

Department of Education and Skills

Irish Pupils' Performance in Progress in International Reading Literacy Study (PIRLS) and ePIRLS 2016

Public Briefing Note

Embargoed until Tuesday, 05 December 2017 at 10.00 a.m. Central European Time (i.e. 09.00 a.m. Irish time).

1 Background

1.1 What are PIRLS and ePIRLS?

- **PIRLS** (Progress in International Reading Literacy Study) is an international assessment of reading achievement. **ePIRLS** is an optional addition to the main PIRLS assessment.
- PIRLS is a paper-based test that assesses the reading achievement of Fourth Class pupils (or the equivalent grade level). It assesses pupils' ability to use both literary and informational texts and their comprehension skills.
- ePIRLS is presented digitally using a simulated online environment and incorporates a set of navigation skills. ePIRLS assesses pupils' ability to use informational texts and their comprehension skills. To participate in ePIRLS a country must participate in PIRLS i.e. it is not an option to participate in ePIRLS only. Similarly, pupils who complete the ePIRLS assessment must also complete the PIRLS assessment.
- PIRLS and ePIRLS report on pupils' mean scores relative to a PIRLS centrepoint of 500. This is a set constant reference point (calculated as the average achieved when PIRLS was first administered in 2001). This provides a solid measure of trends over time, but is not, for clarity, the average score in the 2016 study.

1.2 Where does PIRLS come from?

- PIRLS is a project of the International Association for the Evaluation of Educational Achievement (IEA), a non-profit organisation based in The Hague, Netherlands. The TIMSS & PIRLS International Study Centre in Boston College, USA, manage the study at the international level.
- In Ireland, the Educational Research Centre (ERC) manages the study on behalf of the Department of Education and Skills (DES) and the study is administered by the ERC in collaboration with the Inspectorate of the Department.
- PIRLS was first conducted in 2001. It takes place every five years. As Ireland took part in PIRLS in both 2011 and 2016, trend data are now available. ePIRLS was first conducted in 2016.

1.3 Who took part in PIRLS and ePIRLS in 2016?

- 50 countries and 11 benchmarking participants took part in at least some element of PIRLS in 2016. Internationally, more than 340,000 pupils, 333,000 parents, 16,000 teachers, and 12,000 schools responded to PIRLS questionnaires.

- In Ireland, pupils from 148 schools took part. 4,607 pupils participated in the paper-based PIRLS written test. A subset of all PIRLS pupils comprising 2,473 pupils participated in ePIRLS. In addition, 4,504 parents, 219 teachers, and 146 schools responded to questionnaires. This represented a very high response rate.

1.4 What does PIRLS assess?

- The PIRLS assessment framework has four subscales: 2 are reading purpose subscales, and 2 are comprehension subscales:
 1. Informational
 2. Literary
 3. Retrieve/Infer
 4. Interpret/Evaluate
- ePIRLS only assesses pupils' ability to acquire and use information (i.e., reading for Informational purposes). The two sub-scales used in ePIRLS are:
 1. Retrieve/Infer
 2. Interpret/Evaluate

1.5 What reports on PIRLS and ePIRLS are available?

- On 5th December 2017, three reports relating to PIRLS will be published. Two are international reports, one for PIRLS, and one for ePIRLS, and one is a national report. The international reports describe the performance of pupils in all participating countries, and consider how performance relates to characteristics of the home, school and classroom environment.
- The national report is published by the ERC, to complement the two main international reports. It focuses on the performance of pupils in Ireland. It also describes the main achievement-related PIRLS and ePIRLS results with a specific focus on Ireland. It facilitates comparison between Ireland and a small number of countries of particular interest chosen on the following criteria:
 - high performance on PIRLS and/or ePIRLS
 - cultural and/or linguistic similarity to Ireland

These comparison countries in alphabetical order are: Australia, England, Finland, Hong Kong SAR, New Zealand, Northern Ireland, Norway, Poland, Russian Federation, Singapore, and United States).

- The national report also provides an overview of the study, a description of how the assessments were administered in Ireland, the main PIRLS and ePIRLS results for all countries, a description of the International Benchmarks, performance on the subscales, and an overall summary.

2. Overall PIRLS and ePIRLS results

2.1 Overall PIRLS and ePIRLS performance

There is positive news for Ireland regarding the performance of Fourth class pupils in PIRLS 2016.

