Because an important goal of the PIRLS 2011 assessment was to measure changes in students' reading achievement across assessment cycles, it was important to track any changes over time in population composition and coverage that might be related to student achievement. Exhibit 1 presents, for each country, trends across the PIRLS assessment cycles (2011, 2006, and 2001) in four important characteristics of the assessment populations: number of years of formal schooling, average student age, percent of students in the national target population excluded from the assessment, and overall participation rates after using replacements. Most countries and benchmarking participants were very similar with regard to these characteristics across the three assessment cycles, although there have been changes in some countries in the age and grade structure of the assessed populations and in the exclusion rate.

The Russian Federation and Slovenia have undergone structural changes in the age at which children enter schools that are reflected in their samples. In 2001, the Russian fourth grade sample contained third grade students from some regions and fourth-grade students from others, whereas all students were in fourth grade by 2006. Slovenia has now completed a transition towards having all children begin school at an earlier age so that they all will have four years of primary schooling at the fourth grade instead of three years, as was the case in 2001.

In general, the exclusion rates do not exceed the PIRLS 2011 guidelines of 5 percent, and have not changed very much across assessments for most countries. Also, in most cases, the exclusion rates have decreased. However, the student exclusion rate was higher in 2011 than in 2006 in Belgium (French), Denmark, France, Hong Kong SAR, Singapore, and the United States.

