

SECTION 1:

# BACKGROUND



This section presents a brief overview of the background to the second cycle of the Progress in International Reading Literacy Study (PIRLS). It includes details of the countries that took part, the education level of the students involved, and information on the types of reading texts included in the students' reading literacy assessment.

## Overview of PIRLS

PIRLS-05/06 was the second in an international 5-yearly cycle<sup>7</sup> of assessments designed to measure trends in reading literacy achievement at the middle primary level (Year 5 students in New Zealand). In addition to providing information on student achievement, it also examines the home, class, and school contexts for reading.

In PIRLS, reading literacy is defined as:

*The ability to understand and use those written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment.* (Mullis, Kennedy, Martin, & Sainsbury, 2006, p.3)

As was the case in PIRLS-01, the framework for PIRLS-05/06 describes three aspects of reading literacy:

- purposes of reading
- processes of comprehension
- reading behaviours and attitudes.

The first two aspects were used to shape the reading assessment in PIRLS-05/06. The aspect relating to reading behaviour and attitudes was addressed in a student questionnaire. In addition, information about the home and school context for reading was gathered through questionnaires for the students' parents, teachers, and school principals, as well as within the student questionnaire.

## Countries and education systems involved in the studies

Forty countries and education systems participated in PIRLS-05/06; 26 had also taken part in the first cycle in 2001 (see Table 1.1). Five Canadian provinces, accounting for 88 percent of Canada's population, also took part as benchmark participants; two of these provinces had also taken part in 2001.

Table 1.1: Countries and Canadian provinces participating in PIRLS-05/06

|                            |                              |                      |                      |
|----------------------------|------------------------------|----------------------|----------------------|
| Austria                    | * Hong Kong SAR <sup>†</sup> | Luxembourg           | * Russian Federation |
| Belgium (Flemish)          | * Hungary                    | * Macedonia, Rep. of | * Scotland           |
| Belgium (French)           | * Iceland                    | * Moldova, Rep. of   | * Singapore          |
| * Bulgaria                 | Indonesia                    | * Morocco            | * Slovak Republic    |
| Chinese Taipei             | * Iran, Islamic Rep. of      | * Netherlands, the   | * Slovenia           |
| Denmark                    | * Israel                     | * New Zealand        | South Africa         |
| * England                  | * Italy                      | * Norway             | Spain                |
| * France                   | Kuwait                       | Poland               | * Sweden             |
| Georgia                    | * Latvia                     | Qatar                | Trinidad and Tobago  |
| * Germany                  | * Lithuania                  | * Romania            | * United States      |
| <b>‡Canadian provinces</b> |                              |                      |                      |
| Alberta                    | Nova Scotia                  | * Quebec             |                      |
| British Columbia           | * Ontario                    |                      |                      |

### Notes

\* These countries and provinces participated in PIRLS-01. Kuwait participated in 2001, but its data are not comparable with 2005/2006.

<sup>†</sup> The Hong Kong Special Administrative Region.

<sup>‡</sup> The Canadian provinces took part in PIRLS-01 and PIRLS -05/06 as benchmarking participants.

<sup>7</sup> At its inception PIRLS was to be on a 4-year cycle with the first cycle administered in 2001. PIRLS then moved from being on a 4- to a 5-year cycle. The majority of countries and all Northern Hemisphere countries administered PIRLS in early 2006, but Southern Hemisphere countries, of which there were only three, administered PIRLS in late 2005, only 4 years after the first cycle. The third cycle, PIRLS-10/11, will be a 5-year cycle for all countries.

## New Zealand students and schools involved in PIRLS

In New Zealand, approximately 6,300 Year 5 students from a representative sample of schools which totalled 243 took part in the main survey of PIRLS-05/06 towards the end of 2005. In addition, a group of about 1,320 Year 6<sup>8</sup> students from 40 schools had also taken part in the field trial administered in the first quarter of 2005. Appendix A provides an overview of the sampling design including details of the stratification employed to select a representative sample of schools, and the size of the achieved New Zealand samples: school, teacher, and student samples.

### Age and years of schooling

The target class level for PIRLS-05/06 was set to be the fourth year of schooling, (or ‘Grade 4’), counting from the first year of ISCED Level 1.<sup>9</sup> Grade 4 was chosen because it is regarded as an important transition point in children’s reading development, in that most would have learned to read and be now reading to learn. In New Zealand the fourth year of schooling equates to Year 4. In countries where the average age of the students was *estimated* to be younger than 9.5 years, the class level that represented the fifth year of schooling was chosen. This was the case for New Zealand, England, Scotland, and Trinidad and Tobago, where children start formal schooling at 5 years of age.

To ensure the right New Zealand students were selected, the definition was refined further. Specifically, the definition was Year 5 students, or those students who would enter secondary school (Year 9) in 2009.

Table 1.2 presents a breakdown of the age statistics for New Zealand’s Year 5 students in the two PIRLS cycles. For additional information and a discussion of age comparability and achievement, readers should refer to Chamberlain, 2007b.

Table 1.2: Age of New Zealand Year 5 students, 2001 and 2005/2006

| Statistics                   | Age statistics from each PIRLS assessment |  |
|------------------------------|---|--|
|                              | 2001                                      | 2005/2006                              |
| Mean                         | 10 years, 1 month                         | 10 years                               |
| Median                       | 10 years, 1 month                         | 10 years                               |
| Range (5th–95th percentiles) | 9 years, 6 months – 10 years, 7 months    | 9 years, 6 months – 10 years, 6 months |

### School starting age and school entry

The school starting age in most countries is 6 or 7 years. In France and Singapore, for example, the school starting age is 6 years, while in Sweden and Latvia it is 7 years. In England and Scotland it is 5. In New Zealand the compulsory age is 6, but nearly all children start on or soon after their 5th birthday. New Zealand is the only country that has this entry practice; in all other countries students start at specific intake points. For example, in England many children start school at the beginning of the school year (i.e., September) in which they turn 5 years old.

