and staff have high expectations for students' achievement
- We consider as a priority in this school to help the weakest students to attain reasonable levels of achievement.

Responses were assigned a score of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". The index of *Emphasis on academic achievement* was derived as a mean of these six variables, so that a greater value indicates that the level of perceived emphasis on academic achievement was high and vice versa.

Table III.14. Variables of the index of *Emphasis on academic achievement*

Country	Our school puts great emphasis on cognitive outcomes in basic school subjects	Most of theteachers in this school do their best to help pupils attain high achievement results	Most of the teachers in this school strive to ensure that all pupils do well	It is important in our school that each pupil reaches his/her full potential	The school head and staff have high expectations for pupils' achievement	We consider as a priority in this school to help the weakest pupils	Variance explained	Reliability of the index
Argentina	0.625	0.802	0.758	0.738	0.820	0.740	56.21	0.843
Brazil	0.585	0.801	0.833	0.753	0.764	0.748	56.48	0.840
Chile	0.678	0.812	0.818	0.792	0.769	0.765	59.86	0.865
India	0.647	0.799	0.814	0.807	0.811	0.776	60.50	0.862
Malaysia	0.498	0.837	0.858	0.856	0.798	0.719	59.52	0.851
Paraguay	0.397	0.804	0.830	0.718	0.785	0.708	52.09	0.804
Peru	0.679	0.794	0.806	0.767	0.833	0.764	60.10	0.866
Philippines	0.598	0.802	0.819	0.801	0.751	0.778	58.01	0.846
Sri Lanka	0.660	0.832	0.807	0.728	0.774	0.685	56.25	0.842
Tunisia	0.472	0.758	0.799	0.832	0.747	0.669	52.22	0.798
Uruguay	0.528	0.776	0.780	0.736	0.769	0.737	52.74	0.817

Index of *Professional satisfaction*

Teachers were asked how strongly they agree or disagree with the following statements:

- I am satisfied with my teaching salary
- I receive a great deal of support from parents for the work I do
- Necessary classroom materials are available as needed by the staff
- I am given the support I need to teach the weakest students in my class(es)
- I am satisfied with my class(es) size(s).

Responses were assigned a score of 1 for "strongly disagree", 2 for "disagree", 3 for "agree", and 4 for "strongly agree". The index of *Professional satisfaction* was based on the mean of these five variables, so that a greater value indicates that the level of professional satisfaction was high and vice versa.

Table III.15. Variables of the index of *Professional satisfaction*

Country	I am satisfied with my teaching salary;	I receive a great deal of support from parents for the work I do	Necessary classroom materials are available as needed by the staff	I am given the support I need to teach the weakest students in my class(es)	I am satisfied with my class(es) size(s)	Variance explained	Reliability of the index
Argentina	0.481	0.669	0.701	0.753	0.388	37.76	0.569
Brazil	0.480	0.598	0.729	0.813	0.566	41.99	0.640
Chile	0.558	0.633	0.732	0.712	0.552	41.21	0.626
India	0.570	0.610	0.797	0.763	0.674	47.35	0.708
Malaysia	0.526	0.715	0.652	0.699	0.521	39.44	0.581
Paraguay	0.440	0.619	0.654	0.729	0.613	38.21	0.566
Peru	0.351	0.744	0.716	0.737	0.488	39.40	0.588
Philippines	0.624	0.585	0.673	0.543	0.589	36.53	0.559
Sri Lanka	0.582	0.549	0.659	0.695	0.558	37.39	0.571
Tunisia	0.631	0.611	0.663	0.702	0.448	38.10	0.577
Uruguay	0.527	0.644	0.672	0.773	0.605	42.18	0.652

Index of *Perceived pupil motivation*

Teachers were asked how strongly they agree or disagree with the following characteristics of their students:

- Enjoy being at school
- Work with enthusiasm
- Take pride in this school
- Value academic achievement
- Are cooperative
- Value the education they can receive in this school
- Do their best to learn as much as possible
- Show a sense of belonging to the class
- Are respectful.

Response scoring categories were 1 for "none or a few students", 2 for "most students" and 3 for "all students". The index of *Perceived pupil motivation* was based on a mean of these nine variables, so that greater values indicate that teachers perceived their pupils to be more motivated.

Table III.16. Variables of the index of *Perceived pupil motivation*

Country	Enjoy being at school	Work with enthusiasm	Take pride in this school	Value academic achievement	Are cooperative	Value the education they can receive in this school	Do their best to learn as much as possible	Show a sense of belonging to the class	Are respectful	Variance explained	Reliability of the index
Argentina	0.693	0.746	0.737	0.785	0.697	0.821	0.793	0.738	0.648	55.01	0.897
Brazil	4.443	0.846	0.754	0.646	0.611	0.525	0.499	0.361	0.316	49.37	0.867
Chile	0.613	0.648	0.664	0.731	0.662	0.793	0.711	0.662	0.648	46.70	0.856
India	0.721	0.763	0.721	0.764	0.736	0.768	0.767	0.671	0.653	53.35	0.893
Malaysia	0.629	0.693	0.700	0.743	0.749	0.819	0.743	0.704	0.718	52.36	0.885
Paraguay	0.573	0.624	0.638	0.680	0.653	0.745	0.713	0.603	0.617	42.47	0.829
Peru	0.618	0.679	0.684	0.691	0.631	0.749	0.694	0.665	0.635	45.27	0.848
Philippines	0.610	0.673	0.645	0.771	0.759	0.799	0.763	0.729	0.693	51.60	0.881
Sri Lanka	0.584	0.678	0.751	0.676	0.691	0.771	0.727	0.749	0.740	50.34	0.876
Tunisia	0.618	0.749	0.711	0.795	0.726	0.836	0.785	0.756	0.721	55.73	0.902
Uruguay	0.649	0.740	0.732	0.738	0.702	0.831	0.772	0.685	0.694	53.10	0.887

Perceived teacher status

This variable was derived by recoding the responses of teachers about how they thought primary school classroom teachers in their country compared in social status to other professionals with the same amount of education. The variable was recoded to have a value of -1 if the response was “lower social status”, 0 for “same social status” and 1 for “higher social status”.

Index of *Staff vision of school objectives*

Teachers were asked how strongly they agreed or disagreed with the following statements:

- My school head is supportive and encouraging towards the staff
- My school head lets staff members know what is expected of them
- My school head enforces school rules for student conduct
- Most of my colleagues share my beliefs about what the central mission of the school should be
- My school head knows what kind of school he/she wants and has communicated it to the staff
- There is a great deal of cooperation among staff members.

Responses were assigned a score of 1 for “strongly disagree”, 2 for “disagree”, 3 for “agree”, and 4 for “strongly agree”. The index of *Staff vision of school objectives* was based on a mean of these six variables, so that the higher the index, the more positive the teacher’s perception of the staff’s vision of school objectives and school heads’ behaviour.

Table III.17. Variables of the index of *Staff vision of school objectives*

Country	My school head is supportive and encouraging	My school head lets staff members know what is expected of them	My school head enforces school rules for pupilconduct	Most of my colleagues share my beliefs about what the central mission of the school	My school head knows what kind of school he/she wants and has communicated it to the staff	There is a great deal of cooperation among staff members	Variance explained	Reliability of the index
Argentina	0.787	0.768	0.743	0.634	0.829	0.637	54.26	0.828
Brazil	0.848	0.831	0.765	0.541	0.867	0.727	59.46	0.862
Chile	0.768	0.798	0.525	0.689	0.808	0.672	51.36	0.801
India	0.723	0.767	0.626	0.776	0.780	0.740	54.36	0.826
Malaysia	0.742	0.787	0.717	0.712	0.812	0.634	54.22	0.830
Paraguay	0.752	0.782	0.734	0.632	0.851	0.697	55.39	0.838
Peru	0.754	0.767	0.776	0.673	0.827	0.713	56.75	0.847
Philippines	0.725	0.736	0.732	0.731	0.844	0.724	56.24	0.844
Sri Lanka	0.738	0.818	0.800	0.767	0.749	0.737	59.11	0.861
Tunisia	0.736	0.775	0.732	0.616	0.824	0.612	51.86	0.806
Uruguay	0.811	0.806	0.765	0.611	0.871	0.659	57.65	0.849

Indices of *Learning styles*

Teachers were asked about how often a number of pupil learning activities occurred in their classes. Three indices were created using responses to these questions. The responses were assigned a score of 1 for "never or almost never", 2 for "in some lessons" and 3 for "in most lessons". Each index was derived by taking the mean of the responses to each set of questions.

The first index was *Learning style – active learning,* which was based on responses to these questions:

- Pupils work on problems for which they cannot use a standard solution
- Pupils explain how they have gone about solving a problem
- Pupils prepare projects or posters to be shown to the class
- Pupils are involved in planning what will be done in some lessons
- Pupils explore interesting side-aspects of the topic they learn
- Pupils work on thought-provoking issues.

Table III.18. Variables of theindex of *Learning style – active learning*

Country	Pupils work on problems for which they cannot use a standard solution	Pupils explain how they have gone about solving a problem	Pupils prepare projects or posters to be shown to the class	Pupils are involved in planning what will be done in some lessons	Pupils explore interesting side-aspects of the topic they learn	Pupils work on thought-provoking issues	Variance explained	Reliability
Argentina	0.394	0.577	0.575	0.579	0.686	0.697	35.16	0.653
Brazil	0.513	0.708	0.541	0.589	0.698	0.632	38.18	0.666
Chile	0.238	0.451	0.681	0.661	0.733	0.680	35.99	0.564
India	0.582	0.673	0.575	0.632	0.674	0.637	39.69	0.695
Malaysia	0.552	0.573	0.642	0.567	0.759	0.730	41.27	0.691
Paraguay	0.383	0.638	0.645	0.622	0.680	0.701	38.52	0.671
Peru	0.549	0.596	0.560	0.662	0.733	0.744	41.66	0.713
Philippines	0.572	0.647	0.562	0.649	0.692	0.694	40.71	0.681
Sri Lanka	0.519	0.676	0.522	0.635	0.629	0.744	39.18	0.685
Tunisia	0.516	0.599	0.509	0.598	0.642	0.725	36.33	0.679
Uruguay	0.290	0.558	0.628	0.626	0.723	0.714	36.92	0.646

The second index was *Learning style – group work*, which was based on responses to these questions:

- Pupils assess each other's work
- Pupils work in groups on an assignment
- I ask students to cooperate in small groups in doing assignments
- I ask students to provide one another with explanations, ask each other questions and correct each other's work.

Table III.19. Variables of the index of *Learning style – group work*

Country	Pupils assess each others work	Pupils work in groups on an assignment	Pupils cooperate in small groups in doing assignments	Ask pupils to provide one another with explanation	Variance explained	Reliability
Argentina	0.572	0.818	0.799	0.728	54.121	0.682
Brazil	0.701	0.664	0.640	0.692	45.522	0.602
Chile	0.680	0.799	0.805	0.703	56.079	0.746
India	0.713	0.738	0.657	0.641	47.385	0.631
Malaysia	0.653	0.691	0.682	0.639	44.421	0.507
Paraguay	0.678	0.726	0.711	0.708	49.832	0.655
Peru	0.634	0.752	0.717	0.706	49.490	0.644
Philippines	0.652	0.688	0.650	0.681	44.614	0.577
Sri Lanka	0.569	0.739	0.708	0.587	42.887	0.542
Tunisia	0.640	0.779	0.783	0.679	52.255	0.704
Uruguay	0.613	0.812	0.821	0.812	59.220	0.761

The third index was *Learning style – rote repetition*, which was based on responses to the following questions:

- The whole class repeats sentences that I say first
- Pupils copy texts from the blackboard
- Pupils recite or chant tables, formulae, etc.

Table III.20. Variables of the index of *Learning style – rote repetition*

Country	The whole class repeats sentences	Pupils copy texts from the blackboard	Pupils recite or chant tables, formulae etc	Variance explained	Reliability
Argentina	0.745	0.636	0.729	49.67	0.523
Brazil	0.730	0.628	0.772	50.79	0.512
Chile	0.818	0.725	0.713	56.81	0.614
India	0.740	0.697	0.654	48.69	0.461
Malaysia	0.736	0.700	0.621	47.20	0.371
Paraguay	0.762	0.574	0.738	48.48	0.450
Peru	0.765	0.681	0.765	54.44	0.583
Philippines	0.693	0.669	0.617	43.62	0.389
Sri Lanka	0.706	0.747	0.686	50.90	0.517
Tunisia	0.686	0.693	0.676	46.88	0.475
Uruguay	0.720	0.631	0.710	47.37	0.421

Indices of *Teaching practices*

Teachers were asked about the frequency in which a number of activities occurred in their classes. Three indices of *Teaching practices* were constructed using responses to these questions. Responses were assigned a score of 1 for "never or "almost never", 2 for "in some lessons" and 3 for "in most lessons". Each index was derived by taking the mean for responses to each set of questions.

The first index was *Teacher-centred teaching practice*s, which was based on the responses to the following questions:

- I only start with a new topic after all previous steps have been understood by all students
- I use examples to clarify the subject matter of the lesson
- I check regularly, by asking questions, whether or not the subject matter has been understood
- I see to it that assignments can be carried out correctly by almost all the pupils
- When students are working on assignments individually, I walk around and check their work
- When pupils are working individually, I provide extra explanations to the pupils who need it.

Table III.21. Variables of the index of *Teacher-centred teaching practices*

Country	Start with a new topic after all previous steps have been understood	Use examples to clarify the subject matter of the lesson	Check regularly whether or not the subject matter has been understood	See that assignments can be carried out correctly by almost all the pupils	When pupils are working on assignments walk around and check their work	When pupils are working individually provide extra explanations to the students who need it	Variance explained	Reliability
Argentina	0.418	0.607	0.601	0.557	0.537	0.639	31.88	0.547
Brazil	0.571	0.308	0.594	0.581	0.528	0.653	30.27	0.489
Chile	0.560	0.370	0.565	0.553	0.566	0.482	27.13	0.424
India	0.678	0.552	0.629	0.704	0.671	0.495	39.18	0.675
Malaysia	0.470	0.513	0.592	0.622	0.654	0.655	34.64	0.519
Paraguay	0.393	0.491	0.541	0.563	0.576	0.581	27.89	0.470
Peru	0.536	0.571	0.630	0.543	0.644	0.613	34.93	0.601
Philippines	0.344	0.502	0.405	0.636	0.605	0.661	29.04	0.511
Sri Lanka	0.428	0.497	0.524	0.551	0.629	0.661	30.66	0.493
Tunisia	0.402	0.442	0.472	0.664	0.659	0.580	29.87	0.477
Uruguay	0.458	0.398	0.489	0.630	0.481	0.619	26.96	0.469

The second index was *Strongly-structured teaching practices*, which was created on the basis of teacher responses to these statements:

- At the beginning of the lesson, I present a short summary of the previous lesson
- I explain the aims of a lesson at the beginning
- When I have finished teaching a topic, I give a summary of the contents taught
- I provide pupils with ample opportunity to practice newly taught subject matter.

