

PIRLS 2016: Initial Results



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Every five years, PIRLS measures the reading achievement of primary pupils near the end of Fourth Grade – Fourth class in Ireland. The 2016 cycle of the study also included an assessment of online reading skills called ePIRLS. Ireland was among the highest-achieving countries on both assessments. On the paper-based PIRLS assessment, only two of the 50 participating countries (Russian Federation and Singapore) obtained a significantly higher average national score than Ireland. On the new online assessment, Singapore was the only one of 14 participating countries to obtain a significantly higher average national score than Ireland.

In addition to the reading assessment completed by pupils, school principals, teachers, parents and pupils were asked to complete a questionnaire. The questionnaires gathered information about pupils' attitudes, behaviours and home backgrounds; teacher experience and teaching practices; and, characteristics of the principal and school. Later national analyses will focus on these contextual elements. The focus of this leaflet is solely on achievement.

**Educational
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Foras Taighde ar Oideachas



About PIRLS

Progress in International Reading Literacy Study (PIRLS) is the world's largest comparative study of reading achievement at primary level. The 2016 cycle of the study included a new element called ePIRLS, to assess pupils' online reading skills and digital literacy.

Ireland was one of 50 countries/regions and 11 "benchmarking participants" (e.g., provinces or cities such as Quebec and Madrid) that participated in PIRLS 2016. More than 340,000 pupils, 330,000 parents, 16,000 teachers, and 12,000 schools took part. In addition, 14 countries (including Ireland) and two benchmarking participants took part in ePIRLS.

What is assessed?

Pupils in Fourth class (or the international equivalent) were chosen as the target group for PIRLS because that is considered to be an important transition point for children. At this grade, most pupils have switched from *learning to read* to *reading to learn*. PIRLS assesses *reading comprehension*, which encompasses the ability to understand, use, and construct meaning from texts in a variety of forms. The assessments also consider **reasons for reading** (mainly for literary experience or to acquire information) and the **comprehension processes** used.

The texts used in the paper-based PIRLS assessment are evenly divided between literary and informational types of texts, while ePIRLS assesses only informational reading skills. However, both PIRLS and ePIRLS examine the same four comprehension processes (*retrieving, inferring, interpreting, and evaluating*).

Understanding the scores

PIRLS reports how national mean scores differ from each other and from the "centrepoint" of 500. The centrepoint was the average when the study first took place in 2001. Although the average for countries taking part in 2016 is no longer 500, the centrepoint is used as an unchanging reference point. Doing so allows countries to track changes in their own performance over time, relative to the constant. Because of how the study is designed, a difference of a few points – between countries, or between groups within a country (e.g., boys and girls) – is rarely statistically significant or meaningful. When looking at scores, always allow a small error margin around them.

Sample Content from ePIRLS and PIRLS

ePIRLS Online Reading 2016
<http://www.mars-exploration-programme.org/rover-called-curiosity>

The Solar System / Mars Exploration Programme

Mars Exploration Programme

Home Getting to Mars Missions Seeking Signs of Life Rover Called Curiosity

The Rover Called Curiosity: Like a person, Curiosity has different body parts. These help the rover explore the surface of Mars almost like a person would.

ARM AND HAND BODY EYES WHEELS and LEGS



Curiosity has a robot arm and hand. It holds and uses tools so it can collect samples of rocks and dirt.

Take a Walk

And See the World

Life On A

ePIRLS Class Project

SAVED

Mr Webster
 Now, click the website tab "Rover Called Curiosity."

16.
 Match each part of Curiosity with something that the part does. Click the drop-down menus.

Pupil

A. Arm and Hand
 What does this part do?

B. Body and Instruments
 What does this part do?

C. Eyes
 What does this part do?

D. Wheels and Legs
 What does this part do?

SAVE

That night as Macy was chasing the red hen around the yard she saw an owl gliding down on the other side of the yard fence.



The owl swooped across the grass on its huge white wings, grabbed a mouse in its claws, and soared back into the shadows. This gave Macy an idea. The next day Macy got wire and some white cloth and made two big wings on the end of a long pole. She explained her plan to her brother Sam.

That night when Macy was chasing the red hen as usual, Sam stepped into the yard with the pole that Macy had made. He made the wings swoop down towards the red hen. The hen stopped running and fluffed up her feathers, squawked furiously and beat her wings, ready to face her attacker, but the white wings kept coming closer and closer. The red hen's squawking faded away. She crouched down low on the ground, her beak pointing up ready to peck if she got the chance. Suddenly, Macy stepped in.

Sample Questions

- 10. How does Macy get her idea?**
- (A) Macy's brother, Sam, tells her the plan.
 - (B) Macy sees an owl catch a mouse.
 - (C) Macy's Dad tells her about owls.
 - (D) Macy sees wire and some white cloth.
- 11. Why does Macy make white wings on a pole?**
- (A) to make it look like hen's feathers
 - (B) to make a decision
 - (C) to make it look like an owl
 - (D) to impress Sam

