PIRLS - A Global Metric for Reading Proficiency

PIRLS, PIRLS Literacy, and ePIRLS

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56th IEA General Assembly
October 2015, Mexico City
Since last General Assembly...

Two major accomplishments

• Development completed
  – Ambitious field test!

• Data collection underway
  – Southern Hemisphere Oct-Dec
  – Northern Hemisphere Mar-Jun
PIRLS 2016

- Assesses reading comprehension at the fourth grade – worldwide standard for reading achievement
- Expanded to provide more information at lower part of achievement scale
- 12 reading passages – 141 items
- 50 countries and 9 benchmarking participants
PIRLS Literacy 2016

- A less difficult assessment of reading comprehension at fourth grade
- 12 reading passages – 158 items (same as PIRLS)
- Enables countries where students are still developing reading skills to participate in PIRLS
- 4 passages in common with PIRLS to link PIRLS Literacy to the PIRLS metric
- Countries participating in PIRLS Literacy will have their results reported on the PIRLS scale
- 7 countries participating
ePIRLS 2016

• Extends PIRLS to assess how well students read, comprehend, and interpret online information

• Computer based assessment – students navigate through webpages in an engaging, simulated internet environment

• School-like assignments about science and social studies topics

• Five 40-minute tasks; students take two tasks

• 14 countries and 2 benchmarking participants
PIRLS 2016 Context Questionnaires

Five questionnaires for PIRLS/ePIRLS and PIRLS Literacy

- Learning to Read Survey (Home Questionnaire)
- School Questionnaire
- Teacher Questionnaire
- Student Questionnaire/extra in ePIRLS
- Curriculum Questionnaire

Approx. 20 policy relevant questionnaire scales

PIRLS 2016 Encyclopedia – chapter from every country
PIRLS 4th Grade - Participants

Australia
Austria
Azerbaijan
Bahrain
Belgium (Fl)
Belgium (Fr)
Bulgaria
Canada*
Chile
Chinese Taipei*
Czech Republic
Denmark*
Egypt (Literacy)
England
Finland
France
Georgia*
Germany
Hong Kong SAR
Hungary
Iran (and Literacy)
Ireland*
Israel*
Italy*
Kazakhstan
Kuwait (Literacy)
Latvia
Lithuania
Macao SAR
Malta
Morocco (and Literacy)
Netherlands
New Zealand
Northern Ireland
Norway*
Oman
Poland
Portugal*
Qatar
Russian Federation
Saudi Arabia
Singapore*
Slovak Republic
Slovenia*
South Africa (Literacy)
Spain
Sweden*
Trinidad & Tobago
United Arab Emirates*
United States*

Benchmarking Participants

Buenos Aires, Argentina
Ontario, Canada
Quebec, Canada
Denmark (Literacy – Gr 3)
Norway (younger grade)
Eng/Afr – RSA (5th)
Andalusia, Spain
Abu Dhabi, UAE*
Dubai, UAE*

*ePIRLS participant
Progress Since Last General Assembly

1. Conducted full scale field test of PIRLS, PIRLS Literacy and ePIRLS - 60,000 students

2. Analyzed field test data for items and questionnaires

3. Reviewed field test results and proposed final assessment instruments

4. NRCs reviewed and approved passages, items, and questionnaires for 2015/16 data collection
Field Test
March 1 – April 15

• PIRLS
  - 58,078 students in 49 countries and 7 benchmarking entities

• PIRLS Literacy
  - 6,795 students in 7 countries and 1 benchmarking entity

• ePIRLS
  - 13,701 students in 13 countries and 2 benchmarking entities
Passages and Items for Field Test

PIRLS passages
  - 4 literary, 4 informational – 132 items

PIRLS/PIRLS Literacy passages
  - 2 literary, 2 informational – 71 items

PIRLS Literacy passages
  - 3 literary, 3 informational – 102 items

ePIRLS tasks
  - 6 informational – 115 items

Total: 24 passages – 420 items
• Constructed response scoring training for field test
  – PIRLS
  – PIRLS Literacy
  – ePIRLS

• Sampling, operations, and quality control procedures for field test
  – PIRLS and PIRLS Literacy
  – ePIRLS software components and procedures
Analyzing the Field Test Data

**Very successful field test!**

- Countries sent all data on time to IEA DPC
- IEA DPC very efficient in processing data
- TIMSS & PIRLS International Study Center had data for analysis from all countries
- Comprehensive item statistics for all passages, items, and questionnaires
3-Step Field Test Review Process

1. Internal review by expert consultants and staff of TIMSS & PIRLS International Study Center – June

2. Review by expert committees – July
   - RDG review of passages and items – Stockholm
   - QDG review of questionnaires – Hamburg

3. Final review by National Research Coordinators – August
   - 5th NRC meeting – Jyväskylä, Finland
• Reviewed field test results for all passages and items – PIRLS, PIRLS Literacy, ePIRLS
• Made preliminary recommendations for RDG consideration
• Reviewed field test results for all questionnaires
• Prepared draft questionnaires for QDG review
PIRLS 2016 RDG - 3rd Meeting
– Reading Development Group

July 15-17, Stockholm, Sweden

• Reviewed proposed passages, items and scoring guides
  – PIRLS and PIRLS Literacy – Literary
  – PIRLS and PIRLS Literacy – Informational
  – ePIRLS online informational