- The highest performing countries on **PIRLS 2016** were the Russian Federation and Singapore. They significantly outperformed the next five countries (Hong Kong SAR, **Ireland**, Finland, Poland and Northern Ireland) who in turn significantly outperformed the remaining 43 countries.
- Ireland’s mean score was 567 (not significantly different from the scores of Hong Kong SAR, Finland, Poland and Northern Ireland).
- **No EU or OECD country achieved a score that was significantly higher than Ireland’s score in PIRLS 2016.**
- The highest performing country on **ePIRLS 2016** was Singapore. The next highest-achieving countries were Norway and **Ireland**, with almost identical mean scores. Ireland’s mean achievement score was 567, significantly higher than the 11 remaining countries.
- **No EU or OECD country achieved a score that was significantly higher than Ireland’s score on ePIRLS in 2016.**

Table 1 – Ireland’s performance in PIRLS 2011 and 2016

IRELAND	2016	2011	Comparison with 2011 ¹
PIRLS Overall Mean Score	567	552	+15
PIRLS Girls’ Score	572	559	+13
PIRLS Boys’ Score	561	544	+17
ePIRLS Overall Mean Score	567		
ePIRLS Girls’ Score	572		
ePIRLS Boys’ Score	561		

- Ireland’s mean score of 567 on PIRLS 2016 is 15 points higher than the comparable national score in 2011. This difference is statistically significant and larger than the increase found in most countries.
- The improved performance is attributable to improved scores by both boys and girls, although the improvement was slightly more marked for boys. Overall, both boys and girls performed at a very high level on PIRLS.
- There are no trend data for ePIRLS. However, Ireland’s overall mean score is reflected in very high performances for both boys and girls.

2.2 How well did Irish pupils perform on the subscale scores in PIRLS and e-PIRLS 2016?

Table 2: Performance on subscales in Ireland (overall and by gender)

	Subscales	Overall	Girls	Boys	Irish gender gap	PIRLS avg gender gap
PIRLS	Literary	571	580	563	17	23
	Informational	565	569	561	8	16

¹ ePIRLS was not administered in 2011. It was introduced in 2016 so comparisons cannot be made

	Retrieve/Infer	566	571	561	10	17
	Interpret/Evaluate	569	576	562	14	20
ePIRLS	Retrieve/Infer	566	572	559	13	15
	Interpret/Evaluate	568	573	563	10	9

- While Irish pupils performed well overall, they demonstrated a particular strength on Literary texts.
- Gender gaps in Ireland were smaller than the corresponding international averages, particularly so for Informational PIRLS texts.

2.3 Trends in achievement

From 2011 to 2016, Ireland's mean achievement score improved by 15 points, a statistically significant increase.

- Of the comparison countries, Ireland's improvement of 15 points was the second largest, with only Australia having a larger improvement of 17 points. New Zealand experienced a drop of 8 points.
- The overall mean score obtained by girls in Ireland increased by 13 points since 2011, and for boys it increased by 17 points.
- There were significant improvements in overall achievement on all PIRLS subscales since 2011 in Ireland. The improved overall mean score of Irish pupils is attributable to relatively even gains on all subscales (Tables 3 and 4).

Table 3: Mean scores by gender on reading purpose subscales, 2011 and 2016

	Informational			Literary		
	2011	2016	Increase	2011	2016	Increase
Girl	554	569	15	569	580	11
Boy	545	561	16	546	563	17

Table 4: Mean scores by gender on comprehension process subscales, 2011 and 2016

	Retrieve/infer			Interpret/Evaluate		
	2011	2016	Increase	2011	2016	Increase
Girl	558	571	13	562	576	15
Boy	546	561	15	545	562	17

3. Performance at International Benchmarks

3.1 PIRLS Benchmarks

International Benchmarks are used to describe the skills and strategies demonstrated by pupils at various levels of achievement. These are Low, Intermediate, High, and Advanced.

Table 4 - the percentage of Irish pupils reaching each of the four benchmarks.

	Lowest Benchmark (400 points)	Intermediate Benchmark (475 points)	High Benchmark (550 points)	Advanced Benchmark (625 points)
IRELAND	98%	89%	62%	21%
International Median*	96%	82%	47%	10%

*Values for the international median divide countries evenly. For example, the median value for Advanced is 10%. Therefore, in half of the participating countries more than 10% of pupils reached this benchmark and in half, fewer than 10% did so.