Table III.22. Variables of the index of *Strongly-structured teaching practices*

Country	At the beginning, present a short summary of the previous lesson	Explain the aims of a lesson at the beginning of the lesson	Give a summary of the contents taught	Provide pupils ample opportunity to practice newly taught subject	Variance explained	Reliability
Argentina	0.690	0.612	0.693	0.463	38.64	0.437
Brazil	0.659	0.591	0.665	0.708	43.19	0.543
Chile	0.648	0.661	0.644	0.450	36.86	0.366
India	0.626	0.701	0.716	0.687	46.72	0.605
Malaysia	0.559	0.600	0.726	0.697	42.13	0.529
Paraguay	0.588	0.532	0.661	0.643	37.01	0.415
Peru	0.636	0.642	0.592	0.587	37.78	0.439
Philippines	0.672	0.637	0.717	0.617	43.82	0.543
Sri Lanka	0.691	0.424	0.622	0.502	32.41	0.278
Tunisia	0.713	0.538	0.718	0.282	34.81	0.401
Uruguay	0.652	0.471	0.696	0.519	35.00	0.369

The third index was *Pupil-centred teaching practices*, which was created based on teacher responses to these questions:

- I ask students to summarize out loud what I have explained
- While working with the students when they are doing assignments, I ask them first how they think of dealing with the assignment
- I offer students the opportunity to compare different strategies to solve problems
- When discussing assignments after they have been carried out, I first ask about the way the student has tackled the assignment before providing feedback.

Table III.23. Variables of the index of *Pupil-centred teaching practices*

Country	Ask pupils to summarize out loud what I have explained	Ask pupils first how they think of dealing with the assignment	Offer pupils the opportunity to compare different strategies to solve problems	Ask first about the way pupils has tackled the assignment before providing feedback	Variance explained	Reliability
Argentina	0.582	0.692	0.681	0.676	43.45	0.574
Brazil	0.635	0.719	0.676	0.732	47.84	0.632
Chile	0.516	0.735	0.702	0.772	47.37	0.646
India	0.645	0.736	0.702	0.700	48.49	0.637
Malaysia	0.621	0.673	0.744	0.689	46.67	0.636
Paraguay	0.574	0.742	0.633	0.734	45.50	0.608
Peru	0.567	0.747	0.713	0.732	48.09	0.645
Philippines	0.640	0.728	0.705	0.749	49.94	0.679
Sri Lanka	0.488	0.697	0.683	0.673	41.07	0.500
Tunisia	0.539	0.698	0.590	0.678	39.63	0.531
Uruguay	0.276	0.756	0.675	0.709	40.15	0.468

C. Opportunity to Learn (OTL) in reading

Index of *Difficulty of reading materials*

Teachers were asked how they would compare the sample text to the reading materials that they typically used in their Grade 4 reading lessons in terms of length, vocabulary, syntax and content. For the question on length, responses were assigned a score of 1 for "much shorter", 2 for "somewhat shorter", 3 for "about the same length", 4 for "somewhat longer" and 5 for "much longer". Responses to the question about vocabulary had a value of 1 for "much lower level of difficulty", 2 for "somewhat lower level of difficulty", 3 for "about same level of difficulty", 4 for "somewhat higher level of difficulty" and 5 for "much higher level of difficulty". Responses to the question about syntax had a value of 1 for "much simpler sentences", 2 for "somewhat simpler sentences", 3 for "about same level of complexity", 4 for "somewhat more complex sentences" and 5 for "much more complex sentences". Similarly, responses to the question on content had a value of 1 for "much less demanding", 2 for "somewhat less demanding", 3 for "about equally demanding", 4 for "somewhat more demanding" and 5 for "much more demanding". The index of *Difficulty of reading materials* was derived as an average of these four variables.

Table III.24. Variables of the index of *Difficulty of reading materials*

Country	Length	Vocabulary	Syntax	Content	Variance explained	Reliability
Argentina	0.686	0.815	0.840	0.837	63.49	0.803
Brazil	0.697	0.798	0.813	0.815	61.18	0.787
Chile	0.709	0.808	0.814	0.837	62.96	0.798
India	0.586	0.773	0.771	0.478	44.04	0.572
Malaysia	0.803	0.872	0.870	0.836	71.52	0.860
Paraguay	0.659	0.783	0.796	0.815	58.66	0.755
Peru	0.744	0.729	0.808	0.774	58.43	0.761
Philippines	0.707	0.845	0.836	0.817	64.55	0.689
Sri Lanka	0.617	0.783	0.818	0.652	52.20	0.814
Uruguay	0.426	0.814	0.802	0.814	53.78	0.684

Index of *Variety of reading materials*

Teachers were asked what types of materials they might use in reading lessons at Grade 4 and how often. The types of written materials were:

- Fables, or similar types of narrative texts with imaginary characters and situations (e.g. speaking animals, magic objects etc.)
- Narrative texts with real-life characters and situations (e.g. stories about children, life of famous people etc.)
- Information texts intended at describing or explaining things (e.g. what is a volcano, how bees produce honey etc.)
- Authentic documents (e.g. timetables, advertisements, forms, maps, labels, instructions etc.)

Responses had a value of 1 for "never or hardly ever", 2 for "sometimes", 3 for "often" and 4 for "very often (several lessons a week)". The index of *Variety of reading materials* was derived by taking the average across these four variables.

Table III.25. Variables of the index of *Variety of reading materials*

Country	Fables, or similar types of narrative texts with imaginary characters and situations	Narrative texts with real-life characters and situations	Information texts intended at describing or explaining things	Authentic documents	Variance explained	Reliability
Argentina	0.508	0.647	0.733	0.731	43.73	0.571
Brazil	0.619	0.711	0.747	0.778	51.28	0.684
Chile	0.667	0.705	0.727	0.737	50.29	0.668
India	0.683	0.760	0.750	0.684	51.85	0.686
Malaysia	0.642	0.753	0.713	0.650	47.75	0.632
Paraguay	0.649	0.739	0.759	0.743	52.37	0.696
Peru	0.500	0.666	0.736	0.744	44.74	0.579
Philippines	0.685	0.753	0.800	0.732	55.26	0.729
Sri Lanka	0.683	0.802	0.741	0.662	52.41	0.693
Uruguay	0.452	0.531	0.683	0.675	35.19	0.377

Indices of *Emphasis on types of reading activities*

Teachers who taught reading were given a set of sample questions regarding the text and asked to determine the extent to which similar questions or activities would be emphasized in their reading classes. The responses were assigned a score of 1 for "no emphasis", 2 for "little emphasis", 3 for "some emphasis" and 4 for "major emphasis". Based on a principal component analysis, the sample questions were divided into four types of activities. The four indices described below were created by averaging the responses for each set of questions, so that higher values of the index imply that more emphasis was given to the respective type of activities in reading lessons.

Index of *Emphasis on creative activities*

The sample questions used to form this index asked pupils to:

- Integrate ideas across a text to provide interpretations of a character's traits, intentions or feelings, and to provide support based on the text
- Write a short composition based on the text
- Organise oral activities in groups based on the text (i.e. Play the scene when the mice are panicked)
- Organize a discussion on whether this story is only fiction, or if it could have happened in the real world.

Table III.26. Variables of the index of *Emphasis on creative activities*

Country	Integrate ideas across a text to provide interpretations of a character's traits	Write a short composition based on the text	Play the scene when the mice are panicked	Organize a discusion on whether this story is only fiction, or if it could have happened in the real world	Variance explained	Reliability
Argentina	0.699	0.605	0.762	0.773	50.85	0.677
Brazil	0.673	0.745	0.824	0.803	58.29	0.758
Chile	0.661	0.666	0.751	0.788	51.65	0.684
India	0.635	0.799	0.757	0.749	54.40	0.719
Malaysia	0.642	0.765	0.747	0.788	54.42	0.717
Paraguay	0.680	0.753	0.808	0.801	58.11	0.753
Peru	0.763	0.736	0.762	0.789	58.20	0.758
Philippines	0.717	0.809	0.818	0.812	62.45	0.798
Sri Lanka	0.580	0.809	0.641	0.794	50.80	0.662
Uruguay	0.647	0.540	0.782	0.803	49.15	0.654

Index of *Emphasis on grammar and other formal exercises*

The sample questions used for creating this index were generally about asking pupils to:

- Reproduce or memorize the definition of difficult words
- Apply grammar rules using examples from the text.

Table III.27. Variables of the index of *Emphasis on grammar and other formal exercises*

Country	Reproduce or memorize the definition of difficult words;	Apply grammar rules using examples from the text		Variance explained	Reliability
		Turn into plural a sentence	Change some verbs into present tense		
Argentina	0.667	0.853	0.812	61.11	0.673
Brazil	0.772	0.869	0.855	69.46	0.778
Chile	0.715	0.842	0.850	64.78	0.722
India	0.739	0.803	0.794	60.73	0.676
Paraguay	0.697	0.851	0.832	63.40	0.703
Peru	0.722	0.829	0.811	62.25	0.693
Philippines	0.747	0.844	0.839	65.79	0.735
Sri Lanka	0.701	0.850	0.880	66.29	0.746
Uruguay	0.610	0.852	0.844	60.32	0.651

Index of *Emphasis on locating information*

The questions used for this index were about asking pupils to:

- Locate and reproduce explicitly stated facts about people, places and animals using just one of the sentences in the text
- Locate and reproduce explicitly stated facts from several passages in the text.

Table III.28. Variables of the index of *Emphasis on locating information*

Country	Locate and reproduce explicitly stated facts about people, places from one of the sentences in the text		Locate and reproduce explicitly stated facts from several passages in the text	Variance explained	Reliability
	What was the name of the old man?	Where did the old man put the mice when he picked them up ?			
Argentina	0.846	0.883	0.728	67.54	0.760
Brazil	0.840	0.891	0.791	70.83	0.791
Chile	0.790	0.820	0.641	56.92	0.614
India	0.760	0.800	0.698	56.80	0.620
Malaysia	0.816	0.856	0.626	59.71	0.654
Paraguay	0.821	0.859	0.614	59.63	0.654
Peru	0.784	0.853	0.636	58.23	0.639
Philippines	0.793	0.863	0.698	62.03	0.689
Sri Lanka	0.868	0.845	0.797	70.08	0.785
Uruguay	0.853	0.877	0.693	65.90	0.738

Index of *Emphasis on interpreting the meaning of the text*

The sample questions used for this index were about asking pupils to:

- Locate the sentence with relevant information and use it to make inferences clearly suggested by the text
- Make interpretations that go beyond single sentences, such as identifying the mood of an entire story
- Make interpretations about time sequence or causal relationships across the text
- Make interpretations based on different aspects of characters and events, supporting the inference with evidence from the text
- Find the moral of the story, or to comment on it.

Table III.29. Variables of the index of *Emphasis on interpreting the meaning of the text*

Country	Locate the sentence with relevant information and use it to make inferences clearly suggested by the text	Make interpretations that go beyond single sentences	Make interpretations about time sequence or causal relationships across the text		Make interpretations based on different aspects of characters and events, supporting the inference with evidence from the text	Find the moral of the story, or to comment on it	Variance explained	Reliability
			Why was there no mouse caught in the mousetraps?	How many days did the old man spend to get rid of the mice?	Do you think the mice were easy to fool? Give one reason why or why not			
Argentina	0.616	0.707	0.754	0.618	0.689	0.616	44.75	0.748
Brazil	0.618	0.753	0.797	0.724	0.716	0.654	50.82	0.805
Chile	0.576	0.702	0.753	0.619	0.719	0.548	43.20	0.727
India	0.614	0.661	0.678	0.644	0.731	0.546	42.02	0.723
Malaysia	0.595	0.627	0.725	0.696	0.690	0.623	43.72	0.739
Paraguay	0.708	0.727	0.768	0.690	0.687	0.593	48.66	0.784
Peru	0.609	0.653	0.736	0.699	0.721	0.562	44.39	0.744
Philippines	0.714	0.729	0.781	0.632	0.746	0.679	51.15	0.806
Sri Lanka	0.576	0.709	0.732	0.639	0.714	0.675	45.74	0.760
Uruguay	0.482	0.646	0.719	0.581	0.712	0.459	37.02	0.640

Index of *Difficulty of reading activities*

For the same set of sample questions that were used to construct the indices on types of reading activities, teachers were also asked to rate the level of difficulty for each activity. Response scores were 1 for “too easy”, 2 for “appropriate” or 3 for “too difficult” for a Grade 4 student. An index of *Difficulty of reading activities* was derived by taking the average across the responses to all these questions.

Table III.30. Variables of the index of *Difficulty of reading activities*

Country	Locate and reproduce explicitly stated facts about people, places from one of the sentences in the text		Locate and reproduce explicitly stated facts from several passages in the text	Locate the sentece with relevant information and use it to make inferences clearly suggested by the text	Questions that ask students to make interpretations that go beyond single sentences, such as identifying the mood of an entire story	Questions that ask students to make interpretations about time sequence or causal relationships across the text	
	What was the name of the old man?	Where did the old man put the mice when he picked them up ?				Why was there no mouse caught in the mousetraps?	How many days did the old man spend to get rid of the mice?
Argentina	0.307	0.387	0.436	0.450	0.488	0.498	0.489
Brazil	0.425	0.445	0.507	0.497	0.505	0.480	0.516
Chile	0.111	0.229	0.324	0.346	0.483	0.468	0.437
India	0.208	0.343	0.446	0.453	0.562	0.523	0.431
Paraguay	0.390	0.441	0.440	0.506	0.549	0.542	0.542
Peru	0.359	0.467	0.481	0.469	0.571	0.572	0.547
Philippines	0.207	0.348	0.514	0.519	0.476	0.591	0.490
Sri Lanka	0.302	0.330	0.424	0.554	0.608	0.573	0.524
Uruguay	0.294	0.358	0.434	0.382	0.301	0.507	0.434

Country	Questions that ask students to *make interpretations based on different aspects of characters and events*, supporting the	Questions that ask students to *integrate ideas across a text to provide interpretations of a character's traits, intentions or feelings*, and to give text based	Questions that ask students to *find the moral of the story,* or to comment on it	Questions that ask students to reproduce or memorize the *definition of difficult words*	Questions that ask students to *apply grammar rules* using examples from the text	
					Turn into plural a sentence	Change into the present tense some verbs
Argentina	0.510	0.471	0.381	0.388	0.508	0.475
Brazil	0.529	0.483	0.477	0.433	0.534	0.488
Chile	0.555	0.484	0.458	0.350	0.400	0.459
India	0.575	0.588	0.541	0.491	0.506	0.509
Paraguay	0.559	0.485	0.537	0.451	0.558	0.513
Peru	0.548	0.512	0.552	0.456	0.568	0.555
Philippines	0.628	0.609	0.574	0.428	0.552	0.475
Sri Lanka	0.630	0.630	0.611	0.495	0.601	0.615
Uruguay	0.518	0.438	0.360	0.150	0.297	0.362

Country	Questions that ask students to *write a short composition* based on the text	Questions that ask groups of students to *organise oral activities* based on the text		Variance explained	Reliability
		Using the dialog in the text, play the scene when the mice are panicked	Organise a discussion on whether this story is only fiction, or if it could have happened in the real world		
Argentina	0.444	0.378	0.356	19.32	0.704
Brazil	0.502	0.473	0.444	23.48	0.762
Chile	0.475	0.464	0.419	17.47	0.659
India	0.528	0.535	0.437	23.88	0.780
Paraguay	0.558	0.570	0.469	25.97	0.801
Peru	0.569	0.513	0.472	26.68	0.813
Philippines	0.582	0.546	0.495	26.27	0.803
Sri Lanka	0.602	0.472	0.517	29.14	0.832
Uruguay	0.354	0.313	0.237	13.73	0.562

Index of *Grade where (the sample question was) appropriate*

For questions described in the index of types and difficulty of reading activities, teachers were asked for which grade they considered the question would be appropriate. Responses were recoded so that they varied from 1 to 7 to respond to the respective grade level for which the teacher regarded the material to be appropriate. The index of *Grade where appropriate* was created by taking the average value across the responses.

