

Developing the PIRLS Background Questionnaires

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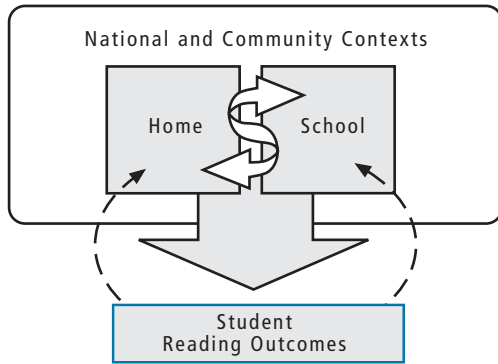
3.1 Overview

Children are exposed to language and print at home and at school; receive formal reading instruction; and see others reading for recreation and to perform tasks. These and other experiences and activities at home and school combine to influence how well children read and how they feel about reading by the end of fourth grade. Beyond influences within the home and at school are those in the wider environments in which children live and learn. Community size and resources, organization of the educational system, and educational decision-making affect homes and schools, and thus children's literacy development. To be sure, not all children have the same experiences. Children have varying levels of home support for reading, and different levels of exposure to language and print throughout their lives. They also attend schools with different approaches to learning and resources with which to teach.

By gathering information about children's experiences in learning to read together with reading achievement on the PIRLS test, it is possible to identify the factors or combinations of factors associated with a high degree of reading literacy. The PIRLS design includes a set of questionnaires targeting important factors related to reading literacy. PIRLS administered four questionnaires to the tested students and their parents, reading teachers, and school principals. This chapter describes the conceptual framework underlying the questionnaires, the process used to develop them, and their content.¹

1 See *Framework and Specifications for the PIRLS Assessment 2001* (Campbell, Kelly, Mullis, Martin, & Sainsbury, 2001) for more information about the conceptual framework underlying the questionnaires.

Exhibit 3.1: Contexts for the Development of Reading Literacy



3.2 Framework for the Questionnaires

The PIRLS questionnaires are grounded in a conceptual model relating reading outcomes – students’ reading literacy achievement and attitudes – to home, school, and community and national contexts. Exhibit 3.1 illustrates how PIRLS conceptualizes the influences on children’s reading by depicting the relationship between home and school, and how both are situated within the community and the country.

The PIRLS questionnaires address factors within each of the aspects that are deemed important for the development of reading literacy. In addition to reading achievement, reading outcomes include students’ reading attitudes and behaviors. The factors within the home, school, and national and community contexts addressed by PIRLS are shown in Exhibit 3.2.

Exhibit 3.2: Factors within the Home, School, and National and Community Contexts Addressed by PIRLS

Factors
National and Community Contexts
Demographics and resources
Governance and organization of educational system
Curriculum characteristics and policies
Home Contexts
Activities fostering reading literacy
Language in the home
Home resources
Home/school connection
Students out-of-school literacy activities
School Contexts
School environment and resources
Teacher training and preparation
Classroom environment and structure
Instructional strategies and activities
Instructional materials and technology

3.3 Process for Developing Questionnaire Items and Final Forms

The PIRLS questionnaires were developed through a collaborative process involving the PIRLS International Study Center, the National Research Coordinators (NRCs), the Questionnaire Development Group (QDG), the Reading Development Group (RDG), and the IEA Data Processing Center (DPC). The process included a series of reviews of draft instruments, a field test of five questionnaires in 30 countries, a review of field-test data, and a revision of the field-test questionnaires.

3.3.1 Plan for Questionnaires

In developing the PIRLS questionnaires, the aim was to create instruments that could be used to collect reliable information related to children's reading literacy achievement (as outlined in the framework) without unduly burdening students and schools. Altogether, the instruments were intended to provide a picture of children's experiences from early language and literacy development to the time of the PIRLS assessment. The plan initially called for five questionnaires:

- A student questionnaire to provide data on home and school factors related to reading
- A home questionnaire (to be completed by the students' parents or primary caregivers) to provide data on home support for literacy

- A school questionnaire to provide information on school policies and resources related to reading
- A teacher questionnaire to provide information on instructional approaches and resources at the fourth grade level
- An early-literacy instructional questionnaire to provide information on reading instruction in the grades below the grade tested (fourth grade).

This last questionnaire was originally intended to be administered to a sample of teachers in each of the grades prior to fourth grade. However, early on it became clear that this would be a burden for the schools, and for the national centers preparing and disseminating the instruments. Instead, a less burdensome approach was taken, whereby the school reading coordinator or a teacher familiar with the primary school reading program would complete a questionnaire about literacy instruction in the early grades. All five questionnaires were developed and field-tested.