Main PIRLS results

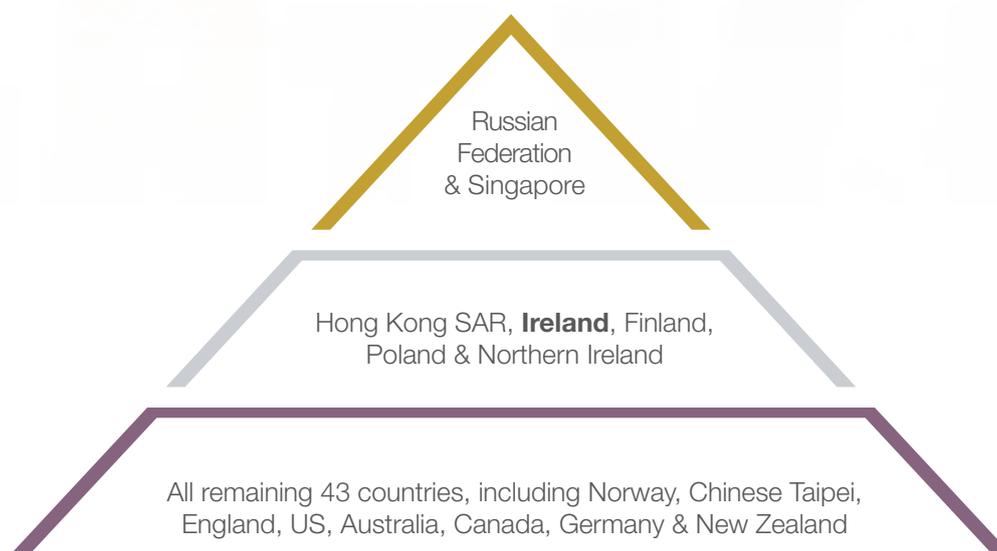
Ireland's mean score of 567 was significantly above the study centrepoint of 500, and significantly above most other participating countries.

Only two countries achieved a mean score that was significantly higher than Ireland's mean (Figure 1). The Russian Federation's mean score was 581, while Singapore's was 576.

Ireland was one of five countries (Hong Kong, Ireland, Finland, Poland and Northern Ireland) in the next tier of highest-performers. Mean scores in this group ranged between 565 and 569, and did not differ significantly from each other. Scores in all other 43 participating countries were statistically significantly lower than Ireland's. Among these countries are England, the United States, Canada, Germany, Australia and New Zealand.

Results for all countries, and more details on Ireland's performance, can be found in the national report for PIRLS 2016 (Eivers, Gilleece & Delaney, 2017).

Figure 1: Performance of countries in PIRLS 2016, relative to Ireland



Main ePIRLS results

Irish pupils achieved a mean score of 567 on ePIRLS. This was significantly above the international average, significantly above most other participating countries, and more or less identical to the Irish mean score on the pencil-and-paper test.

Only Singapore (588) had a significantly higher mean score than Ireland. Norway and Ireland had significantly higher ePIRLS mean scores than all other participating countries (Figure 2).



Figure 2: Comparing scores on PIRLS and ePIRLS – all ePIRLS countries



Apart from Ireland and Canada, all countries displayed statistically significant differences between PIRLS and ePIRLS mean scores. Slovenia, Italy, and Chinese Taipei had lower scores on ePIRLS than on PIRLS. In contrast, the United Arab Emirates, Singapore and Denmark did better on ePIRLS.

Aspects of reading achievement

PIRLS provides scores for the two main reading purposes – reading for literary experience and reading to acquire information. Irish pupils demonstrated a particular strength for Literary style texts (mean score of 571, which was significantly higher than the Irish mean of 565 for Informational texts).

Scores are also given for two reading comprehension processes. Irish pupils scored slightly higher on questions that required them to *interpret, integrate and evaluate* what they had read than on questions that required *retrieval and straightforward inferencing*. However, the difference was not statistically significant.

Gender differences

Across the 50 countries that took part in PIRLS:

- Girls had significantly higher achievement than boys in 48 countries while in two countries (Portugal and Macao SAR), gender differences were not statistically significant. The international average difference was 19 points, in favour of girls.
- In Ireland, girls significantly outperformed boys by 12 points, a slightly smaller gender gap than the international average.

Across the 14 countries that took part in ePIRLS:

- Girls had significantly higher achievement than boys in 11 of the 14 countries, while in three countries (Italy, Portugal and Denmark), gender differences were not significant. The international average difference was 12 points, smaller than the gender gap on the paper-based test.
- In Ireland, girls significantly outperformed boys by 11 points.

Trends over time

Figure 3 shows changes in national means between PIRLS 2011 and 2016 for Ireland and a set of “comparison countries” (these countries feature in all national reporting and were selected because they are of particular interest to Ireland). Statistically significant increases are shown in green, significant decreases in red, and non-significant changes are in yellow. As ePIRLS was a new assessment in 2016, no trend data are available.

With an increase of 15 points in the national mean score, Ireland saw a large and significant improvement in reading performance since 2011. Other countries with significantly improved PIRLS performance included the Russian Federation, Norway, and Australia. Countries with statistically significant drops in performance (shown in red) included the United States and New Zealand.

Figure 3: Changes in mean scores between 2011 and 2016, Ireland and comparison countries



More information on PIRLS and ePIRLS

Ireland

www.erc.ie/pirls @ pirls@erc.ie

[Reading achievement in PIRLS 2016: Initial report for Ireland \(Eivers, Gilleece & Delaney, 2017\)](#)

International

<https://timssandpirls.bc.edu> @ pirls@bc.edu

We thank participating school principals, teachers, pupils and parents. The excellent response rates and levels of cooperation mean that PIRLS and ePIRLS provide us with an accurate reflection of the achievements and attitudes of Fourth class pupils in Ireland. A special thanks to Mr Creaner, Ms Mathews, and pupils at St Fiachra's SNS in Beaumont for our PIRLS photographs.