Table III.31. Variables of the index of *Grade where appropriate*

Country	Reliability
Argentina	0.783
Brazil	0.890
Chile	0.733
India	0.871
Malaysia	0.800
Paraguay	0.875
Peru	0.851
Philippines	0.836
Sri Lanka	0.913
Uruguay	0.604

Appendix IV

Sample design summary for each participating country

Argentina

Argentina's desired target population included all schools teaching Grade 4 pupils in Spanish. However, schools with a total enrolment of less than 26 pupils in primary grades were excluded from the desired target population. These 4,681 excluded schools contain 1.5% of the Grade 4 pupil population and 1.4% of the total pupil population. The population resulting from the exclusions constituted Argentina's nationally-defined target population.

The sampling frame in Argentina was based on the 2002 annual survey conducted by the Ministry of Education, Science and Technology. It included 762,093 Grade 4 pupils in 16,900 schools. Argentina used a one-stage stratified sample design. Schools were stratified, both explicitly and implicitly, and selected with equal probabilities within each stratum.

Stratification

Explicit strata

Explicit stratification was based on regions (3 regions), school type (public or private) and school size (5 categories). The size categories were collapsed into fewer than five categories for some of the strata defined by region and school type. As a result, Argentina's sample design included 24 explicit strata.

Implicit strata

The target population was further stratified implicitly into 24 provinces.

Benchmark categories

Table III.1 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.1. Benchmark totals for schools – Argentina

Benchmark category	Schools	
	SPS frame (2002)	SPS benchmark total (2005)
Centre-Public	7,393	7,191
Centre-Private	2,820	2,761
North-Public	5,263	5,219
North-Private	488	537
South-Public	797	808
South-Private	139	146
Total	**16,900**	**16,662**

Sample allocation

Argentina's school sample allocation is presented in Table III.2.

Table IV.2. Sample allocation – Argentina

Stratum	Region	School type	Size stratum	Number of schools	
				Eligible	Sampled
1	Centre	Public	Size stratum 1 (with largest schools)	582	39
2			Size stratum 2	769	42
3			Size stratum 3	983	46
4			Size stratum 4	1,389	54
5			Size stratum 5 (with smallest schools)	3,670	96
6		Private	Size stratum 1 (with largest schools)	240	31
7			Size stratum 2	344	34
8			Size stratum 3	440	38
9			Size stratum 4	606	45
10			Size stratum 5 (with smallest schools)	1,190	67
Total: Centre				**10,213**	**492**
11	North	Public	Size stratum 1 (with largest schools)	212	30
12			Size stratum 2	307	32
13			Size stratum 3	430	35
14			Size stratum 4	788	44
15			Size stratum 5 (with smallest schools)	3,526	108
16		Private	Size stratum 1 (with largest schools)	70	39
17			Size stratum 2	114	47
18			Size stratum 3 (with smallest schools)	304	78
Total: North				**5,751**	**413**
19	South	Public	Size stratum 1 (with largest schools)	95	30
20			Size stratum 2	123	33
21			Size stratum 3	169	38
22			Size stratum 4 (with smallest schools)	410	61
23		Private	Size stratum 1 (with largest schools)	36	36
24			Size stratum 2 (with smallest schools)	103	86
Total: South				**936**	**284**
Total: Argentina				**16,900**	**1,189**

Brazil

Brazil's desired target population covered Grade 4 pupils taught in Portuguese.

Brazil excluded small schools, defined as schools with only one or two pupils enrolled in Grade 4, from its desired target population. These school-level exclusions accounted for 1.3% of all pupils from Grades 1 through 4 and 0.5% of Grade 4 pupils. Also excluded were pupils with special needs (mentally or functionally disabled) in regular classrooms. These within-school exclusions accounted for 0.2% of all Grade 4 pupils. Thus, Brazil's nationally-defined target population of schools is the population resulting from the above exclusions.

Brazil used a single-level sample frame based on enrolment data for the year 2003 from the Ministry of Education and the National Institute for Educational Studies and Research (MEC/INEP). The sample frame provided complete coverage of the nationally-defined target population comprising 4,179,470 Grade 4 pupils in 127,441 schools. The nationally-defined target population comprised approximately 97% of the nationally-desired target population.

Brazil employed a one-stage stratified (explicitly and implicitly) sample design. A systematic sample of schools was selected with equal probabilities in each stratum.

Stratification

Explicit strata

Brazil's target population was explicitly stratified by size of school (5 categories), region (5 regions), urbanization (urban or rural), and school type (public or private). The size categories were collapsed into fewer than five categories for some of the strata defined by region, urbanization and school type. As a result, Brazil's sample design included 47 explicit strata.

Implicit strata

The target population was further implicitly stratified into 27 States.

Benchmark categories

Table III.3 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.3. Benchmark totals for schools – Brazil

Benchmark category	Schools	
	SPS frame (2003)	SPSP benchmark total (2005)
North Urban Public	3,384	3,383
North Urban Private	638	712
North Rural Public	13,407	12,702
North Rural Private	13	17
Northeast Urban Public	13,079	12,425
Northeast Urban Private	5,819	5,903
Northeast Rural Public	40,617	37,735
Northeast Rural Private	144	140
Middle West Urban Public	3,412	3,315
Middle West Urban Private	1,271	1,324
Middle West Rural Public	1,919	1,736
Middle West Rural Private	10	10
Southeast Urban Public	13,277	13,536
Southeast Urban Private	6,291	6,520
Southeast Rural Public	9,179	8,261
Southeast Rural Private	57	46
South Urban Public	7,506	7,580
South Urban Private	1,304	1,353
South Rural Public	6,098	5,384
South Rural Private	16	16
Total	**127,441**	**122,098**

Sample allocation

Brazil's initial sample size of 646 schools was allocated as illustrated in Table III.4.

Table IV.4. Sample allocation – Brazil

Stratum	Region	Area	Administration type	Size stratum	Eligible schools	Sampled schools
1	North	Urban	Public	Largest Schools	252	9
2				2nd Largest Schools	402	11
3				3rd Largest Schools	547	12
4				4th Largest Schools	739	14
5				5th Largest Schools	1,444	21
6			Private	Largest Schools	638	4
7		Rural	Public	Largest Schools	1,142	8
8				2nd Largest Schools	3,427	11
9				3rd Largest Schools	8,838	18
10			Private	Largest Schools	13	2
Total	**North**				**17,442**	**110**
11	Northeast	Urban	Public	Largest Schools	898	11
12				2nd Largest Schools	1,445	13
13				3rd Largest Schools	2,026	14
14				4th Largest Schools	2,876	17
15				5th Largest Schools	5,834	26
16			Private	Largest Schools	5,819	12
17		Rural	Public	Largest Schools	1,725	7
18				2nd Largest Schools	3,543	8
19				3rd Largest Schools	5,658	10
20				4th Largest Schools	9,489	13
21				5th Largest Schools	20,202	20
22			Private	Largest Schools	144	2
Total	**Northeast**				**59,659**	**153**
23	Middle West	Urban	Public	Largest Schools	271	12
24				2nd Largest Schools	416	14
25				3rd Largest Schools	565	16
26				4th Largest Schools	741	18
27				5th Largest Schools	1,419	26
28			Private	Largest Schools	1,271	11
29		Rural	Public	Largest Schools	1,919	10
30			Private	Largest Schools	10	2
Total	**Midwest**				**6,612**	**109**
31	Southeast	Urban	Public	Largest Schools	923	18
32				2nd Largest Schools	1,437	20
33				3rd Largest Schools	1,966	23
34				4th Largest Schools	2,820	27
35				5th Largest Schools	6,131	43
36			Private	Largest Schools	1,149	7
37				2nd Largest Schools	5,142	13
38		Rural	Public	Largest Schools	9,179	11
39			Private	Largest Schools	57	2
Total	**Southeast**				**28,804**	**164**
40	South	Urban	Public	Largest Schools	545	12
41				2nd Largest Schools	849	14
42				3rd Largest Schools	1,172	15
43				4th Largest Schools	1,612	18
44				5th Largest Schools	3,328	28
45			Private	Largest Schools	1,304	8
46		Rural	Public	Largest Schools	6,098	13
47			Private	Largest Schools	16	2
Total	**South**				**14,924**	**110**
Total					**127,441**	**646**

Chile

Chile's nationally-desired target population comprised all schools teaching Grade 4 in Spanish.

Chile's nationally-defined target population excluded 7,109 pupils from the nationally-desired target population. These exclusions consisted of 6,211 pupils in 2,236 very small schools and 898 pupils in 52 schools located in isolated and/or rural areas. Very small schools were defined as schools with fewer than six pupils enrolled in Grade 4. These school-level exclusions accounted for 2.4% of Grade 4 pupils.

Chile employed a single-level sample frame, constructed from 2003 enrolment data from the Ministry of Education Enrolment Data Base. The frame contains 6,103 schools in Chile's defined target population. According to the sample frame information, there are 283,506 Grade 4 pupils in these schools. Chile's nationally-defined target population of schools comprises 97.6% of the nationally- desired target population.

Chile used a one-stage stratified sample design. Schools were stratified explicitly; no implicit stratification variables were employed. Subsequently, schools were systematically selected with equal probabilities within each stratum.

Stratification

Explicit strata

Chile's target population was explicitly stratified by size of school (5 categories), urbanization (urban or rural), and school type (public institutions, government-dependent private institutions or independent private institutions). The size categories were collapsed into fewer than five categories for some of the strata defined by urbanization and school type. As a result, Chile's sample design included 21 explicit strata.

Implicit strata

The target population was not implicitly stratified.

Benchmark categories

Table III.5 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.5. Benchmark totals for schools – Chile

Benchmark category	Schools	
	SPS frame (2003)	SPS benchmark total (2005)
Public urban	1,709	1,734
Public rural	1,646	1,408
Government-dependent private – urban	1,849	2,043
Government-dependent private – rural	393	381
Independent private – urban	486	382
Independent private – rural	20	15
Total	**6,103**	**5,863**

Sample allocation

Chile's initial sample size of 668 schools was allocated as illustrated in Table III.6.

Table IV.6. Sample allocation – Chile

Stratum	Administration type	Area	Size stratum	Eligible schools	Sampled schools
1	Public	Urban	Largest Schools	157	27
2			2nd Largest Schools	215	30
3			3rd Largest Schools	282	33
4			4th Largest Schools	362	37
5			5th Largest Schools	693	55
6		Rural	Largest Schools	90	6
7			2nd Largest Schools	175	7
8			3rd Largest Schools	258	8
9			4th Largest Schools	398	10
10			5th Largest Schools	725	14
Total	**Public**			**3,355**	**227**
11	Private government-dependent	Urban	Largest Schools	120	27
12			2nd Largest Schools	217	33
13			3rd Largest Schools	274	36
14			4th Largest Schools	414	44
15			5th Largest Schools	824	67
16		Rural	Largest Schools	71	4
17			2nd Largest Schools	322	9
Total	**Private government-dependent**			**2,242**	**220**
18	Private independent	Urban	Largest Schools	60	49
19			2nd Largest Schools	115	62
20			3rd Largest Schools	311	106
21		Rural	Largest Schools	20	4
Total	**Private independent**			**506**	**221**
Grand total				**6,103**	**668**

India

India's defined target population was limited to the states of Assam, Madhya Pradesh, Rajasthan and Tamil Nadu. In each state the desired target population consisted of all schools with a Grade 4 class. Within these four states, there were no exclusions from the nationally-defined target population.

India used a double-level sample frame that was constructed using provisional enrolment data extracted from the 7th All India School Education Survey (NCERT, reference date 30/9/2002). The sample frame provided complete coverage of the defined target population comprising 4,283,957 Grade 4 pupils in 201,814 eligible schools.

It is important to note that the results from the survey for India can only be generalized to the total eligible school population of the four states. The sample for India is not a probability sample of the total eligible school population in the entire country. Hence, the survey results cannot be legitimately used to produce estimates relative to all of India's schools with a Grade 4 population.

India used a two-stage stratified sample design. The primary sampling unit (PSU) was the district. Within each of the four Indian states, districts were selected with probability proportional to school size, where the measure of school size was the number of Grade 4 pupils in the target population of schools. Subsequently, eligible schools in each selected district were systematically selected with equal probabilities.

At the second stage of selection, the eligible schools were stratified, explicitly and implicitly, and were systematically selected with equal probabilities within each stratum.

Stratification

Explicit strata

The target population for India was explicitly stratified by state (Assam, Madhya Pradesh, Rajasthan and Tamil Nadu), size of school (5 categories) and urbanization (urban or rural). As a result, the sample design for India included 40 explicit strata.

Implicit strata

The target population within the selected districts was implicitly stratified by type of school management (government and local body, private aided or private unaided).

Sample allocation

66 districts were selected at the first stage of sampling. A summary of the allocation of districts by state is illustrated in Table III.7.

Table IV.7. Sample allocation, first-stage districts – India

State	Total number		Sampled	
	Districts	Eligible schools	Districts	Eligible schools
Assam	23	30,519	15	21,393
Madhya Pradesh	45	70,407	20	34,590
Rajasthan	32	58,702	16	34,398
Tamil Nadu	29	42,186	15	23,354
Total	**129**	**201,814**	**66**	**113,735**

India allocated its initial sample size of 1,105 schools as illustrated in Table III.8.

Table IV.8. Sample allocation, second-stage schools – India

Stratum	State	Size stratum	Area	Eligible schools	Sampled schools
1	Assam	Largest Schools	Rural	746	23
2			Urban	437	20
3		2nd Largest Schools	Rural	2,070	31
4			Urban	252	17
5		3rd Largest Schools	Rural	3,216	31
6			Urban	173	23
7		4th Largest Schools	Rural	4,731	32
8			Urban	156	30
9		5th Largest Schools	Rural	9,492	45
10			Urban	120	27
Total	**Assam**			**21,393**	**279**
11	Madhya Pradesh	Largest Schools	Rural	802	23
12			Urban	1,239	21
13		2nd Largest Schools	Rural	2,549	27
14			Urban	1,271	22
15		3rd Largest Schools	Rural	4,106	29
16			Urban	1,380	24
17		4th Largest Schools	Rural	6,324	36
18			Urban	1,562	26
19		5th Largest Schools	Rural	12,658	39
20			Urban	2,699	32
Total	**Madhya Pradesh**			**34,590**	**279**
21	Rajasthan	Largest Schools	Rural	1,657	22
22			Urban	789	20
23		2nd Largest Schools	Rural	3,161	27
24			Urban	852	23
25		3rd Largest Schools	Rural	4,384	29
26			Urban	1,035	24
27		4th Largest Schools	Rural	6,238	32
28			Urban	1,362	26
29		5th Largest Schools	Rural	12,575	37
30			Urban	2,345	33
Total	**Rajasthan**			**34,398**	**275**
31	Tamil Nadu	Largest Schools	Rural	107	22
32			Urban	804	18
33		2nd Largest Schools	Rural	716	25
34			Urban	1,173	21
35		3rd Largest Schools	Rural	1,766	28
36			Urban	1,372	24
37		4th Largest Schools	Rural	3,601	32
38			Urban	1,518	26
39		5th Largest Schools	Rural	9,776	42
40			Urban	2,521	34
Total	**Tamil Nadu**			**23,354**	**272**
Grand total – second stage				**113,735**	**1,105**

Malaysia

Malaysia's nationally-desired target population comprised all schools teaching Grade 4 pupils in Chinese, Bahasa Malaysia or Tamil. Malaysia excluded 794 schools with fewer than 10 pupils in Grade 4 from the survey. These exclusions accounted for 4,717 Grade 4 pupils or 0.93% of all Grade 4 pupils and 1.09% of all primary grade pupils. The population resulting from these exclusions represented Malaysia's nationally-defined target population.