3.3.2 Initial Item Development

Based on the home, school, and community factors addressed by the framework (shown in Exhibit 3.2), a detailed list of potential variables was developed and reviewed by the NRCs at their first meeting – in July 1999. The list of variables was refined and then used – together with the questionnaires from the Trends in IEA's Reading Literacy Study – as the basis for the initial questionnaire development.

Questionnaire scales used in other reading research studies also were consulted during this initial development phase.

3.3.3 Iterative Review

In September 1999, drafts of student, school, teacher, and home questionnaires were distributed to the NRCs for within-country review. At the same time, they were reviewed by the Reading Development Group. Comments from both reviews were used to revise the questionnaires for a second review by the NRCs in November 1999 – at their second meeting. The Questionnaire Development Group, comprising NRCs from six countries, then met with ISC staff in December 1999 to review the drafts, and to develop the early literacy instruction questionnaire.

In January 2000, the five draft field-test questionnaires were sent to the NRCs for within-country review, and also were reviewed by the RDG. The drafts were revised on the basis of these reviews. At the third NRC meeting – in March 2000 – NRCs reviewed the revised-draft field-test questionnaires, and suggested further revisions. In April 2000, the final field-test questionnaires, were sent to their respective countries for translation and production.

3.3.4 Field Test

The PIRLS field test was conducted in September 2000. Approximately 48,000 students from almost 1,100 schools in 28 countries participated, providing approximately: 1) 48,000 responses to the student questionnaire and the learning to read sur-

vey; 2) 2,000 responses to the teacher questionnaire; and 3) 1,000 responses to the school questionnaire and the early literacy instruction questionnaire.

3.3.5 Item Analysis and Finalization of Questionnaires

After the field-test data files had been prepared by each country, then checked and processed by the IEA Data Processing Center, the International Study Center (ISC) prepared five data almanacs – one for each questionnaire – to facilitate review of the data. For each country, each almanac displayed appropriate student-weighted distributions of responses to each question in the questionnaires. In the case of categorical variables, the weighted percentage of respondents choosing each option were shown together with the corresponding average student achievement in reading. For questions with numeric responses, the mean, mode, and selected percentiles were displayed.

The QDG met in December 2000 to review the field-test data for the five questionnaires, and to recommend revisions to the items. Committee members were provided – in addition to the data almanacs – with results from scale-reliability analyses conducted by the DPC, analyses conducted by the Swedish national center, and comments from teachers in New Zealand – to inform their review.

In general, the committee recommended few revisions of the field-test questionnaires; however, there were improvements in the wording of some items in each questionnaire; the removal of as many “filter” questions as possible; and the reordering of items in the student questionnaire. The most significant decision was not to include the early literacy instruction questionnaire in the main survey. Field-test data indicated that, in many countries, the respondent (the school reading coordinator or teacher familiar with early reading instruction in the school) was not able to provide the detailed information required about reading instruction at each grade level; and that the questionnaire (as field-tested) was too burdensome – resulting in unreliable data on many questions. For these reasons, it was not taken forward to the main survey (although six of the more important questions were simplified and included in the school questionnaire).

The ISC prepared drafts of the four main survey questionnaires for review by NRCs at their January 2001 meeting. NRCs recommended few additional changes. Following the meeting, the ISC produced the final documents and electronic files, then distributed them to participating countries for translation and production.

3.4 PIRLS Main Survey Questionnaires

The contents of the PIRLS main survey questionnaires used to collect information about home, school, and community contexts for learning to read are described below.

3.4.1 Student Questionnaire

Each student taking the PIRLS reading assessment completed the student questionnaire. The questionnaire asks about aspects of students’ home and school experiences – including instructional experiences and reading for homework, self-perceptions and attitudes towards reading, out-of-school reading habits, computer use, home literacy resources, and basic demographic information. The questionnaire was designed to take 15-30 minutes to complete. Exhibit 3.3 presents details regarding the items in the questionnaire.

3.4.2 Learning-to-Read Survey (Home)

The learning-to-read survey was completed by the parents or primary caregivers of each student taking the PIRLS reading assessment. It deals with child-parent literacy interactions, home literacy resources, parents’ reading habits and attitudes, home-school connections, and basic demographic and socioeconomic indicators. This questionnaire was designed to take 10-15 minutes to complete. Exhibit 3.4 presents details regarding the items in the questionnaire.