### Pre-primary education

Pre-primary education also differs markedly across countries. For example, in Germany most (80%) children go to kindergarten or pre-school from 3 to 5 years of age, but reading instruction does not start formally until they enter school at age 6. In Hungary, children are generally enrolled in kindergarten at 3 years old, with compulsory attendance for 1 year by 5 years of age before they start their formal schooling at 6 years old. Box 1.1 presents examples of the practices used in a selection of countries.

<sup>8</sup> The field trial was undertaken in April/May 2005, this being towards the end of the school year in Northern Hemisphere countries, and was conducted with Grade 4 students. Due to the field trial being administered near the beginning of the school year in Southern Hemisphere countries, trial in these countries involved students in one grade higher than was the case in the main survey. In New Zealand’s case this was the Year 6 cohort.

<sup>9</sup> UNESCO’s International Standard Classification of Education. Level 1 corresponds to primary education, or the first stage of basic education.

### Box 1.1: Pre-primary education practices for selected countries

| Selected country | Pre-primary education   | Compulsory starting age  |
|------------------|---|--|
| Germany          | Attendance is voluntary. Most children attend a pre-primary education facility for 3 to 5 years, with no special instruction in reading.  | 6 years  |
| Hong Kong SAR    | Childcare is provided for 2- to 3-year-olds, and kindergarten is attended from 3 to 6 years of age. Formal reading starts at age 6 (Grade 1), but many begin to learn to read in kindergarten.  | 6 years  |
| Hungary          | Pre-primary education is available from ages 3 to 6; it is compulsory for 1 year for children aged 5. This prepares children for entry into formal education. The focus is on skills and competencies   | 6 years  |
| Netherlands      | There is no formal provision under 4 years, although childcare and preschool are available. Kindergarten is part of primary education, which starts at 4 years.   | 5 years; formal schooling starts at 6 years or the 3rd year        |
| New Zealand      | Early childhood education is provided through childcare services, home-based services, kindergartens, kōhanga reo, and play centres, up to school entry. <i>Te Whāriki</i> , the early childhood curriculum, identifies five goals that recognise aspects of early literacy skills. | 6 years; in practice children start on or near their 5th birthday. |
| Sweden           | The majority of 6-year-olds attend voluntary pre-school or preparatory classes (Grade 0). The goal is to stimulate language development and encourage interest in the written word. Many children (77%) also attend pre-school (nursery or day care) from ages 1 to 5.              | Schooling starts at age 7  |

Source: Kennedy, A.M., Mullis, I. V. S., Martin, M. O., & Trong, K. L., 2007.

## Language of assessment

Countries assessed their students according to the language or languages of instruction. Ten countries and the five Canadian provinces assessed in more than one language in order to cover their whole (Grade 4) student population. New Zealand assessed in Māori and English. South Africa (11) and Spain (5) were the only two countries to test in more than two languages. Table A.1 in Appendix A shows these countries (and provinces), with the languages in which their students were assessed.

## Assessment format

The reading purposes and comprehension processes were assessed using a total of 10 different passages: five literary passages and five informational passages (outlined in Box 1.2). The passages averaged 760 words in length, with a range of 495 to 872 words. Four of the ten passages and accompanying questions had been retained from PIRLS-01 to enable trends in achievement to be measured.

### Box 1.2: Literary texts versus informational texts

| Literary texts  | Informational texts   |
|---|---|
| The five literary texts were complete short stories or episodes, which were accompanied by supportive illustrations. The stories covered a variety of settings, with each story having two main characters and a plot with one or two central events. | The five informational texts covered a variety of content including scientific, biographical, and procedural material. The texts were structured sequentially or by topic. As well as prose, each text included organisational and presentational features such as diagrams, photographs, and text boxes. |

In PIRLS-05/06 students were assigned one of thirteen booklets, each with two passages: one literary text and one informational text; two literary texts; or two informational texts. Each passage was accompanied by a set of questions (about 12), with about half in multiple-choice format and half in constructed-response format. Details of the development and design are described in the *PIRLS 2006 technical report* edited by Martin, Mullis, and Kennedy (2007).

## Other sources of information

To assist with the interpretation of the students' assessment data, information was sought from a number of sources using questionnaires. The PIRLS-05/06 framework was used as the basis for developing the questions for the questionnaires. The questionnaires were then given to:

- students and their parents/caregivers
- teachers who taught reading to the students
- principals of the schools the students attended.

A selection of the information collected from these various sources is presented in this report. Information was also sought from each country about its reading curriculum and was reported in Chamberlain 2007b.

To complement the quantitative nature of the approach and presentation of the information collected in PIRLS-05/06, each country (and benchmarking province) contributed an article outlining the policy context for reading in their country. These articles are published in the *PIRLS 2006 encyclopedia* (Kennedy, et al., 2007), available at [www.pirls.org](http://www.pirls.org).

## Technical information

For details on some of the technical aspects pertaining to the reporting of the information in this report, readers are referred to the Technical Notes at the end of this report. A full account of the procedures (e.g., the international sampling design, calculation of countries' sampling weights, assessment item analysis and review, the [IRT] scaling methodology, and estimation of sampling errors)<sup>10</sup> used in PIRLS-05/06 is provided in the *PIRLS 2006 technical report* (Martin, et al., 2007).

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<sup>10</sup>See TN 1 to TN 4 in the Technical Notes and Appendix A for an overview of these topics.