

# PIRLS

## **Introduction**



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## Trends in Children's Reading Literacy Achievement 1991–2001

*Integral to its mission of improving education and the understanding of educational processes by conducting international comparative studies of student achievement in key school subjects, the International Association for the Evaluation of Educational Achievement (IEA) has conducted a series of large-scale surveys of student reading achievement over the past 30 years.*

The first study, conducted in 1970-71 and focusing on reading comprehension in 15 countries, demonstrated that valid international comparisons of student reading were indeed feasible; and could produce valuable information to help participating countries identify strengths and weaknesses in their literacy programs.<sup>1</sup> Expanding on the first effort, the IEA Reading Literacy Study<sup>2</sup> was conducted in 1990-91 in 32 countries, assessing student reading on a wider range of reading materials and collecting data on the nature and extent of student reading, home literacy support, and school and classroom instructional factors. Twenty-seven countries participated at the primary/elementary-school level, and 31 at the lower-secondary/middle-school level. The Reading Literacy Study was, at the time, the most ambitious international study of student achievement ever attempted.

Ten years after the Reading Literacy Study, IEA launched the Progress in International Reading Literacy Study (PIRLS),<sup>3</sup> designed not only to provide a state-of-the-art international assessment of fourth-grade students' reading literacy achievement in 2001, but also to continue to provide data on trends in reading literacy achievement on a five-year cycle thereafter. Thirty-five countries participated in PIRLS 2001, the first cycle of PIRLS. Although built on the foundation of the 1991 study, PIRLS is a new and different study, with a new assessment framework describing the interaction between two major reading purposes (literary and informative), and a range of four comprehension processes, an innovative reading test, and newly-developed questionnaires for parents, students, teachers, and school principals.

Because the PIRLS 2001 reading test differed in a number of respects from the 1991 test, it was not possible to link the results of the two studies directly together. However, since PIRLS 2001 was scheduled to collect data on fourth-grade students ten years after the 1991 Reading Literacy Study, PIRLS countries that participated in 1991 were given the opportunity of measuring changes in reading literacy achievement over that period by re-administering the 1991 reading literacy test for primary/elementary-school students as part of the PIRLS data collection. The resulting study is known as the Trends in IEA's Reading Literacy Study.

- 1 Thorndike, R.L. (1973). Reading comprehension in fifteen countries: An empirical study. *International studies in evaluation: Vol. 3*. Stockholm: Almqvist & Wiksell.
- 2 Elley, W.B. (Ed.). (1994). *The IEA study of reading literacy: Achievement and instruction in thirty-two school systems*. Oxford, England: Elsevier Science Ltd. Although planning began in 1988, data collection took place in 1990-91, and the study is widely known as the IEA 1991 Reading Literacy Study.
- 3 Campbell, J.R., Kelly, D.L., Mullis, I.V.S., Martin, M.O., & Sainsbury, M. (2001). *Framework and specifications for PIRLS assessment 2001–2nd edition*. Chestnut Hill, MA: Boston College.

The 1991 reading literacy test was designed to measure reading achievement in three domains: narrative texts, expository texts, and documents; using a range of reading passages and non-continuous texts and with questions almost exclusively in multiple-choice format. The 2001 data collection also included a student questionnaire used in 1991, which asked students about home support for literacy and their reading at home and in school. The target population was the grade containing the most nine-year-olds, which was third or fourth grade in most countries.

The IEA is an independent international cooperative of national research institutions and governmental agencies, with a permanent secretariat, based in Amsterdam, The Netherlands. Its primary purpose is to conduct large-scale comparative studies of educational achievement, in order to gain a deeper understanding of the effects policies and practices have within and across systems of education.

### **Which Countries Participated?**

Nine countries participated in the Trends in IEA's Reading Literacy Study to examine how primary/elementary-school students' achievement in reading literacy had changed since 1991. Generally, these countries performed very well in 1991 – with six of them (the United States, Sweden, Italy, New Zealand, Iceland, and Singapore) scoring above the international average for the 27 countries participating in 1991; the remaining three (Greece, Hungary, and Slovenia) scoring at about the average. Each country had been working to improve students' reading achievement and was interested in seeing how this was reflected in performances on the 1991 reading literacy test.