**Outcome:** proposed selections of passages and items for NRC review
Reading Development Group (RDG)

- Julian Fraillon, Australia
- Jan Mejding, Denmark
- Galina Zuckerman, Russian Federation
- Elizabeth Pang, Singapore
- Jenny Wiksted Folkeryd, Sweden
- Ahlam Msaiqer, UAE Abu Dhabi
- Karen Wixon, USA
- Don Leu, USA
- Marian Sainsbury, Chief Reading Consultant
PIRLS 2016 QDG - 2nd Meeting – Questionnaire Development Group

July 20-21, Hamburg, Germany

• Reviewed field test results and proposed questionnaires for Home, School, Student, and Teacher

• Reviewed Curriculum Questionnaire and TIMSS 2015 Encyclopedia outline

Outcome: proposed questionnaires for NRC review
Questionnaire Development Group (QDG)

• Joanne Latourelle, Canada
• Ko Hwa Wei, Chinese Taipei
• Marc Colmant, France
• Maryam Al-Osted, Kuwait
• Megan Chamberlain, New Zealand
• João Maroco, Portugal
• Sarah Howie, South Africa
PIRLS 2016 NRCs - 5th Meeting
- National Research Coordinators

August 9-14, Jyväskylä, Finland

- NRCs reviewed and finalized all passages and items
  - PIRLS, PIRLS Literacy, ePIRLS
  - Passage by passage, item by item!
- NRCs reviewed and finalized home, student, teacher, and school questionnaires
- Reviewed sampling plans and operations procedures for the PIRLS 2016 data collection
- Reviewed ePIRLS software and procedures
Finalized Data Collection Instruments

• August 27
  – Posted final PIRLS, PIRLS Literacy, and ePIRLS data collection materials
  – Countries began translation
• Sept 3-Nov 25
  – ePIRLS software systems being made available

*ePIRLS very popular, but complicated!*
ePIRLS Field Test

- Engaging tasks contributed to very successful field test
- In general, the ePIRLS software worked well in most countries
- Valuable feedback provided by all countries
- High quality tasks and items – 5 of 6 tasks with good measurement properties and well-liked
Engaging Characteristics of Tasks

• A range of interesting topics
• Very colorful visual displays
• Variety of approaches to web navigation – tabs, links, graphic icons, scroll bars
• Animation (videos)
• Choosing websites
• Integrating information across websites
Mars

- Science content about the planets and space exploration, particularly of Mars
- Contains some animation about planning to get to Mars
- Contains considerable interaction to learn about the features of the Mars rover
Rainforests

• Environmental science content about the wonders of the rainforests and preserving the rainforests

• Contains interaction and navigation learning about the animals that live in the rainforests
Troy

- Social science content about the legend of Troy and the archaeological search for the city
- Contains a variety of online features, such as links and pop-ups
Blackwell

• Biographical content about Elizabeth Blackwell, the first woman doctor

• Also contains a variety of online features, such as timelines and scrolling
Migration

- Biology content about animal migration in search of food
- Contains animation of animal migration paths
- Contains pop-ups about predator-prey relationships
Supported by Complex Software Systems

- Complete assessment system
- Custom designed for ePIRLS by TIMSS & PIRLS International Study Center and IEA DPC
- Substantial investment to develop but may provide some efficiencies in long run – translation, translation verification, scoring
- Foundation for future IEA e-assessment activities – notably eTIMSS
The ePIRLS Software

- ePIRLS Software
- ePIRLS Online Data Monitor
- ePIRLS Online Scoring System
- ePIRLS Online Translation System
- ePIRLS System Check Program

**ePIRLS Server**
Contains the central ePIRLS database (managed by IEA DPC)

**ePIRLS Data**
The ePIRLS Software

- ePIRLS Software
- ePIRLS System Check Program
- ePIRLS Online Data Monitor
- ePIRLS Online Scoring System
- ePIRLS Online Translation System

ePIRLS Online Translation System
Allows online translation, review, revision and verification

ePIRLS Data
The ePIRLS Software

- ePIRLS System Check Program
- ePIRLS Online Translation System
- ePIRLS Online Data Monitor
- ePIRLS Online Scoring System

ePIRLS System Check Program
Verifies ePIRLS system requirements on target computers

ePIRLS Data
The ePIRLS Software

ePIRLS Software
  = Test delivery system
    (USB or server method)
The ePIRLS Software

- ePIRLS Software
- ePIRLS System Check Program
- ePIRLS Online Translation System
- ePIRLS Online Data Monitor
- ePIRLS Online Scoring System

ePIRLS Data

ePIRLS Online Data Monitor
Allows monitoring the status of uploaded student data
The ePIRLS Software

- ePIRLS Software
  - System Check Program
  - Online Data Monitor
- ePIRLS Online
  - Translation System
  - Scoring System

ePIRLS Online Scoring System
Allows scoring of student answers to constructed-response questions

ePIRLS Data
Reporting ePIRLS

- *PIRLS 2016 International Results in Reading*
  - Similar to previous PIRLS reports
- Special chapter on ePIRLS results
  - In comparison with overall PIRLS score
  - In comparison with PIRLS Literary and Informational scores
Upcoming Schedule Highlights

2015

>Southern Hemisphere Data Collection<
October – December
Southern Hemisphere scorer training —
Buenos Aires (Nov 9-11)

2016

>Northern Hemisphere Data Collection<
March – June
Northern Hemisphere scorer training —
PIRLS 2016 6th NRC Meeting, Hong Kong
(Feb 28-Mar 4)