The sampling frame for Malaysia was the list of schools based on the 2003 enrolment data collected by the Ministry of Education. It comprised 505,008 pupils in 6,796 schools.

Malaysia used a one-stage stratified sample design. Schools were stratified, both explicitly and implicitly, and selected with equal probabilities within each stratum.

Stratification

Explicit strata

Explicit stratification was based on the language of instruction (Chinese, Bahasa Malaysia and Tamil) and school size (5 categories). For schools where Bahasa Malaysia was the language of instruction, a further stratification was done by distinguishing private and religious schools from the others. The size categories were collapsed into fewer than five categories for some of the strata defined by the language of instruction. As a result, Malaysia's sample design included 15 explicit strata. Upon request by the NPM, the data for language of instruction have been removed from the database. Thus, no analysis of differences between these schools is possible.

Implicit strata

The target population was further implicitly stratified using states (15) and urbanization (urban or rural).

Benchmark categories

Table III.9 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.9. Benchmark totals for schools – Malaysia

Benchmark category	Schools	
	SPS frame (2003)	SPS benchmark total (2005)
Bahasa Malaysia – private	35	35
Bahasa Malaysia – religious	73	73
Bahasa Malaysia – government	5,257	5,761
Chinese	1,058	1,287
Tamil	370	525
Total	**6,793**	**7,681**

Sample allocation

Malaysia's school sample allocation is presented in the Table III.10.

Table IV.10. Sample allocation – Malaysia

Stratum	Language	School type	Size stratum	Number of schools	
				Eligible	Sampled
1	Bahasa Malaysia	Private	Size 1 (Only one size stratum)	36	36
			Total - Private	36	36
2		Religious	Size 1 (Only one size stratum)	75	75
			Total - Religious	75	75
3		Others	Size 1 (Largest)	309	29
4			Size 2	490	33
5			Size 3	697	37
6			Size 4	1,091	45
7			Size 5 (Small)	2,670	79
			Total - Others	5,257	223
Total: Bahasa Malaysia				**5,368**	**334**
8	Chinese	n/a	Size 1 (Largest)	43	29
9			Size 2	75	33
10			Size 3	107	36
11			Size 4	190	46
12			Size 5 (Small)	643	97
Total: Chinese				**1058**	**241**
13	Tamil	n/a	Size 1 (Largest)	34	34
14			Size 2	92	49
15			Size 3 (Small)	244	84
Total: Tamil				**370**	**167**
Total				**6,796**	**742**

Paraguay

Paraguay's nationally-desired target population consisted of all eligible schools teaching Grade 4 in Spanish. Although the educational system includes about 100 schools in which Guarani is the main language of instruction, there was no objective to ensure the inclusion of any of these schools in the sample. None of these schools was selected in the sample.

Paraguay excluded 2,381 pupils from the nationally-desired target population. These exclusions were pupils in 664 very small schools (i.e. schools with fewer than six pupils enrolled in Grade 4). Also, the regions of Alto Paraguay and Boqueron were excluded due to their remote geographic location, resulting in the exclusion of 1,364 pupils in 112 schools. The resulting school population that includes Grade 4 pupils in Spanish was Paraguay's nationally-defined target population.

Paraguay used a single-level sample frame based on enrolment data from the *Ministerio de Educación y Cultura – Dirección de Planificación, Estadística e Información* - Database 2001. The sample frame provided complete coverage of the nationally-defined target population. Paraguay's nationally-defined target population comprised 147,758 Grade 4 pupils in 5,537 schools.

Paraguay employed a one-stage stratified sample design. Schools were stratified, both explicitly and implicitly, and selected with equal probabilities within each stratum. A systematic sample of schools was selected with equal probabilities in each stratum.

Stratification

Explicit strata

Paraguay's target population was explicitly stratified by size of school (5 categories), region [Region 1: Asunción (city and metropolitan area), central department, and Villa Hayes; Region 2: South-centre, includes Cordillera, Guaira, Caazapa and Paraguari; Region 3: Caaguazu and Alto Paraná; Region 4: Extreme south, includes Itapúa, Misiones, and Ñeembucu; Region 5: North, includes Concepción, San Pedro, Amambay and Canindeyu.] and urbanization (urban or rural). The size categories were collapsed into fewer than five categories for some of the strata defined by region and urbanization. As a result, Paraguay's sample design included 37 explicit strata.

Implicit strata

The target population was implicitly stratified by school-type (public institutions, private institutions and government-subsidized private institutions).

Sample allocation

Paraguay's initial sample size of 812 schools was allocated as illustrated in Table III.11.

Table IV.11. Sample allocation – Paraguay

Stratum	Region	Area	Size stratum	Eligible schools	Sampled schools
1	Region 1	Urban	Largest Schools	48	18
2			2nd Largest Schools	70	20
3			3rd Largest Schools	96	22
4			4th Largest Schools	148	27
5			5th Largest Schools	384	48
6		Rural	Largest Schools	35	8
7			2nd Largest Schools	73	10
8			3rd Largest Schools	196	17
Total	**Region 1**			**1,050**	**170**
9	Region 2	Urban	Largest Schools	44	19
10			2nd Largest Schools	119	30
11		Rural	Largest Schools	73	15
12			2nd Largest Schools	117	18
13			3rd Largest Schools	168	21
14			4th Largest Schools	230	25
15			5th Largest Schools	363	32
Total	**Region 2**			**1,114**	**160**
16	Region 3	Urban	Largest Schools	37	17
17			2nd Largest Schools	68	21
18			3rd Largest Schools	183	36
19		Rural	Largest Schools	64	12
20			2nd Largest Schools	118	14
21			3rd Largest Schools	165	17
22			4th Largest Schools	221	19
23			5th Largest Schools	364	26
Total	**Region 3**			**1,220**	**162**
24	Region 4	Urban	Largest Schools	43	23
25			2nd Largest Schools	120	38
26		Rural	Largest Schools	46	13
27			2nd Largest Schools	83	16
28			3rd Largest Schools	119	19
29			4th Largest Schools	161	22
30			5th Largest Schools	263	29
Total	**Region 4**			**835**	**160**
31	Region 5	Urban	Largest Schools	41	16
32		Rural	2nd Largest Schools	105	25
33			Largest Schools	91	16
34			2nd Largest Schools	154	20
35			3rd Largest Schools	213	23
36			4th Largest Schools	279	26
37			5th Largest Schools	435	34
Total	**Region 5**			**1,318**	**160**
Grand total				**5,537**	**812**

Benchmark categories

Table III.12 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.12. Benchmark totals for schools – Paraguay

Benchmark category	Schools	
	SPS frame (2001)	SPS benchmark total
Region 1 - Urban	746	861
Region 1 - Rural	304	416
Region 2 - Urban	163	187
Region 2 - Rural	951	1,088
Region 3 - Urban	288	334
Region 3 - Rural	932	1,091
Region 4 - Urban	163	183
Region 4 - Rural	672	814
Region 5 - Urban	146	172
Region 5 - Rural	1,172	1,447
Total	**5,537**	**6,593**

Peru

Peru's nationally-desired target population consisted of all eligible schools teaching Grade 4 in Spanish.

Peru's nationally-defined target population excluded 21,755 pupils from the nationally-desired target population. These school-level exclusions accounted for about 3.1% of Grade 4 pupils.

Peru's exclusions from the SPS are summarized as follows:

Description of SPS exclusions	Grade 4 pupils	Percentage excluded
Schools without 2004 enrollment data	6,819	0.97
Geographically inaccessible schools	9,107	1.29
Schools for mentally & functionally disabled pupils	2,940	0.42
Extremely small schools (schools with one teacher & less than 15 primary pupils)	2,889	0.41
TOTAL exclusions	**21,755**	**3.08**

Peru used a single-level sample frame created from the Ministry of Education 2004 Database. Peru's nationally-defined target population of schools comprises 674,170 Grade 4 pupils in 30,126 schools. It provides coverage of approximately 97% of the nationally-desired target population.

Peru used a one-stage stratified sample design. Schools were stratified explicitly and implicitly. Subsequently, schools were systematically selected with equal probabilities within each stratum.

Stratification

Explicit strata

Peru's target population was explicitly stratified by size of school (5 categories), schoolctype (public or private institutions) and urbanization (urban or rural). There were no private rural schools in the largest size category. Peru's sample design included 19 explicit strata.

Implicit strata

The target population was further implicitly stratified by 26 geographic regions, number of grades per class, socioeconomic status (non-poor, poor or extremely poor) and school language (Spanish-speaking and non-Spanish-speaking).

Sample allocation

Peru's initial sample size of 665 schools was allocated as illustrated in Table III.13.

Table IV.13. Sample allocation – Peru

Stratum	School type	Area	Size stratum	Eligible schools	Sampled schools
1	Public	Urban	Largest Schools	690	62
2		Rural	Largest Schools	19	2
3	Private	Urban	Largest Schools	22	11
4		Rural	Largest Schools	0	0
Total	**Largest Schools**			**731**	**75**
5	Public	Urban	2nd Largest Schools	1,120	57
6		Rural	2nd Largest Schools	126	6
7	Private	Urban	2nd Largest Schools	112	19
8		Rural	2nd Largest Schools	4	1
Total	**2nd Largest Schools**			**1,362**	**83**
9	Public	Urban	3rd Largest Schools	1,406	41
10		Rural	3rd Largest Schools	883	26
11	Private	Urban	3rd Largest Schools	467	30
12		Rural	3rd Largest Schools	8	1
Total	**3rd Largest Schools**			**2,764**	**98**
13	Public	Urban	4th Largest Schools	916	17
14		Rural	4th Largest Schools	3,852	70
15	Private	Urban	4th Largest Schools	1,418	47
16		Rural	4th Largest Schools	41	1
Total	**4th Largest Schools**			**6,227**	**135**
17	Public	Urban	5th Largest Schools	455	5
18		Rural	5th Largest Schools	15,314	183
19	Private	Urban	5th Largest Schools	2,958	78
20		Rural	5th Largest Schools	315	8
Total	**5th Largest Schools**			**19,042**	**274**
Grand total				**30,126**	**665**

Philippines

In the Philippines, the desired target population included all schools teaching Grade 4 pupils in English. However, schools with fewer than 15 Grade 4 pupils or fewer than 3 teachers were excluded from the desired target population. These excluded schools contained 5% of the Grade 4 pupil population and 5% of the primary grade pupil population. The population resulting from these exclusions constituted the nationally-defined target population.

The sampling frame in the Philippines was based on enrolment data for the 2003/2004 school year provided by the Department of Education. It included 1,921,819 Grade 4 pupils in 29,296 schools.

The Philippines employed a one-stage stratified sample design where a systematic sample of schools was selected with equal probabilities in each stratum.

Stratification

Explicit strata

Explicit stratification was based on regions (4 regions), school type (public or private) and school size (5 categories). The size categories were collapsed into fewer than five categories for some of the strata defined by region and school type. As a result, sample design included 32 explicit strata.

Implicit strata

The target population was not implicitly stratified.

Sample allocation

The school sample allocation of the Philippines is presented in the Table III.14.

Table IV.14. Sample allocation – Philippines

Stratum	Region	School type	Size stratum	Number of schools	
				Eligible	Sampled
1	National Capital Region (NCR)	Public	Size stratum 1 (largest schools)	36	15
2			Size stratum 2	53	17
3			Size stratum 3	71	19
4			Size stratum 4	104	23
5			Size stratum 5 (smallest schools)	230	37
6		Private	Size stratum 1 (largest schools)	34	12
7			Size stratum 2	84	15
8			Size stratum 3 (smallest schools)	351	32
Total: NCR				**963**	**170**
9	Luzon (w/o NCR)	Public	Size stratum 1 (largest schools)	456	13
10			Size stratum 2	1,073	16
11			Size stratum 3	1,949	20
12			Size stratum 4	3,186	26
13			Size stratum 5 (smallest schools)	6,006	38
14		Private	Size stratum 1 (largest schools)	47	7
15			Size stratum 2	96	8
16			Size stratum 3	169	10
17			Size stratum 4	260	13
18			Size stratum 5 (smallest schools)	445	18
Total: Luzon (w/o NCR)				**13,687**	**169**
19	Visayas	Public	Size stratum 1 (largest schools)	266	18
20			Size stratum 2	601	21
21			Size stratum 3	1,032	26
22			Size stratum 4	1,688	33
23			Size stratum 5 (smallest schools)	3,021	48
24		Private	Size stratum 1 (largest schools)	42	8
25			Size stratum 2 (smallest schools)	158	14
Total: Visayas				**6,808**	**168**
26	Mindanao	Public	Size stratum 1 (largest schools)	277	17
27			Size stratum 2	664	21
28			Size stratum 3	1,178	26
29			Size stratum 4	1,981	34
30			Size stratum 5 (smallest schools)	3,515	49
31		Private	Size stratum 1 (largest schools)	44	8
32			Size stratum 2 (smallest schools)	179	14
Total: Mindanao				**7,838**	**169**
Total: Philippines				**29,296**	**676**

Sri Lanka

Sri Lanka's desired target population included all schools teaching Grade 4 pupils in Tamil, Sinhala or both languages (Bimedia). However, schools with fewer than 10 Grade 4 pupils were excluded from the desired target population. These excluded schools contained 3.5% of the Grade 4 pupil population. The population resulting from these exclusions constituted Sri Lanka's nationally-defined target population.

The sampling frame in Sri Lanka was based on the 2004 school census conducted by the Ministry of Education. It included 319,222 Grade 4 pupils in 7,255 schools.

Sri Lanka employed a one-stage stratified sample design. Schools were stratified, both explicitly and implicitly, and selected with equal probabilities within each stratum. A systematic sample of schools was selected with equal probabilities in each stratum.

Stratification

Explicit strata

Explicit stratification was based on provinces (9 provinces) and school size (5 categories). The size categories were collapsed into fewer than five categories for some of the provinces. As a result, Sri Lanka's sample design included 32 explicit strata.

Implicit strata

The target population was further stratified implicitly by urbanization (urban or rural) and language of instruction (Sinhala, Tamil and Bimedia).