In participating in PIRLS 2001 and the trend study, each country designated a national center and appointed a National Research Coordinator (NRC) to implement the studies in accordance with international procedures – a considerable responsibility given the complexity of the data collection and the measurement instruments. Appendix B contains a list of the PIRLS 2001 National Research Coordinators participating in the trend study. For efficiency in sampling and operations, the two studies were conducted in parallel as

much as possible. In choosing the sample for the trend study, participants used half of the schools sampled for the PIRLS 2001 data collection – sampling an additional class from the target grade for the 1991 literacy test data collection.

For the sake of comparability across countries, all testing was conducted at the end of the school year (most often in April through June of 2001 for countries in the Northern Hemisphere). The two countries on a Southern Hemisphere school schedule (New Zealand and Singapore) tested in September and October 2001, which was the end of the school year there. To ensure comparability over time, the 2001 data collection was scheduled in each country for the same time of year, as in 1991.<sup>4</sup>

### Conducting the Trends in IEA's Reading Literacy Study

As described in the *PIRLS Technical Report*,<sup>5</sup> PIRLS 2001 and the Trends in Reading Literacy Study were conducted according to the highest quality standards – with careful planning and documentation, cooperation among the participating countries, standardized procedures, and rigorous attention to quality control throughout. Countries used the same translated version of the 1991 test and student questionnaire in 2001, for example, and followed the same procedures for test administration and data collection. The stringent requirements for sampling documentation necessary to meet the PIRLS sampling standards also were applied in the trend study. Appendix A contains an overview of the procedures used.

This report summarizes performance on the IEA 1991 reading literacy test in 1991 and 2001, as well as responses to selected questions from the 1991 student questionnaire. Its purpose is to provide information on changes during that period. A more complete description of students' reading literacy achievement in 2001 is provided in the *PIRLS 2001 International Report*,<sup>6</sup> which describes performance on the PIRLS assessment of students from 35 countries – including the nine trend countries – as well as a wealth of information on home and school contexts.

Additional information about the countries participating in the trend study may be found in the *PIRLS 2001 Encyclopedia*,<sup>7</sup> a volume providing general information on the cultural, societal, and economic situation in each

4 In the 1991 study, Southern-Hemisphere countries tested in September-October 1990, before Northern-Hemisphere countries who tested in the first half of 1991. However, in PIRLS 2001, testing for Southern-Hemisphere countries followed Northern-Hemisphere testing, and so for New Zealand and Singapore the interval between data collections was eleven years.

5 Martin, M.O., Mullis, I.V.S., & Kennedy, A.M. (Eds.). (2003). *PIRLS 2001 technical report*. Chestnut Hill, MA: Boston College.

6 Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., & Kennedy, A.M. (2003). *PIRLS 2001 international report: IEA's study of reading literacy achievement in primary schools in 35 countries*. Chestnut Hill, MA: Boston College.

7 Mullis, I.V.S., Martin, M.O., Kennedy, A.M., & Flaherty, C.L. (Eds.). (2002). *PIRLS 2001 encyclopedia: A reference guide to reading education in the countries participating in IEA's Progress in International Reading Literacy Study (PIRLS)*. Chestnut Hill, MA: Boston College.

country; providing a more focused perspective on the structure and organization of the educational system, as it pertains specifically to the promotion of reading literacy. Consisting of a chapter from each country, the *PIRLS 2001 Encyclopedia* describes primary/elementary schooling as it pertains to reading within each educational system – including teacher education and training, reading curricula, classroom organization and instruction, and assessment practices. As such, it is an extremely valuable companion publication to this report; providing insights and detailed information about the policies, practices, and resources within each country.

The PIRLS International Study Center at Boston College, directed by Ina V.S. Mullis and Michael O. Martin, was responsible for all aspects of the design, development, and implementation of both the PIRLS 2001 and the Trends in IEA's Reading Literacy studies – working closely with the PIRLS advisory committees, the NRCs, and partner organizations responsible for particular aspects of the study. These included the IEA Secretariat, which provided guidance in all aspects of the study and was responsible for verification of all translations produced by participating countries; Statistics Canada, which was responsible for school and student sampling activities; the National Foundation for Educational Research in England and Wales, which had major responsibility for developing the PIRLS reading assessment; the IEA Data Processing Center, responsible for processing and verifying the data from the 35 countries; and Educational Testing Service, which provided software and support for scaling the achievement data.

## Funding

A project of this magnitude requires considerable financial support. IEA's major funding partners for PIRLS included the World Bank, the U.S. Department of Education through the National Center for Education Statistics, and those countries that contributed by way of fees.