- The percentage of pupils in Ireland who reached the Advanced Benchmark is similar to that in Poland (20%), Northern Ireland (22%) and England (20%). In Russia (26%) and Singapore (29%), over one-quarter of pupils reached the Advanced Benchmark.
- In Ireland, there have been significant improvements in the percentages reaching the Intermediate, High and Advanced Benchmarks.
- There was also an increase in the percentage of Irish pupils reaching the Low International Benchmark, but the increase was not statistically significant.
- ePIRLS Benchmarks were developed using the same procedures and percentages reaching each in Ireland were very similar on the two assessments.
- Unlike PIRLS, there are no trend data available for ePIRLS Benchmarks as 2016 was the first time ePIRLS was administered.

3. What were the main strengths of Irish pupils' performance in 2016?

- PIRLS 2016 indicates a significant improvement in our pupils' performance since 2011. With a mean score of 567, Irish pupils performed very well on PIRLS. This score was significantly higher than that of 43 countries. Just two countries (Russia and Singapore) had significantly higher mean scores than Ireland.
- Irish pupils demonstrated a particular strength on Literary texts, but very good all round performance. The very high performance of Irish girls on Literary texts (mean score of 580) contributes to this overall high score. Boys in Ireland performed well above average on both Literary and Informational types of texts.
- Girls outperformed boys in Ireland and in all but two countries. The gender gap in achievement in Ireland is smaller than the corresponding international average gap, and has narrowed somewhat since 2011.
- Irish pupils also performed extremely well on PIRLS benchmarks, with 21% reaching the Advanced Benchmark (international median: 10%).
- With a mean score of 567, Irish pupils performed as well on the digital ePIRLS assessment as they did on the paper-based PIRLS assessment. Pupils in just one country (Singapore) achieved a significantly higher mean score than pupils in Ireland.

- As with PIRLS, Irish pupils also performed extremely well on ePIRLS Benchmarks, with 20% reaching the Advanced Benchmark (international median 13%).

4. Context for Ireland's performance

- While Ireland welcomes this very positive result, it is important to note that despite having a representative sample and excellent participation rates, Ireland's mean score can only ever be an estimate of the reading achievement of Ireland's Fourth Class pupils. There is a statistical error associated with such measurements – the Standard Error provides an estimate of this error. It is worth noting also, that PIRLS focuses on one aspect of literacy only; reading.
- The assessments measure achievement over time, and while we hope that Ireland's performance will continue at a high level, fluctuations can occur. We should be cognisant of the fact that other high-performing countries may join the study, and/or that countries currently participating may implement educational reforms that lead to significantly improved performance in the future. Either might affect Ireland's relative performance in the study.
- The PIRLS and ePIRLS results for the 2016 assessments are consistent with findings in a number of recent reports including:
 - The National Assessments of English Reading and Mathematics (NAERM), 2014, which showed the first significant improvements in reading at primary level recorded in this assessment in over 30 years. The targets for improvement in NAERM, which were set in the *National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020* were achieved in NAERM 2014, well in advance of the scheduled date of 2020. Accordingly, a review of the 2011 Strategy was undertaken and revised actions and targets have been set out in *The National Strategy: Interim Review Report* (2017). These include actions which are targeted at ensuring that the achievement of boys in reading is strengthened and that higher-achieving learners reach their full potential.
 - PISA, 2015 in which the performance of Irish fifteen year-old students compared favourably with the international average; and in which Ireland's digital reading performance was above the OECD average.
 - The most recent ERC evaluation of DEIS which indicates that, relative to the baseline data collected in 2007, significant increases in pupil outcomes in both English reading and Mathematics were noted in the follow-up testing in 2010 and again in 2013.
- Pupils that participated in PIRLS and ePIRLS, have experienced an enhanced emphasis on literacy in the course of their education, due to the introduction in 2011 of the national literacy and numeracy Strategy. This may have contributed to the positive outcomes in PIRLS and ePIRLS 2016.
- School Self-Evaluation (SSE) was introduced in Ireland in 2012, coinciding with the timing of the National Literacy and Numeracy Strategy. Inspectorate information shows that the majority of schools have embraced SSE. The requirement that schools focus on both literacy and numeracy as key themes in the SSE process is likely to have had a positive impact on teaching and learning in English and Mathematics. Schools received targeted support for SSE

and aspects of literacy from the Professional Development Service for Teachers (PDST) and the Inspectorate. In 2016, a new circular was issued, advising schools that the next phase of SSE, which will continue to focus on teaching and learning as the core work of the school. Inspectors will continue to provide advice and support to schools as they fully embed SSE in the second four-year cycle.