Benchmark categories

Table III.15 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.15. Benchmark totals for schools – Sri Lanka

Benchmark category	Schools	
	SPS frame (2004)	SPS benchmark total (2005)
Western Province	1,076	1,060
Central Province	1,080	1,044
Southern Province	800	798
Northern Province	655	647
Eastern Province	819	839
North Western Province	878	833
North Central Province	563	569
Uva Province	631	626
Sabaragamuwa Province	753	726
Total	**7,255**	**7,142**

Sample allocation

Sri Lanka's school sample allocation is presented in Table III.16.

Table IV.16. Sample allocation – Sri Lanka

Stratum	Province	Size stratum	Number of schools	
			Eligible	Sampled
1	Central	Size 1 (Largest schools)	63	10
2		Size 2	140	13
3		Size 3	280	17
4		Size 4 (Smallest schools)	597	27
Total: Central			**1080**	**67**
5	Eastern	Size 1 (Largest schools)	104	15
6		Size 2	215	19
7		Size 3 (Smallest schools)	500	31
Total: Eastern			**819**	**65**
8	North Central	Size 1 (Largest schools)	52	14
9		Size 2	144	20
10		Size 3 (Smallest schools)	367	33
Total: North Central			**563**	**67**
11	North Western	Size 1 (Largest schools)	48	11
12		Size 2	99	13
13		Size 3	208	17
14		Size 4 (Smallest schools)	523	30
Total: North Western			**878**	**71**
15	Northern	Size 1 (Largest schools)	82	15
16		Size 2	178	20
17		Size 3 (Smallest schools)	395	30
Total: Northern			**655**	**65**
18	Sabaragamuwa	Size 1 (Largest schools)	60	14
19		Size 2	178	20
20		Size 3 (Smallest schools)	515	35
Total: Sabaragamuwa			**753**	**69**
21	Southern	Size 1 (Largest schools)	41	11
22		Size 2	77	12
23		Size 3	179	17
24		Size 4 (Smallest schools)	503	30
Total: Southern			**800**	**70**
25	Uva	Size 1 (Largest schools)	64	14
26		Size 2	159	20
27		Size 3 (Smallest schools)	408	33
Total: Uva			**631**	**67**
28	Western	Size 1 (Largest schools)	53	9
29		Size 2	81	10
30		Size 3	122	11
31		Size 4	209	14
32		Size 5 (Smallest schools)	611	27
Total: Western			**1,076**	**71**
Total: Sri Lanka			**7,255**	**612**

Tunisia

Tunisia's desired target population included all public schools teaching Grade 4 pupils. The nationally-defined target population was the same as the desired target population, since there were no exclusions.

The sampling frame in Tunisia was based on the 2002-2003 Statistics of Education and Vocational Training provided by the Ministry of Education and Training. It included 239,482 Grade 4 pupils in 3,758 schools.

Tunisia used a one-stage stratified sample design. Schools were stratified, both explicitly and implicitly, and were systematically selected with equal probabilities within each stratum.

Stratification

Explicit strata

Explicit stratification was based on regions (5 regions), urbanization (urban or rural) and school size (5 categories). The size categories were collapsed into fewer than five categories for some of the strata defined by region and urbanization. As a result, Tunisia's sample design included 30 explicit strata.

Implicit strata

The target population was further implicitly stratified into 24 governorates.

Benchmark categories

Table III.17 presents the SPS frame counts and corresponding benchmark population counts for the number of target population schools in each benchmark category.

Table IV.17. Benchmark totals for schools – Tunisia

Benchmark category	Schools	
	SPS frame (school year 2002/03)	SPS benchmark total (2005)
Region 1 North West – urban	165	174
Region 1 North West – rural	406	586
Region 2 Mid-West – urban	137	138
Region 2 Mid-West – rural	569	773
Region 3 South – urban	353	358
Region 3 South – rural	296	479
Region 4 Mid-East – urban	434	441
Region 4 Mid-East – rural	404	434
Region 5 North-East – urban	638	650
Region 5 North-East – rural	356	437
Total	**3,758**	**4,470**

Sample allocation

Tunisia's school sample allocation is presented in Table III.18.

Table IV.18. Sample allocation – Tunisia

Stratum	Region	School type	Size stratum	Number of schools	
				Eligible	Sampled
1	Northwest	Urban	Size stratum 1 (largest schools)	56	16
2			Size stratum 2	109	23
3		Rural	Size stratum 1 (largest schools)	74	14
4			Size stratum 2	121	17
5			Size stratum 3 (smallest schools)	211	23
Total: Northwest				**571**	**93**
6	Midwest	Urban	Size stratum 1 (largest schools)	48	14
7			Size stratum 2	89	19
8		Rural	Size stratum 1 (largest schools)	64	11
9			Size stratum 2	114	14
10			Size stratum 3	154	16
11			Size stratum 4 (smallest schools)	237	20
Total: Midwest				**706**	**94**
12	South	Urban	Size stratum 1 (largest schools)	64	16
13			Size stratum 2	100	20
14			Size stratum 3 (smallest schools)	189	27
15		Rural	Size stratum 1 (largest schools)	50	8
16			Size stratum 2	88	10
17			Size stratum 3 (smallest schools)	158	14
Total: South				**649**	**95**
18	Mideast	Urban	Size stratum 1 (largest schools)	83	17
19			Size stratum 2	124	20
20			Size stratum 3 (smallest schools)	227	27
21		Rural	Size stratum 1 (largest schools)	72	8
22			Size stratum 2	115	9
23			Size stratum 3 (smallest schools)	217	13
Total: Mideast				**838**	**94**
24	Northeast	Urban	Size stratum 1 (largest schools)	90	15
25			Size stratum 2	121	16
26			Size stratum 3	156	18
27			Size stratum 4 (smallest schools)	271	25
28		Rural	Size stratum 1 (largest schools)	64	5
29			Size stratum 2	105	6
30			Size stratum 3 (smallest schools)	187	9
Total: Northeast				**994**	**94**
Total: Tunisia				**3,758**	**470**

Uruguay

Uruguay's nationally-desired target population consisted of all eligible schools teaching Grade 4 in Spanish. There were no exclusions from Uruguay's nationally-desired target population. Thus, Uruguay's nationally-defined target school population was equivalent to its nationally-desired target population.

Uruguay's single-level sample frame was constructed from the enrolment data for the year 2002 from the *Administración Nacional de Educación Pública – Consejo de Educación Primaria*. The sample frame provides complete coverage of the nationally-defined target population, which comprises 55,939 Grade 4 pupils in 1,453 schools.

Uruguay used a one-stage stratified sample design. Schools were stratified explicitly and implicitly. Subsequently, schools were systematically selected with equal probabilities within each stratum.

Stratification

Explicit strata

Uruguay's target population was explicitly stratified by size of school (5 categories), department (Montevideo and other departments) and urbanization (urban or rural). The size categories were collapsed into fewer than five categories for some of the strata defined by department and urbanization. As a result, Uruguay's sample design included 12 explicit strata.

Implicit strata

The target population was implicitly stratified by school type (public or private institutions).

Sample allocation

Uruguay's initial sample size of 437 schools was allocated as illustrated in Table III.19.

Table IV.19. Sample allocation – Uruguay

Stratum	Region	Area	Size stratum	Eligible schools	Sampled schools
1	Montevideo	Urban	Largest Schools	38	22
2			2nd Largest Schools	53	26
3			3rd Largest Schools	65	28
4			4th Largest Schools	83	31
5			5th Largest Schools	174	48
Total	**Montevideo**			**413**	**155**
6	Other Departments	Urban	Largest Schools	65	38
7			2nd Largest Schools	92	42
8			3rd Largest Schools	118	46
9			4th Largest Schools	166	54
10			5th Largest Schools	411	93
11		Rural	Largest Schools	69	4
12			2nd Largest Schools	118	5
Total	**Other departments**			**1,040**	**282**
Grand total				**1,453**	**437**

Appendix V
Sampling forms

Sampling form 1

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 1
PARTICIPATION

See Section 3.1 of School Sampling Manual

Country _____

National Project Manager: _____

1. Will you request that the international organizations select your school sample? ◯ Yes or ◯ No

2. Please specify the usual start date of the school year, the expected date of fieldwork for the main survey and the usual end date of the school year.

Start of the school year:	Expected date of fieldwork:	End of the school year:
_____	_____	_____

3. Describe the age and birth date rules for entering primary school in your country.

_____
_____
_____
_____
_____
_____
_____

4. Describe the grade structure of early primary school in your country (for example, nursery, kindergarten, grades 1 through 6).

_____
_____
_____
_____

Sampling form 2

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 2
NATIONAL DESIRED TARGET POPULATION

See Section 5.2 of School Sampling Manual

Country _____

National Project Manager: _____

1. Total national enrollment by grade

Grade 1
Grade 2
Grade 3
Grade 4 [a]
Grade 5
Grade 6
TOTAL [b]

2. Describe the population(s) to be excluded form the national desired target population (if applicable).

_____

_____

_____

3. Total enrollment excluded from the national desired target population (corresponding to the exclusions listed in the previous item):

Grade 4 [c]
TOTAL [d]

4. Total enrollment in the national desired target population

(Grade 4: box [a] - box [c] TOTAL: box [b] - box [d])

Grade 4 [e]
TOTAL [f]

5. Percentage of coverage in the national desired target population

Grade 4 [e] / [a]
TOTAL [f] / [b]

6. Describe your data source .

_____

_____

_____

Sampling form 3

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 3

NATIONAL DEFINED TARGET POPULATION

See Section 5.3 of School Sampling Manual

Country _____

National Project Manager: _____

1. Total enrollment in the national desired target population

(From boxes [e] and [f] on sampling Form 2)	Grade 4 [e]
	TOTAL [f]

2. School-level exclusions:

Description of exclusions	# of students	
	Grade 4 only	Grades 1-6
TOTAL	[g]	

Percentage of school-level exclusions:(box [g] / box [f]) _____

3. Total enrollment in national defined target population:(box [f] - box [g]) [h]

4. Within-school exclusions:

Description of exclusions	Expected # of students (Grade 4)
TOTAL	[i]

Percentage of within school exclusions:(box [i] / box [e]) _____

6. Describe your data source . _____

_____

_____

Sampling form 4

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 4
STRATIFICATION

See Section 6.4 of School Sampling Manual

Country

National Project Manager:

Explicit Stratification

1. List and describe the variables used for explicit stratification.

	Explicit stratification variables	# of levels
1		
2		
3		
4		
5		

2. Total number of explicit strata:

Implicit Stratification

3. List and describe the variables used for implicit stratification.

	Implicit stratification variables	# of levels
1		
2		
3		
4		
5		

4. Total number of implicit strata:

Sampling form 5

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 5
SMALL SCHOOLS

See Section 7.5 of School Sampling Manual

Country _____

National Project Manager: _____

1. Definition of a small school in your country (if applicable). ___ ___

_____

_____

_____

2. If there are small schools in your country, please fill in the following table

Type of school	Number of students enrolled in grades 1-6	Percentage
Extremely small schools		[a]
Small schools		
Other schools		[b]
TOTAL		100%

3. If the percentage in box [a] is less than 2%, then these extremely small schools can be excluded from the national defined target population. Be sure to record this exclusion on Sampling Form 3, item2

4. If the percentage in box [b] is 90% or more, then all schools should remain in the national defined target population and be subject to normal school sampling

5. If the percentage in box [b] is less than 90% then small schools could form an explicit stratum. If this is so, be sure to record this level of explicit stratification in Sampling Form 4, Item1. Please consult with the international organizations for assistance.

Sampling form 6

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 6
SAMPLING FRAME DESCRIPTION

See Section 8 of School Sampling Manual

Country _____

National Project Manager: _____

1. Specify the type of school sampling frame to be used.

- ◯ Single-level sampling frame
- ◯ Double-level sampling frame
- ◯ Other (please describe): _____

2. Specify the school measure of size (MOS) to be used.

- ◯ Student enrollment in grade 4
- ◯ Average student enrollment per grade
- ◯ Total school enrollment
- ◯ Other (please describe): _____

3. Specify the school year for which enrollment data will be used for the school MOS.

4. If a double-level sampling frame is used, please provide a preliminary description of the information available to construct the frame. Please consult with the international organizations for assistance in the construction and the use of a double-level sampling frame.

Sampling form 7

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 7
EXCLUDED SCHOOLS

See Section 8.6 of School Sampling Manual

Country _____

National Project Manager: _____

Use additional sheets if necessary

School Id	Reason for exclusion	School MOS

Sampling form 8

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 8
SAMPLING FRAME STATISTICS

See Section 8.8 of School Sampling Manual

Country _____

National Project Manager: _____

Use additional sheets if necessary

(1) Explicit Strata	(2) Implicit Strata	(3) Population Counts	(4)
		Schools	Students

Sampling form 9

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 9
SAMPLE ALLOCATION BY EXPLICIT STRATA

See Section 8.9 of School Sampling Manual

Country _____

National Project Manager: _____

Use additional sheets if necessary

(1) Explicit Strata	(2) Sample Allocation Schools

Sampling form 10

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 10
SCHOOL SAMPLE SELECTION

See Section 9.2 of School Sampling Manual

Country _____

National Project Manager: _____

Explicit Stratum: _____

S [a] Total number of schools	**D** [b] Desired Sample Size	**I** [c] Sampling Interval	**RN** [d] Random Number

Use additional sheets if necessary

(1) Line Numbers	(2) Selection numbers

Sampling form 11

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 11
SCHOOL SAMPLING FRAME

See Sections 9.3, 9.4, and 9.5 of School Sampling Manual

Country _____

National Project Manager: _____

Explicit Stratum: _____

Use additional sheets if necessary

(1) School List ID	(2) Implicit Stratum	(3) MOS	(4) Line Number	(5) Sample Status	(6) WEI-SPS School ID

Page _____ of _____

Sampling form 12

WORLD EDUCATION INDICATORS PROJECT
SURVEY OF PRIMARY SCHOOLS (WEI-SPS)
SAMPLING FORM 12
SCHOOL TRACKING FORM

Use one form for each sampled school. See sections 9.6 and 9.7 of School Sampling Manual

Country

National Project Manager:

Explicit Stratum:

	(1) WEI-SPS School ID	(2) School MOS	(3) Name, Address and Phone # of School	(4) Name and Phone # of School Coordinator	(5) Status*	(6) Date materials sent	(7) Date materials received	(8) Language of instruction	(9) Number of grade 4 teachers
Sampled School									
First Replacement School									
Second Replacement School									

* Enter "N" for non-participating schools and "Y" for participating school.

Appendix VI

National deviations

National deviations by Survey Instrument

National Intended Curriculum Questionnaire (OTL)

Question: 1

India **Description:** Upside down mice is provided in 2 languages:

1-regional language (Assamese, Hindi or Tamil) and
2-English version

Explanation from IND: *This is done because English language is well known through out the country, everyone can read English text.*

India **Description:** Applicable for 3 languages.
4 instructions added at the beginning of the questionnaire

"While answering the questionnaire, keep the following points in your mind:
- Please put the tick (√) inside the box.
- All information in this questionnaire is to be provided only for primary classes even if school has upper primary, secondary or higher secondary classes attached to it until and unless it is stated.
- Wherever information is to be provided in figures, it should be in international numerals (e.g. 0, 1, 3, 4...9).
- Whenever a question is asked about "Main Language of Instructions", the answer should only refer to the language in which most of the teaching-learning instructions are imparted in the classroom. For example, if a school is English medium school and teaching at class 4 level is done in English for most of the subjects, information should be given for English language. If school is providing instructions in Regional Language, information should be given for that language."