Exhibit 3.3: Content of the PIRLS Student Questionnaire

Student Questionnaire		
Item Number	Item Content	Description
1	Gender	Whether student is a boy or girl
2	Date of birth	Month and year of student's birth
3	Out-of-school activities	Frequency student does various reading-related activities and watches television
4	Reading outside of school	Frequency student reads different types of texts outside school
5	Use of library	Frequency student borrows books from library for fun
6	Television watching	Frequency student watches television on a normal school day
7-8	Instructional activities	Frequency student does certain reading instructional activities in school
9-10	Homework	Frequency reading for homework is assigned and amount of time student spends on reading homework
11	Computer use	Frequency computer is used for different literacy activities, and where computer is used
12	Attitude toward reading	Student's attitude towards reading
13	Reading self-concept	Student's self-concept regarding his/her reading ability
14	Feelings about school	Student's feelings about school – safety, perception of students and teachers
15	School environment	Student's reports of problematic behavior by other students at school
16-18	Language in the home	Student's use of the language of the test at home (used as indicator of home environment and home support for reading in language of the test)
19	Books in the home	Number of books in student's home (used as indicator of home environment and socio-economic status)
20	Home possessions	The presence of various socio-economic indicators (used as indicator of home environment and socio-economic status)
21-22	Persons living in home	Number of people and children living in the home (used as indicator of home environment and socio-economic status)
23-25	Student and parents born in country	Provides information on immigrant status (used as indicator of home environment and home support for reading in language of the test)

3.4.3 Teacher Questionnaire

The reading teacher of each fourth-grade class sampled for PIRLS completed a teacher questionnaire, which was designed to gather information about classroom contexts for developing reading literacy. This questionnaire asks teachers to describe the general characteristics of the class tested, such as

class size, and the reading levels and language abilities of the students. Several questions in the questionnaire focus on factors related to reading instruction, such as instructional time, materials, grouping of students for instruction, and activities to teach reading and promote the development of the students' reading literacy. The ques-

Exhibit 3.4: Content of the PIRLS Learning-to-Read Survey (Home Questionnaire)

Learning-to-Read Survey		
Item Number	Item Content	Description
1	Respondent	Who completed the survey
2	Parent/child literacy interactions	Frequency parents engaged in different literacy activities with child during early childhood
3	Attend kindergarten	Whether, and for how long, child attended kindergarten (or equivalent)
4	Age began school	Age when child began formal schooling
5	Literacy skills when began school	Child's literacy skills when he/she began formal schooling
6	Home literacy activities	Frequency parent engages in different literacy activities with child (now)
7	Home/school connection	Parents' perception of school's connection with home
8	View of school	Parents' opinion of school
9-10	Parents' literacy activities	Time parent spends reading for enjoyment, and frequency reading for different purposes
11	Parents' attitude towards reading	Parents' attitude toward reading
12-13	Books in home	Number of books (total and children's) in the home (used as an indicator of home environment and support for literacy, and for socio-economic indicator)
14	Parents' education	Highest level of education completed by both parents (used as an indicator of home environment and socio-economic status)
15-16	Occupational status	Employment status and type of profession of each parent
17-18	Wealth	Perception of wealth relative to others and annual income
19	Time	Amount of time required to complete questionnaire

tionnaire also asks teachers about classroom resources, assessment practices, and efforts to maintain home-school connections. It also asks teachers for their views about opportunities provided for cooperation and collaboration with other teachers, for professional development, and for information about themselves and their education and training. This questionnaire requires about 30 minutes of the teacher's time. Exhibit 3.5 presents details regarding the items in the questionnaire.

3.4.4 School Questionnaire

The principal of each school sampled for PIRLS responded to the school questionnaire. It asks school principals about enrollment and school demographic characteristics, such as school location, resources available in the surrounding area, and indicators of the socioeconomic background of the study body. The school questionnaire also asks principals about reading curriculum policies and total instructional time for the school year. It also includes questions