Exhibit 1: Trends in Student Populations - PIRLS

| Country | Years of Formal Schooling* |  |  | Average Age at Time of Testing |  |  | Overall Exclusion Rates |  |  | Overall Participation Rates (After Replacement) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2011 | 2006 | 2001 | 2011 | 2006 | 2001 | 2011 | 2006 | 2001 | 2011 | 2006 | 2001 |
| Austria | 4 | 4 |  | 10.3 | 10.3 |  | 5.1\% | 5.1\% |  | 98\% | 97\% |  |
| Belgium (French) | 4 | 4 |  | 10.1 | 9.9 |  | 5.6\% | 3.9\% |  | 82\% | 95\% |  |
| Bulgaria | 4 | 4 | 4 | 10.7 | 10.9 | 10.9 | 2.5\% | 6.4\% | 2.7\% | 95\% | 94\% | 93\% |
| Chinese Taipei | 4 | 4 |  | 10.2 | 10.1 |  | 1.4\% | 2.9\% |  | 99\% | 99\% |  |
| Colombia | 4 |  | 4 | 10.4 |  | 10.5 | 1.5\% |  | 3.3\% | 95\% |  | 94\% |
| Czech Republic | 4 |  | 4 | 10.4 |  | 10.5 | 5.1\% |  | 5.0\% | 94\% |  | 90\% |
| Denmark | 4 | 4 |  | 10.9 | 10.9 |  | 7.3\% | 6.2\% |  | 95\% | 96\% |  |
| England | 5 | 5 | 5 | 10.3 | 10.3 | 10.2 | 2.4\% | 2.4\% | 5.7\% | 82\% | 92\% | 82\% |
| France | 4 | 4 | 4 | 10.0 | 10.0 | 10.1 | 5.2\% | 3.8\% | 5.3\% | 97\% | 95\% | 94\% |
| a Georgia | 4 | 4 |  | 10.0 | 10.1 |  | 4.9\% | 7.3\% |  | 96\% | 98\% |  |
| Germany | 4 | 4 | 4 | 10.4 | 10.5 | 10.5 | 1.9\% | 0.7\% | 1.8\% | 95\% | 92\% | 86\% |
| Hong Kong SAR | 4 | 4 | 4 | 10.1 | 10.0 | 10.2 | 11.8\% | 3.9\% | 2.8\% | 83\% | 97\% | 97\% |
| Hungary | 4 | 4 | 4 | 10.7 | 10.7 | 10.7 | 4.2\% | 3.7\% | 2.1\% | 96\% | 97\% | 95\% |
| Indonesia | 4 | 4 |  | 10.4 | 10.4 |  | 2.5\% | 3.2\% |  | 97\% | 98\% |  |
| Iran, Islamic Rep. of | 4 | 4 | 4 | 10.2 | 10.2 | 10.4 | 4.5\% | 3.8\% | 0.5\% | 99\% | 99\% | 98\% |
| Italy | 4 | 4 | 4 | 9.7 | 9.7 | 9.8 | 3.7\% | 5.3\% | 2.9\% | 95\% | 97\% | 98\% |
| Lithuania | 4 | 4 | 4 | 10.7 | 10.7 | 10.9 | 5.6\% | 5.1\% | 3.8\% | 94\% | 92\% | 83\% |
| Morocco | 4 | 4 | 4 | 10.5 | 10.8 | 11.2 | 2.0\% | 1.1\% | 1.0\% | 95\% | 94\% | 69\% |
| Netherlands | 4 | 4 | 4 | 10.2 | 10.3 | 10.3 | 3.7\% | 3.6\% | 3.7\% | 89\% | 90\% | 87\% |
| New Zealand | 4.5-5.5 | 4.5-5.5 | 4.5-5.5 | 10.1 | 10.0 | 10.1 | 3.3\% | 5.3\% | 3.2\% | 93\% | 95\% | 96\% |
| Norway | 4 | 4 | 4 | 9.7 | 9.8 | 10.0 | 4.2\% | 3.8\% | 2.8\% | 71\% | 71\% | 82\% |
| Poland | 4 | 4 |  | 9.9 | 9.9 |  | 3.8\% | 5.1\% |  | 96\% | 95\% |  |
| Romania | 4 | 4 | 4 | 10.9 | 10.9 | 11.1 | 4.0\% | 2.4\% | 4.5\% | 97\% | 97\% | 93\% |
| Russian Federation | 4 | 3 or 4 | 3 or 4 | 10.8 | 10.8 | 10.3 | 5.3\% | 5.9\% | 6.6\% | 98\% | 97\% | 97\% |
| Singapore | 4 | 4 | 4 | 10.4 | 10.4 | 10.1 | 6.3\% | 0.9\% | 0.1\% | 96\% | 95\% | 98\% |
| Slovak Republic | 4 | 4 | 4 | 10.4 | 10.4 | 10.3 | 4.6\% | 3.6\% | 2.0\% | 96\% | 94\% | 96\% |
| Slovenia | 4 | 3 or 4 | 3 | 9.9 | 9.9 | 9.8 | 2.6\% | 0.8\% | 0.3\% | 94\% | 93\% | 94\% |
| Spain | 4 | 4 |  | 9.8 | 9.9 |  | 5.4\% | 5.3\% |  | 96\% | 97\% |  |
| Sweden | 4 | 4 | 4 | 10.7 | 10.9 | 10.8 | 4.1\% | 3.9\% | 5.0\% | 91\% | 96\% | 92\% |
| Trinidad and Tobago | 5 | 5 |  | 10.3 | 10.1 |  | 0.9\% | 0.7\% |  | 95\% | 94\% |  |
| United States | 4 | 4 | 4 | 10.2 | 10.1 | 10.2 | 7.2\% | 5.9\% | 5.3\% | 81\% | 82\% | 83\% |
| Benchmarking Participants ${ }^{\text {® }}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Alberta, Canada | 4 | 4 |  | 9.9 | 9.9 |  | 6.8\% | 7.1\% |  | 94\% | 96\% |  |
| Ontario, Canada | 4 | 4 | 4 | 9.8 | 9.8 | 9.9 | 7.9\% | 8.3\% | 6.6\% | 95\% | 87\% | 92\% |
| Quebec, Canada | 4 | 4 | 4 | 10.1 | 10.1 | 10.2 | 3.7\% | 3.6\% | 3.3\% | 92\% | 81\% | 89\% |
| b Eng/Afr (5) - RSA | 5 | 5 |  | 11.4 | 11.9 |  | 1.9\% | 4.3\% |  | 94\% | 88\% |  |

${ }^{\circ}$ Republic of South Africa (RSA) tested 5th grade students receiving instruction in English (ENG) or Afrikaans (AFR).

* Represents years of schooling counting from the first year of ISCED Level 1
a Schools in South Ossetia and Abkhazia were excluded due to lack of access and absence of official statistics. Abkhazia refugee schools in other territories of Georgia were included in the sample frame.
b Information from 2006 is for the entire country of South Africa.