Explanation by IND: *Some general instructions to make questionnaire more clear*

Question: 4 **Column:** A

Brazil **Description:** Translated as:
No emphasis / Little emphasis / Moderate emphasis / Strong emphasis

Question: 4 **Column:** C

Brazil **Description:** Added an additional instruction.

Explanation from BRA: *Many state and municipal schools are adopting other forms of class organization and school management in elementary education, such as system of cycles, taking into account the phases of the human development (system of cycles).*

- The organization of the cycle varies across states and municipalities. Age is the criteria most used to define each cycle.
- When a school implement the cycle system, usually, there no repetition until the end of a given cycle.

The additional instruction is:

Even if your school adopted another form of organization of groups, please make the correspondence with the grade, considering Elementary Education of 8 years (1st to 8th grade), and provide the grade this question would be appropriate.

Question: 4 **Part:** 10.1

Malaysia **set to NA: X** **Recoding undertaken:** set OT4.10.2 to n/a

Description: Item dropped
Explanation from MYS: *In Malay Language there is no emphasis on 'tenses'. All verbs are the same.*

Question: 6 **Column:** A

Brazil **Description:** Translated as:
No emphasis / Little emphasis / Moderate emphasis / Strong emphasis

Question: 6 **Column:** C

Brazil **Description:** Added an additional instruction.

Explanation from BRA: *In Brazil, many state and municipal schools are adopting other forms of class organization and school management, such as system of cycles.*

The additional instruction is:
Even if your school adopted another form of organization of groups, please make the correspondence with the grade, considering Elementary Education of 8 years
(1st to 8th grade), and provide the grade this question would be appropriate.

Question: 6 **Part:** 12.1

India	**Description:**	In the 3 versions (Assamese, Hindi and Tamil). Adapted 'billions, millions' to 'crore, lakh'.

Question: 6 **Part:** 13.1

Malaysia	**Description:**	Translated as: Bacterium (the singular of bacteria), in the right conditions, can reproduce rapidly. MYS used "reproduce" instead of "grow". Explanation from MYS: *Bacteria does not grow but the population of bacteria grows.*

Question: 6 **Part:** 14.1

Malaysia	**Description:**	Translated as: Questions that ask students to make increasingly accurate estimates of measurements using informal units (relative) and standard units. MYS added the word "relative". Explanation from MYS: *The added term of "relative" is more familiar for the country.*

Question: 6 **Part:** 14.3

Malaysia	**Description:**	Translated as: The weight of a pin. MYS deleted the term "mass". Explanation from MYS: *The term "mass" is not familiar for the teachers.*

Question: 6 **Part:** 15.1

India	**Description:**	'marbles' adapted to 'beads' in the Hindi version. In a game of 'kanchas' instead of a game of 'marbles'.

Question: 6 **Part:** 22.1

India	**Description:**	changed the word 'pie' to 'cake' in the Hindi version.

National deviations by Survey Instrument

Teacher Questionnaire

Question: 1

India **Description:** Applicable for 3 languages. 4 instructions added at the beginning of the questionnaire:

"While answering the questionnaire, keep the following points in your mind:
- Please put the tick (√) inside the box.
- All information in this questionnaire is to be provided only for primary classes even if school has upper primary, secondary or higher secondary classes attached to it until and unless it is stated.
- Wherever information is to be provided in figures, it should be in international numerals (e.g. 0, 1, 3, 4...9).
- Whenever a question is asked about "Main Language of Instructions", the answer should only refer to the language in which most of the teaching-learning instructions are imparted in the classroom. For example, if a school is English medium school and teaching at class 4 level is done in English for most of the subjects, information should be given for English language. If school is providing instructions in Regional Language, information should be given for that language."

Explanation by IND: *Some general instructions to make questionnaire more clear*

Sri Lanka **Description:** In the introductory text before question 1. A footnote was added:
"The teachers' questionnaire of a single medium school should be completed by all the teachers, teaching the mother tongue and maths in grade 4 classes, while in a bi-media school, the teachers teaching the mother tongue in either of the mediums and, or those teaching maths should complete the questionnaire."

Explanation by LKA: *In Sri Lanka, some schools have 2 main languages of instruction (bi- media schools: Tamil and Sinhala), this footnote was added for specification.*

Question: 2

Malaysia **Description:** "Your gender" instead of "Are your male or female?"

Explanation from MYS: *In Malaysian context we use gender instead of asking whether a person male or female.*

Tunisia **Description:** "Your gender" instead of "Are your male or female?"

Explanation from TUN: *Question replaced by only one word to convey the meaning, The discourse of the original structure after translation is not an appropriate discourse addressed to adults.*

Question: 3 **SubQuest:** A

Argentina

Recoding undertaken: if TQ3A = 4 then TQ3A = 5

Description:
ISCED 1= Primary education;
ISCED 2 = 2nd year of secondary;
ISCED 3 = secondary;
ISCED 4 = not applicable in ARG;
ISCED 5 = tertiary non university (option 4) + tertiary university (option 5)

Brazil

Description: Added an extra instruction and example.

Explanation from BRA: *This is to allow the inclusion of official programmes targeting teachers teaching for primary grades or literacy classes for children who have no teaching qualification:*

Even though these programmes are not "pre-service" training per se, they correspond to the initial stage of formal teacher training. At the Federal level, there is a programme called pro-formação. It lasts four semesters for a total of 3,200 hours.

"ou dos programas de formação inicial para o magistério para os professores em exercício (por exemplo, PROFORMAÇÃO)."

Brazil

Recoding undertaken: 1=1; 2=2; 3+4=3; 5+6+7+8+9+10+11=5

Description:
ISCED 1= Elementary education (grades 1-4) or equivalent;
ISCED 2= Elementary education (grades 5-8) or equivalent;
ISCED 3= Upper secondary Education - Teaching Education (option 3)
+ Upper secondary education - Other (option 4);
ISCED 4= not applicable in BRA;
ISCED 5= Higher Education/Teaching Education at the tertiary level (option 5)
+ Higher Education/Pedagogy (option 6)
+ Higher Education/Licentiate in Letras (option 7)
+ Higher Education/ Licentiate in Mathematics (option 8)
+ Higher Education/Other Licentiate (option 9)
+ Higher Education/ Other courses (option 10)
+ Post-graduate studies (specialization, master and doctoral programmes) (option 11)

Chile

Recoding undertaken: TQ3A = TQN3A
if TQN3a = 4 then TQ3A = 5;

Description:
ISCED 1= 6th grade of basic education or equivalent;
ISCED 2= 8th grade of basic education or equivalent
ISCED 3= 4th middle (secondary education) or equivalent;
ISCED 4= not applicable in CHL;
ISCED 5= Higher education (Centre for Technical Training, Professional Institute or University) or equivalent;

India

Description:
Applicable for 3 languages in IND.
ISCED 1 = primary education;
ISCED 2 = upper primary education;
ISCED 3 = secondary and/or higher secondary education;
ISCED 4 = Junior Basic Training/ Diploma in Teacher Training;
ISCED 5 = Graduation or higher than that

Malaysia **Description:** ISCED 1 = Primary education level or equivalent;
ISCED 2 = Lower Secondary Education level or equivalent;
ISCED 3 = Upper Secondary Education level (including Form 6 and Matriculation) or equivalent;
ISCED 4 = Skills Certificate level or equivalent;
ISCED 5 = Teaching Certificate/Diploma/Degree or equivalent or higher;

Paraguay **Recoding undertaken:** if TQ3A = 4 then TQ3a = 5;

Description: International item #4 (ISCED 4) dropped, and international item #5 (ISCED 5) was renumbered to 4.

Peru **Description:** ISCED 1= Primary education;
ISCED 2= Third secondary grade;
ISCED 3= Fifth secondary grade;
ISCED 4= Short career (six months as minimum) beyond secondary education, not superior education;
ISCED 5= Superior education;

Philippines **Recoding undertaken:** if TQ3a = 2 then TQ3a = 4; if TQ3a = 3 then TQ3a = 5; if TQ3a = 1 then TQ3a = 3;

Description: ISCED 1 + 2 + 3 = Lower than post-secondary non-tertiary education (e.g. elementary and secondary education)
ISCED 4 = Post-secondary non-tertiary education (e.g. post-secondary technical vocational education and training)
ISCED 5 = Tertiary education (e.g. bachelor's degree, master's degree, doctorate degree, etc.).

Sri Lanka **Description:** Answers from teachers may include in-service training

Extra instruction added about 'formal pre-service teacher training'.

Explanation from LKA: *In Sri Lanka, three years of 'pre-service' teacher training provided by colleges of Education. Two years course work in Colleges of Education and one year practical training in schools.*

The additional instruction reads as follow: "If you were trained in National Colleges of Education, please consider the 3 years of training as part of your total for pre-service teacher training."

Sri Lanka **Recoding undertaken:** 1=1; 2=2; 3+4+5 = 3; 6+7 = 5;

Description: Both languages in LKA:

ISCED 1 = primary education (grade 5) or equivalent;
ISCED 2 = junior secondary (grade 9);
ISCED 3 = Lower secondary education (GCE O/L) or equivalent
+ Upper secondary education (GCE A/L) or equivalent
+ Other diplomas or certificates (Technical colleges / aesthetic colleges or
equivalent;
ISCED 4 = not applicable;
ISCED 5 = Diploma from National Colleges of Education or equivalent
+ Tertiary education (University degree) or higher;

Tunisia	**Description:**	ISCED 1 = primary education or equivalent; ISCED 2 = Basic education 2nd cycle; ISCED 3 = Secondary education or equivalent; ISCED 4 = Post secondary not university (tertiary); ISCED 5 = University or equivalent;
Uruguay	**Description:**	ISCED 1= Primary education; ISCED 2= Basic cycle of Middle Education or equivalent; ISCED 3= Second cycle of Middle Education or equivalent; ISCED 4= Technical courses from UTU (Commercial teaching, administration, data processing, communication); ISCED 5= Tertiary education or equivalent: Teaching, Professional qualification, Faculty or equivalent;

Question: 5 **SubQuest: A**

Brazil	**Recoding undertaken:**	TQ5A = (TQ5A/ 8)
	Description:	"hours" replaces <days>. 1 day = 8 hours. Recoded for international database.
Paraguay	**Recoding undertaken:**	TQ5A = (TQ5A/8)
	Description:	"hours" instead of <days>. 1 day = 8 hours. Recoded for international database.
India	**Description:**	ICT footnote in Hindi version only. At the bottom of question 5, note reads: ICT: information communication and technology
India	**Description:**	The Tamil version does not state to EXCLUDE participation in a teacher union. In the International source version, SQ17.6 and TQ5b.6 are the same. In the translation of this item in the Tamil version, it is not the same.

Question: 7 **SubQuest: B** **Language: Sinhala**

Sri Lanka version.	**Description:**	It reads 'paid OR unpaid' not 'paid AND unpaid' as in the International source

Question: 8 **SubQuest:** **Part: 5**

Argentina	**Description:**	Was translated as: Escuchar lecciones orales, recitados, lecturas. International source version: "Listening to recitations".
Malaysia	**Description:**	Translated as: Listening to students' reading and recitation.

Question: **9** **SubQuest:** **B**

Brazil	**Description:**	The word "minutes" is underlined. Explanation from BRA: *During the pilot, we had teachers who answered the second question (9a) using hours instead minutes and vice-versa.*
Brazil	**Description:**	The word "hours" is underlined. Explanation from BRA: *During the pilot, we had teachers who answered the second question (9b) using hours instead minutes and vice-versa.*
Chile	**Description:**	Deleted the text "in the main language of this school" in stem of question and at 9b.1 Explanation from CHL: *"in the main language" is not considered because there is one main language in the country - schools.*
Paraguay	**Description:**	Deleted the text "in the main language of this school" in stem of question and at 9b.1 Only Castellano as main language of the school.
Uruguay	**Description:**	Deleted "in the main language of instruction". Explanation from URY: *The main language of education is the same in all schools: Spanish.*

Question: **10** **Part:** **1**

India	**set to NA:** **X**	**Recoding undertaken:** set TQ10.1 to n/a
	Description:	Set to "not applicable" upon request of the country.
Tunisia	**Description:**	The tense of the verb has changed. Therefore the sentence now is: "Does not eat (breakfast, lunch) when they come to school." International version: 'Have not eaten when they come to school.' Explanation from TUN: *It will not cause problems in understanding because primary schools in Tunisia do not have cafeterias. Children cannot eat at school.*

Question: **11** **Part:** **5** **Language:** **Tamil**

Sri Lanka	**Description:**	Translation of ‘Students are cooperative’ is ‘Students help each other mutually’

Question: **12** **SubQuest:** **A** **Part:** **2**

Malaysia	**set to NA:X**	**Recoding undertaken:** set TQ12a.2 to n/a
	Description:	Automatic promotion in MYS.
Sri Lanka	**Description:**	- Automatic promotion in LKA - Repeaters are very exceptional cases

Question: 12 **SubQuest: C**

Chile **Description:** "continued" replaces "transferred" in the stem of the question and at 12c.2

Explanation from CHL:
The change is in the word "continued" instead of "transferred", which is meaningful for the Chilean education system, because 7th grade is part of the same education level and given in the same school.

Basic education is 1st to 8th grade, which is divided in ISCED 1 and 2; therefore it is a continuity between both levels, and the first grade in lower secondary is 7th grade.

Paraguay **Description:** "will transfer" was replaced by "will enrol" in stem of question and at TQ12c.2

Question: 13 **SubQuest: A**

Brazil **Description:** Added extra text to the stem of the question:
"Are your Grade 4 students enrolled in single or multi-grade class(es) or in other form of class organization (for example, cycles, phase, etc.)? "

Brazil **Description:** Added national option TQ13A3
"Other form of class organization (cycles, phase, etc.)"

Malaysia **Description:** Translated as "Typical grade 4 classes"

Explanation from MYS: *The word "typical" is used to differentiate between the two kinds of classes (single and multi-grade).*

Question: 14 **SubQuest: B**

Tunisia **Description:** Deleted in the instruction: "if you teach several shifts".

Explanation from TUN: *"multiple shifts" was omitted because it is not applicable*

Question: 16 **SubQuest: B**

Tunisia **Description:** Deleted in the instruction: "if you teach several shifts".

Explanation from TUN: *"multiple shifts" was omitted because it is not applicable*

Question: 21 **Part: 1**

Malaysia **Description:** Translated as "All students class repeat sentences after me"

Explanation from MYS: *The clause "that I say first" is deleted because it is unnecessary.*

Question: 21 **Part: 10**

Malaysia **Description:** Translated as Students do their homework at school.
International source version: Students do their homework assignments at school.

Explanation from MYS: *The word “assignment” is not necessary.*

Question: 22 **Part: 5**

Philippines **set to NA: X** **Recoding undertaken:** TQ22.5 set to n/a

Description: Item dropped

Question: 23

Tunisia **Description:** The term "strongly" was not used in both column headers: "Strongly disagree" and "Strongly agree".

Explanation from TUN: *using this term will be understood in Tunisia as the same way as intended (strongly agree).*

Question: 23 **Part:** 1

Tunisia **Description:** International source version: Our school puts great emphasis on cognitive outcomes in basic school subjects.