Exhibit 3.5: Content of the PIRLS Teacher Questionnaire

Teacher Questionnaire		
Item Number	Item Content	Description
1	Class size	Number of students total, and in the grade tested in the class
2-5	Students in class	Describes the students in the class with respect to reading level, language ability, and reading/language services received
6-7	Language instruction	Whether language instruction is conducted as part of instruction in different curriculum areas or as a separate subject, how much time is spent on language instruction, and how frequently language homework is assigned
8	Reading instruction	Whether reading instruction is conducted as part of instruction in different curriculum areas or as a separate subject
9	Reading instructional time	Amount of time spent on reading instruction, and if that time is for formal reading instruction
10	Reading instruction frequency	Number of days per week reading instruction is provided
11	Instructional grouping	Whether, and how, students are grouped for reading instruction
12	Instructional material	Frequency teacher uses different materials in reading instruction (worksheets, textbooks, etc.)
13	Reading material	Frequency teacher uses different types of texts in reading instruction
14	Reading instructional materials and different abilities	How teacher uses reading instructional materials for students at different reading levels
15-17	Instructional activities	Frequency teacher has students do different reading instructional activities
18	Instructional media	Frequency, and how teacher uses media in reading instruction
19	Computer use	Availability and use of computers and Internet for literacy activities
20	Classroom library	Availability, size, and use of classroom library or reading corner
21	School library use	Frequency teacher takes or sends students to the school library
22-23	Homework	Frequency teacher assigns reading for homework and how much time is expected to be spent on reading homework
24-25	Reading difficulties	Resources available to the teacher to deal with students' reading difficulties, and teacher's approach to dealing with reading difficulties
26-28	Assessment	Teacher's use of different assessment methods to monitor students' progress and performance in reading
29	Professional development	Teacher's perception of opportunities for professional development in school
30	Cooperation and collaboration	Frequency teacher meets with other teachers to discuss and plan reading curriculum or teaching approaches
31	Home/school connection	Frequency teacher meets with parents or sends students' work home
32	Expectations for success	Teacher's expectations for students' future success as readers
33-34	Teaching experience	Number of years teacher has been teaching altogether and teaching the grade tested in particular
35-36	Age and gender	Teacher's age and gender

Exhibit 3.5: Content of the PIRLS Teacher Questionnaire (continued)

Teacher Questionnaire		
Item Number	Item Content	Description
37-39	Education/training	Teacher's highest level of education, teaching certification, and academic preparation for teaching reading
40	Professional development	Time teacher has spent in professional development in the last two years
41	Reading habits	Frequency teacher reads different material and reads for different purposes
42	Teach class	Whether the class is taught by the teacher only, or by a team of teachers teaching different subjects
43	Time	Amount of time required to complete questionnaire

about resources, the availability of materials and staff, and perceptions of the school climate, as well as the interaction between the schools and the students' parents and families. The school questionnaire was designed to be completed in about 30 minutes.

Exhibit 3.6 presents detail on the items in the questionnaire.

Exhibit 3.6: Content of the PIRLS School Questionnaire

School Questionnaire		
Item Number	Item Content	Description
1	Grades	Grades below the grade test that are present in the school
2-3	Enrollment	Number of boys and girls in school, and in grade tested
4-5	Community	Size and type of community in which the school is located
6	Community resources	Resources available in the community in which the school is located
7-9	Student body	Describes students in the school with respect to stability of student body, family socioeconomic status, and academic abilities
10	Tracking	Whether classes are formed on the basis of ability/performance
11	Instructional time	Number of instructional days per year, amount of instructional time per week, and number of days per week school is open
12	Years with same teacher	Number of years students typically stay with the same teacher
13	Influence on curriculum	Influence on the school's curriculum at grade tested by national or regional curriculum and examinations/assessments, standardized tests, and parents' and students' wishes
14	Literacy skills of students beginning formal schooling	Literacy skills of the students in the school when they begin formal schooling
15-16	Reading literacy emphasis	Relative emphasis placed on reading, writing, and oral language skills by school, presence of own reading curriculum and programs in support of reading education
17	Coordination of reading instruction	Whether school has a policy to coordinate reading instruction across primary school grades
18	Instructional materials	Emphasis on different types of reading material in reading instruction for primary school students
19	Instructional emphasis	Emphasis on different literacy skills and activities at different grades in primary school
20	Reading instruction and different abilities	How reading instructional program is implemented for students at different reading levels
21	School library	Availability, size, and staffing of school library
22	Classroom libraries	Availability of classroom libraries in school
23	Computer availability and Internet access	Availability of computers and access to the Internet for instructional purposes
24	Instructional resources	Material factors affecting school's capacity to provide instruction
25-27	Home/school connection	Availability of programs offered by the school to families, frequency of activities involving parents, and percentage of parents involved in school activities
28-29	School climate	Principal's perception of teachers', parents', and students' attitudes and the severity of students' problem behavior
30-31	Teacher collaboration	Existence of a school policy to promote cooperation and collaboration among teachers and the frequency with which teachers meet to share or develop instructional materials and approaches
32	Principal's time	Percentage of time the principal spends on various roles and functions
33	Time	Amount of time required to complete questionnaire

References

Campbell, J.R., Kelly, D. L., Mullis, I. V. S., Martin, M.O., & Sainsbury, M. (2001). *Framework and specifications for PIRLS assessment 2001*. (2nd ed.). Chestnut Hill, MA: Boston College.