The translation: Our school puts great emphasis on cognitive outcomes in basic school competencies.

Explanation from TUN: *"subjects" changed into "competencies" to match basic school's lexis*

Question: 24

Tunisia **Description:** The term "strongly" was not used in both column headers: "Strongly disagree" and "Strongly agree".

Explanation from TUN: *using this term will be understood in Tunisia as the same way as intended (strongly agree).*

Question: 24 **Part:** 5

Malaysia **Description:** Translated as:
I receive a great deal of support from parents/guardians for the work I do.

International source version:
I receive a great deal of support from parents for the work I do.

Explanation from MYS: *Guardians is added for care-giver other than parents.*

Question: 24 **Part:** 9

Malaysia **Description:** Translated as: Most of my colleagues agree about what the central mission of the school should be .

International source version:
Most of my colleagues share my beliefs about what the central mission of the school should be.

Explanation from MYS: *"Share my beliefs" means "agree" as translated in the Malay language.*

Question: 24 **Part:** 10

Malaysia **Description:** Translated as: My school head is clear on the school culture he/she wants and has communicated it to the teachers and supporting staff.

International source version: My school head knows what kind of school he/she wants and has communicated it to the staff.

Explanation from MYS: *It is suggested that the word "kind" is replaced by "culture" because culture denotes work processes attitudes, shared values and aspirations.*

Question: 24 **Part:** 17

Malaysia **Description:** Translated as: I would recommend teachers from other schools to come and teach in this school.

International source version: I would recommend other classroom teachers to come and teach in this school.

Explanation from MYS: *To make the sentence clearer.*

National deviations by Survey Instrument

School Questionnaire

Question: 1

Brazil **set to NA:** **Recoding undertaken:** 1=1; 2=3

Description: Dropped international item #2: <government dependent private school>.

India **Description:** Applicable to the 3 versions (Assamese, Hindi and Tamil)

Adapted to the following:
<public school> = government school and local body school
<government dependent private school> = A government aided private school

Malaysia **set to NA: X** **Recoding undertaken:** Set SQ1 = n/a in international database

Description: Set to "not applicable" upon request by the country.

Paraguay **Description:** Stem of the question was translated/adapted as:
Which sector or administration type does your school belong to?

Explanation from PRY: *Usual way to ask this question in Paraguay's educational system*

Philippines **Recoding undertaken:** If SQ1 = 2 then SQ1 = 3;

Description: International item #2 (government dependent private school) dropped, international item #3 (independent private school) was renumbered to 2.

Sri Lanka **Description:** In the introductory text before question 1. A footnote was added:
"The teachers' questionnaire of a single medium school should be completed by all the teachers, teaching the mother tongue and maths in grade 4 classes, while in a bi-media school, the teachers teaching the mother tongue in either of the mediums and, or those teaching maths should complete the questionnaire."

Explanation: *In LKA, some schools have 2 main languages of instruction (bi-Media school: Tamil and Sinhala), this footnote was added for specification.*

Sri Lanka	**Description:**	Adaptation of the term 'public school'. The question has been translated to: 'Is your school a government or a private school?' Option 1 is: 'A government school'
Tunisia	**Description:**	International item #2 (government dependent private school) dropped, international item #3 (independent private school) remained as "3" in the database.
Uruguay	**Recoding undertaken:**	if SQ1 = 2 then SQ1 = 3 ;
	Description:	1 = a public school 2 = not administered 3 = a private school

Question: 2

Argentina	**set to NA: X**	**Recoding undertaken:** set SQ2.1, SQ2.2 and SQ2.3 to n/a
	Description:	Set to "not applicable" upon request by the country.
Philippines	**set to NA: X**	**Recoding undertaken:** set SQ2.1, SQ2.2 and SQ2.3 to n/a
	Description:	Explanation from PHL: *Education in the Philippines is free in both public elementary and secondary schools. Along this premise, the "no collection" policy is strictly enforced.* Set to "not applicable" upon request by the country.
Sri Lanka	**set to NA:X**	**Recoding undertaken:** set SQ2.1, SQ2.2 and SQ2.3 to n/a
	Description:	Set to "not applicable" upon request by the country.
Tunisia	**set to NA:X**	**Recoding undertaken:** set SQ2.1, SQ2.2 and SQ2.3 to n/a
	Description:	Set to "not applicable" upon request by the country.
Sri Lanka	**Description:**	<Student fees or school charges> adapted to 'Student fees and school

Question: 5 **Part: 1**

Argentina	**Description:**	<language of the school> adapted to "Spanish".
Chile	**Description:**	<language of the school> adapted to "Spanish".
India	**Description:**	Applicable for the 3 languages. Original: Have a first language other than the <language of the school> Adapted to: Have a first language other than the medium of instruction of the school
Paraguay	**Description:**	<language of the school> adapted to "Castellano".
Sri Lanka	**Description:**	Adaptation of 'Have a first language other than the <language of the school>'. It now reads: 'Students whose mother tongue is other than the medium language used in the school'. Also an additional note was added at the bottom of the question to specify the meaning of question 5.1. For schools where there is 2 media of instruction: 'In bi-media schools, here what is expected is the number of students who are not Sinhala or Tamil. In single medium schools the number of students in each class, whose mother tongue is not the medium of the school should be included.'

Uruguay	**Description:**	<language of the school> adapted to "Spanish".
Tunisia	**Description:**	Translated as "Receive support to help them carry on their studies (e.g. a school uniform, textbooks, meals, scholarship etc.)". Instead of "Receive support for school attendance (e.g. a school uniform, textbooks, meals, <financial support> etc.)". Explanation from TUN: *"school attendance" does not convey what the mentioned kinds of support are meant to be. The fact of following studies means school attendance.*

Question: 5 **Part: 6**

Chile	**Description:**	<Travel to and from school by subsidized transportation> was adapted/translated as: Have school pass for transportation. Explanation from CHL: *There is no public transportation, the transportation subsidy works through a school pass given to students for paying a special fee in private transportation.*

Question: 6

Argentina	**Description:**	4 times GDP per capita = 4000 pesos 2 times GDP per capita = 2000 pesos GDP per capita = 1000 pesos half GDP per capita = 500 pesos National poverty line = 'below 500 pesos' (not the national poverty line of 787 pesos) Value expressed in MONTHLY terms; Year of GDP per capita = 2005; Source = Dirección Nacional de Cuentas Nacionales, SPE/Ministerio de Economía & Instituto Nacional de Estadísticas y Censos
Brazil	**Description:**	4 times GDP per capita = 38 916 reais 2 times GDP per capita = 19 458 GDP per capita = 9729 half GDP per capita = 4864.50 National poverty line = 1800 Value expressed in yearly terms; Year of GDP per capita = 2004; Source = IBGE (Instituto Brasileiro de Geografia e Estatística)
Chile	**Description:**	4 times GDP per capita = 1 200 000 2 times GDP per capita = 600 000 GDP per capita = 300 000 half GDP per capita = 150 000 National poverty line = 50 000 Value expressed in MONTHLY terms; Year of GDP per capita = 2004; Source = Central Bank & National institute for statistics

India	**Description:**	For 3 languages: 4 times GDP per capita = 84 000 rupees 2 times GDP per capita = 42 000 rupees GDP per capita = 21 000 rupees half GDP per capita = 10 500 rupees Value expressed in annual terms; Year of GDP per capita = 2003-2004; Sources = Central Statistical Organisation, Ministry of Planning and Statistics. 55th round, Planning Commission. National poverty line = urban 5400 rupees, rural 3900 rupees (1999-2000, last year available) ; The national poverty line (option 5) has 2 figures given for reference: "The average family income of my students is below national poverty line (national poverty line for rural areas is Rs.5400 and for urban areas is Rs.3900)" (Except for the Tamil version: the 2 figures for the national poverty line are in monthly terms. This is different from the 2 other versions (Assamese & Hindi)).
Malaysia	**set to NA: X**	**Recoding undertaken:** set SQ6 to n/a for MYS
	Description:	Data not published upon request by country.
Paraguay	**Description:**	4 times GDP per capita = 25 680 000 guaranis 2 times GDP per capita = 12 840 000 GDP per capita = 6 420 000 half GDP per capita = 3 210 000 National poverty line = 2 680 200 Value expressed in annual terms; Year of GDP per capita = 2003 (most recent); Source = Paraguay's central bank
Peru	**Description:**	4 times GDP per capita = 2800 nuevos soles 2 times GDP per capita = 1400 GDP per capita = 700 half GDP per capita = 350 National poverty line = 215 Values expressed in MONTHLY terms; Year of GDP per capita = 2004 (latest data); Source = Central bank & National institute for statistics;
Philippines	**Description:**	4 times GDP per capita = 208 964 php (peso) 2 times GDP per capita = 104 482 GDP per capita = 52 241 half GDP per capita = 26 120 National poverty line = 11 906 Values expressed in annual terms; Year of GDP per capita = 2004; Source = PHL statistical yearbook;

Sri Lanka	**Description:**	For the 2 languages: 4 times GDP per capita = 384 000 rupees 2 times GDP per capita = 192 000 rupees GDP per capita = 96 000 rupees half GDP per capita = 48 000 rupees Value expressed in annual terms; Year of GDP per capita = 2004; Source = Central Bank of LKA; National poverty line = 20 000 rupees National poverty line (option 5) = "The average family income of my students is below Rs. 20,000 (which is equivalent to about Rs. 100 per day)"
Tunisia	**Description:**	4 times GDP per capita = 14 000 dinars tunisiens 2 times GDP per capita = 7000 GDP per capita = 3500 half GDP per capita = 1750 National poverty line = 450 dinars tunisiens Value expressed in annual terms; Year of GDP per capita = 2005; Source = Ministry of Development and International Cooperation
Uruguay	**Description:**	4 times GDP per capita = 39 000 pesos 2 times GDP per capita = 19 500 pesos GDP per capita = 9 750 pesos half GDP per capita = 4 875 pesos National poverty line = 3 823 pesos Value expressed in MONTHLY terms; Year of GDP per capita = 2004; Source = Central bank of URY & National Institute of Statistics

Question: 7 **Part: 2**

Argentina	**set to NA:X**	**Recoding undertaken:** SQ7.2 set to n/a
	Description:	Item dropped.

Question: 7 **Part: 4**

Tunisia	**Description:**	The original item is "Parents' endorsement of the philosophy of the school". It was translated as "Parents' endorsement of the learning system of the school". Explanation from TUN: *There is only one recommended (standard) philosophy of the school. Although this option is not applicable, it is retained for methodological purposes, "the philosophy of the school" is replaced by "the learning system of the school".*

Question: 9

Malaysia **Description:** "Your gender" instead of "Are your male or female?"

Explanation from MYS: *In Malaysian context we use gender instead of asking whether a person male or female.*

Tunisia **Description:** "Your gender" instead of "Are your male or female?"

Explanation from TUN: *Question replaced by only one word to convey the meaning. The discourse of the original structure after translation is not an appropriate discourse addressed to adults.*

Question: 10 **SubQuest: A**

Argentina

Recoding undertaken: if SQ10A = 4 then SQ10A = 5

Description:
ISCED 1 = Primary education;
ISCED 2 = 2nd year of secondary;
ISCED 3 = secondary;
ISCED 4 = not applicable in ARG;
ISCED 5 = tertiary non university (option 4) + tertiary university (option 5)

Brazil

Recoding undertaken: 1=1; 2=2; 3+4=3; 5+6+7+8+9+10+11=5

Description:
ISCED 1= Elementary education (grades 1-4) or equivalent;
ISCED 2= Elementary education (grades 5-8) or equivalent;
ISCED 3= Upper secondary Education - Teaching Education (option 3)
+ Upper secondary education - Other (option 4);
ISCED 4= not applicable in BRA;
ISCED 5= Higher Education/Teaching Education at the tertiary level (option 5)
+ Higher Education/Pedagogy (option 6)
+ Higher Education/Licentiate in Letras (option 7)
+ Higher Education/ Licentiate in Mathematics (option 8)
+ Higher Education/Other Licentiate (option 9)
+ Higher Education/ Other courses (option 10)
+ Post-graduate studies (specialization, master and doctoral programmes) (option 11)

Chile

Recoding undertaken: SQ10A = SQN10A;
if SQN10A = 4 then SQ10A = 5;

Description:
ISCED 1= 6th grade of basic education or equivalent;
ISCED 2= 8th grade of basic education or equivalent
ISCED 3= 4th middle (secondary education) or equivalent;
ISCED 4= not applicable in CHL;
ISCED 5= Higher education (Centre for Technical Training, Professional Institute or University) or equivalent;

India **Description:** Applicable for 3 languages.

ISCED 1 = primary education;
ISCED 2 = upper primary education;
ISCED 3 = secondary and/or higher secondary education;
ISCED 4 = Junior Basic Training/ Diploma in Teacher Training;
ISCED 5 = Graduation or higher than that

Malaysia **Description:**
ISCED 1 = Primary education level or equivalent;
ISCED 2 = Lower Secondary Education level or equivalent;
ISCED 3 = Upper Secondary Education level (including Form 6 and Matriculation) or equivalent;
ISCED 4 = Skills Certificate level or equivalent;
ISCED 5 = Teaching Certificate/Diploma/Degree or equivalent or higher;

Paraguay **Recoding undertaken:** if SQ10a = 4 then SQ10a = 5;

Description: ISCED 1 = Primary education or basic school education (1st and 2nd cycle);
ISCED 2 = Lower Secondary education or BSE (3rd cycle);
ISCED 3 = Normal school, Secondary education-Bachillerato or Middle education;
ISCED 4 = dropped by PRY;
ISCED 5 = Teacher training school, higher-level technician, university level,

Peru **Description:** ISCED 1= Primary education;
ISCED 2= Third secondary grade;
ISCED 3= Fifth secondary grade;
ISCED 4= Short career (six months as minimum) beyond secondary education, not superior education;
ISCED 5= Superior education;

Philippines **Recoding undertaken:** if SQ10a = 2 then SQ10a = 4; if SQ10a = 3 then SQ10a = 5 ; if SQ10a = 1 then SQ10a = 3;

Description: ISCED 1 + 2 + 3 = Lower than post-secondary non-tertiary education (e.g. elementary and secondary education)
ISCED 4 = Post-secondary non-tertiary education (e.g. post-secondary technical vocational education and training)
ISCED 5 = Tertiary education (e.g. bachelor's degree, master's degree, doctorate degree, etc.).

Philippines **Recoding undertaken:** recoded if SQ10B < 5 and SQ10A = 5 then SQ10B

Description: All school heads are from the ranks of teachers.
Since pre-service training automatically considers the 1st year of schooling up to the time the course has been completed. Pre-service teacher training is 3 yrs. Recode school heads that have tertiary education to have 3 yrs of pre-service teacher training.

Sri Lanka **Description:** Extra instruction added about 'formal pre-service teacher training'.
Explanation from LKA: "In Sri Lanka, three years of 'pre-service' teacher training provided by colleges of Education. Two years course work in Colleges of Education and one year practical training in schools."

The additional instruction reads as follow: "If you were trained in National Colleges of Education, please consider the 3 years of training as part of your total for pre-service teacher training."

Recoding undertaken: 1=1; 2=2; 3+4+5 = 3; 6+7 = 5;

Description: Both languages:

ISCED 1 = primary education (grade 5) or equivalent;
ISCED 2 = junior secondary (grade9);
ISCED 3 = Lower secondary education (GCE O/L) or equivalent
+ Upper secondary education (GCE A/L) or equivalent
+ Other diplomas or certificates (Technical colleges / aesthetic colleges) or equivalent;
ISCED 4 = not applicable;
ISCED 5 = Diploma from National Colleges of Education or equivalent
+ Tertiary education (University degree) or higher;

Sri Lanka	**Description:**	Extra instruction added about 'formal pre-service teacher training'. Explanation from LKA: "In Sri Lanka, three years of 'pre-service' teacher training provided by colleges of Education. Two years course work in Colleges of Education and one year practical training in schools." The additional instruction reads as follow: "If you were trained in National Colleges of Education, please consider the 3 years of training as part of your total for pre-service teacher training."
Tunisia	**Description:**	ISCED 1 = primary education or equivalent; ISCED 2 = Basic education 2nd cycle; ISCED 3 = Secondary education or equivalent; ISCED 4 = Post secondary not university (tertiary); ISCED 5 = University or equivalent;
Uruguay	**Description:**	ISCED 1= Primary education; ISCED 2= Basic cycle of Middle Education or equivalent; ISCED 3= Second cycle of Middle Education or equivalent; ISCED 4= Technical courses from UTU (Commercial teaching, administration, data processing, communication); ISCED 5= Tertiary education or equivalent: Teaching, Professional qualification, Faculty or equivalent;

Question: 11 **Part: 2**

Brazil	**Recoding undertaken:**	SQ11_2 = SQ11_2/ 8
	Description:	Programme length supplied in <hours> instead of <days>; 8 hours = 1 day training. Recoded for the international database.
Paraguay	**Recoding undertaken:**	SQ11_2= SQ11_2/8
	Description:	Programme length supplied in <hours> instead of <days>; 8 hours = 1 day training. Recoded for the international database.

Question: 12 **SubQuest: B**

Argentina

Recoding undertaken: *ISCED level 5 split into 4 and 5, recode ;
SN12B4 = SQ12B4;
SN12B5 = SQ12B5;
SQ12B5 = sum(SQ12B4,SQ12B5);
SQ12B4 = .A;

Description: ISCED 1 = Primary education;
ISCED 2 = 2nd year of secondary;
ISCED 3 = secondary;
ISCED 4 = not applicable in ARG;
ISCED 5 = tertiary non university (option 4) + tertiary university (option 5)

Brazil

Recoding undertaken: 12b1 = 1;
12b2 = 2;
12b3+12b4 = 3;
12b5+12b6+12b7+12b8+12b9+12b10+12b11=5

Description: ISCED 1= Elementary education (grades 1-4) or equivalent;
ISCED 2= Elementary education (grades 5-8) or equivalent;
ISCED 3= Upper secondary Education - Teaching Education (option 3)
+ Upper secondary education - Other (option 4);
ISCED 4= not applicable in BRA;
ISCED 5= Higher Education/Teaching Education at the tertiary level (option 5)
+ Higher Education/Pedagogy (option 6)
+ Higher Education/Licentiate in Letras (option 7)
+ Higher Education/ Licentiate in Mathematics (option 8)
+ Higher Education/Other Licentiate (option 9)
+ Higher Education/ Other courses (option 10)
+ Post-graduate studies (specialization, master and doctoral programmes) (option 11)

Chile

Description: ISCED 1= 6th grade of basic education or equivalent;
ISCED 2= 8th grade of basic education or equivalent
ISCED 3= 4th middle (secondary education) or equivalent;
ISCED 4= not applicable in CHL;
ISCED 5= Higher education (Centre for Technical Training, Professional Institute or University) or equivalent;

India

Description: Applicable for 3 languages.

A note added below this question:

India

Description: Applicable for 3 languages.

ISCED 1 = primary education;
ISCED 2 = upper primary education ;
ISCED 3 = secondary and/or higher secondary education;
ISCED 4 = Junior Basic Training/ Diploma in Teacher Training;
ISCED 5 = Graduation or higher than that
"Note: Total number of teachers in 12(c) should match with 12(a)."

Malaysia	**Description:**	ISCED 1 = Primary education level or equivalent; ISCED 2 = Lower Secondary Education level or equivalent; ISCED 3 = Upper Secondary Education level (including Form 6 and Matriculation) or equivalent; ISCED 4 = Skills Certificate level or equivalent; ISCED 5 = Teaching Certificate/Diploma/Degree or equivalent or higher;
Paraguay	**Description:**	ISCED 1 = Primary education or basic school education (1st and 2nd cycle); ISCED 2 = Lower Secondary education or BSE (3rd cycle); ISCED 3 = Normal school, Secondary education-Bachillerato or Middle education; ISCED 4 = dropped by PRY, there is no ISCED 4 ISCED 5 = Teacher training school, higher-level technician, university level,
Peru	**Description:**	ISCED 1= Primary education; ISCED 2= Third secondary grade; ISCED 3= Fifth secondary grade; ISCED 4= Short career (six months as minimum) beyond secondary education, not superior education; ISCED 5= Superior education;
Philippines	**Description:**	ISCED 1 + 2 + 3 = Lower than post-secondary non-tertiary education (e.g. elementary and secondary education) ISCED 4 = Post-secondary non-tertiary education (e.g. post-secondary technical vocational education and training) ISCED 5 = Tertiary education (e.g. bachelor's degree, master's degree, doctorate degree, etc.).
Sri Lanka	**Description:**	Extra instruction added about 'formal pre-service teacher training'. Explanation from LKA: "In Sri Lanka, three years of 'pre-service' teacher training provided by colleges of Education. Two years course work in Colleges of Education and one year practical training in schools." The additional instruction reads as follow: "If you were trained in National Colleges of Education, please consider the 3 years of training as part of your total for pre-service teacher training."
Sri Lanka	**set to NA:**	**Recoding undertaken:** SQ12b1=SQ12b1; SQ12b2 = SQ12b2; SQ12b3 + SQ12b4 + SQ12b5 = SQ12b3; SQ12b6 + SQ12b7 = SQ12b5
	Description:	Both languages: ISCED 1 = primary education (grade 5) or equivalent; ISCED 2 = junior secondary (grade9); ISCED 3 = Lower secondary education (GCE O/L) or equivalent + Upper secondary education (GCE A/L) or equivalent + Other diplomas or certificates (Technical colleges / aesthetic colleges) or equivalent; ISCED 4 = not applicable; ISCED 5 = Diploma from National Colleges of Education or equivalent + Tertiary education (University degree) or higher;

Tunisia **Description:** English version is:

"Count each <classroom teacher> once only..."

In the translation, it is missing the specification 'once only'.

Tunisia **Description:** ISCED 1 = primary education or equivalent;
ISCED 2 = Basic education 2nd cycle;
ISCED 3 = Secondary education or equivalent;
ISCED 4 = Post secondary not university (tertiary);
ISCED 5 = University or equivalent;

Uruguay **Description:** ISCED 1= Primary education;
ISCED 2= Basic cycle of Middle Education or equivalent;
ISCED 3= Second cycle of Middle Education or equivalent;
ISCED 4= Technical courses from UTU (Commercial teaching, administration, data processing, communication);
ISCED 5= Tertiary education or equivalent: Teaching, Professional qualification, Faculty or equivalent;

Question: 17 **Part: 1** **Language: Hindi**

India **Description:** ICT footnote in Hindi version only.
At the bottom of question 17, note says:
ICT: information communication and technology

Question: 17 **Part: 6** **Language: Hindi**

India **Description:** The idea of "excluding participation in a teacher union" is not clear in the translation. It has been translated as 'on the contrary'. It can be misunderstood by respondents.

Question: 18 **Part: 2**

India **Description:** International source version: Running water.

in Assamese: drinking water
Hindi: running drinking water
Tamil: drinking water

Tunisia **Description:** International source version: "Running water". Was translated as "Fountain water".

Question: 18 **Part: 9**

Uruguay **Description:** "Teachers' room" is the name used for "Staff room".

Question: 18 **Part: 17**

Argentina **Description:** "Cyclone shelters" replaced by "Storm shelters"

Chile **Description:** "Cyclone shelters" replaced by "Storm shelters"

Malaysia **Description:** "Cyclone shelters" replaced by "Storm shelters"

Paraguay **Description:** "Cyclone shelters" replaced by "Storm shelters"

Peru **Description:** "Cyclone shelters" replaced by "Storm shelters"

Uruguay **Description:** 'Cyclones shelters' replaced by 'Storm shelters'

Question: 18 **Part:** 20

Paraguay **Description:** "Duplicator" dropped.
Explanation from PRY: *Not commonly used in schools. Can cause confusion.*

Question: 19 **Part:** 10

Malaysia **Description:** "disabled students/cacat" translated as "helpless students/kurang upaya".

Explanation from MYS: *Kurang upaya is an accepted term as disabled. Cacat is a very degrading term for handicapped people*

Question: 19 **Part:** 17 **Language:** **Tamil**

India **Description:** The translation is specific, not general as in the International source version. The approximate translation in the Tamil version reads:
"Administrative assistants, librarians, there is a lack or shortage."

Question: 21

India **Description:** Applicable in 3 languages.

Additional instruction added:
"Indicate your total time of teaching periods in hours (1 hour = 60 minutes)."

Explanation from IND:
To make more clear (60 minutes = 1 hour) is used. The word 60 minutes to make more clear about hour to distinguish school period it may be as 40 -45 minutes

Question: 23 **Part:** 4

Tunisia **Description:** "Evaluate <classroom teachers>' records on students' progress" was translated as "Evaluate daily preparation file of every teacher and check assessment and follow-up booklets"

Explanation from TUN: *Reported to be a common discourse conveying the original meaning of this option.*

Question: 27 **Part:** 2

Malaysia **set to NA:** X **Recoding undertaken:** SQ27.2 set to n/a
Description: Question dropped. Automatic promotion in place in MYS.

Question: 28 **SubQuest:** A

India **Description:** Definition of governing board added in the 3 versions, as indicated and Permitted in the Translation guidelines.

"The Governing Board is a group of individuals, generally external to the school, that have administrative responsibilities. These responsibilities often include the appropriate functioning of the schools and sometimes educational and pedagogical aspects of the school; this group can also be responsible for hiring the director, assistant director and possibly other educational personnel."

Paraguay	**Description:**	A definition for <governing board> was added. "The governing board is a board usually conformed in order to administer, organize and take educational, pedagogical and organizational-operative decisions." In 2 schools in PRY, 2 kinds of boards exist: a governing board and a board of stakeholders. Surveyors instructed school head: if one of these boards is responsible: 'school governing board" should be ticked.
Philippines	**set to NA: X** **Description:**	**Recoding undertaken:** SQ28a and SQ28b set to n/a Question dropped. Governing boards are not applicable in public schools.
Uruguay	**Description:**	A definition for <governing board> was added. El ”Equipo de Gestión Escolar” es un grupo de personas, generalmente externos a la escuela, con responsabilidades administrativas, educacionales, pedagógicas, y toma de decisiones operativas; así como también es responsable de la contratación del director, subdirector y personal docente.
Sri Lanka	**Description:**	Adapted as ‘The local government, provincial council, pradesheeya sabha, urban council’.
Question: 29	**Column: B**	
Philippines	**Description:**	Column (School’s <governing board>) dropped
Tunisia	**Description:**	"Deciding on budget allocations within the school" was translated as "Using budget allocations within the school". Explanation from TUN: *Common way of saying that expression, will be understood the same as original meaning.*
Question: 31	**Part: 3**	
Uruguay	**Description:**	Added a brief definition in the answer item: "Teachers that leave the class without prior authorization of the director"
Question: 34	**Part: 5**	
Philippines	**set to NA:X** **Description:**	**Recoding undertaken:** SQ27.2 set to n/a Item dropped
Question: 37	**SubQuest: B**	
Brazil	**Description:**	International source version: Please count half day as 0.5. Changed to: Please count half shift as 0.5 day. Explanation from BRA: *Replaced "count half days" with "count half shifts" since, in the majority of the schools, the school day corresponds to a shift.*
Sri Lanka	**Recoding undertaken:** **Description:**	SQ37a = 39 All answers were set to 39 weeks due to LKA's MoE regulation: *In LKA school should be opened 210 days (i.e. 42 weeks) a year. This regulation is normally strictly followed by the schools. The values less than 40 and over than 42 cannot be accepted. In 2004, there were 199 school days according to government directive (MoE). Thus the range should be between 38-40 weeks.*

Sri Lanka	**Recoding undertaken:**	SQ37D = 27
	Description:	Answers were set to 27 hours due to LKA's MoE regulations: *Grade 4 students have 40 periods per week (8 periods per day). Each period is of 40 minutes duration. Therefore the number of hours of teaching in grade 4 in a typical week is 27 hrs.*
Tunisia	**Recoding undertaken:**	SQ37a = 32
	Description:	All answers were set to 32 weeks due to TUN's MoE regulations : *The official number of weeks in a school year is always 32. Since all participating schools are public, this number may not vary (higher or lower). This is a rule of the national education system in TUN.*
Tunisia	**Recoding undertaken:**	SQ37D = 25
	Description:	Answers were set to 25 hours due to TUN's MoE regulations: *Officially grade 4 students receive 25 hours in a typical school week (24 hrs of instruction in all subject matters and 1 hr "out of classroom" activities such as Sports)*
Tunisia	**Recoding undertaken:**	SQ37B = 180
	Description:	All answers were set to 180 due to TUN's MoE regulations: *The official number of weeks in a school year is always 32. Since all participating schools are public, this number may not vary (higher or lower). This is a rule of the national education system in TUN.* *The school is open 6 days a week. 6 * 32=192 days - 12 (days of festivities) = 180.*

Question: 38 **SubQuest: A**

Brazil	**set to NA:**	**Recoding undertaken:** SQ38A = SN38A if SQ38A = 25 then SQ38A = 0
	Description:	Alphabetization programs (ISCED 0) ="25" Early childhood programs = "0". Recoded to 0 in international database.
Paraguay	**Description:**	Grades 13 to 16 include teacher training programmes.

Question: 41 **SubQuest: A**

Brazil	**Description:**	Replaced the word "transferred" by "continued".
Chile	**Description:**	Replaced the word "transferred" by "continued" in the stem of the question and at 41a.2 and 41a.3 *The change is in the word "continued" instead of "transferred", which is meaningful for the Chilean education system, because 5th grade is part of the same education level and given in the same school.*
Paraguay	**Description:**	Replaced "have transferred" by "have enrolled" in the stem of question and at 41a.2 and 41a.3

Question: **41** **SubQuest:** **B**

Brazil **Description:** Replaced the word "transferred" by the word "promoted".

Chile **Description:** Replaced the word "transferred" by "continued" in the stem of the question and at 41b.2 and 41b.3

The change is in the word continued instead of transferred, which is meaningful for the Chilean education system, because 7th grade is part of the same education level and given in the same school.

Paraguay **Description:** Replaced "have transferred" by "have enrolled" in stem of question and at 41b.2 and 41b.3

Question: **43** **Part:** **2**

Brazil **Recoding undertaken:** SQ43_2 = SQ43_2/ 8

Description: International option administered.
"hours" replaces <days>. 1 day = 8 hours