

PIRLS 2016 in Northern Ireland: Executive Summary

This summary accompanies the national report for Northern Ireland (Sizmur *et al.*, 2017). It outlines the attainment of Year 6 pupils in Northern Ireland in the PIRLS 2016 survey and explores the context of that attainment.

PIRLS is a study of reading at ages 9-10 and has a five-yearly cycle. Northern Ireland took part in PIRLS for the first time in 2011 so comparisons can be made between cycles where appropriate.

Countries with which Northern Ireland will mainly be compared in this report

Fifty countries took part in PIRLS 2016, with a further 11 benchmarking participants. Northern Ireland's performance in PIRLS 2016 is outlined and compared with that of six other participating countries. These countries were selected because they have some similarities with Northern Ireland and/or because they are high performers and/or have demonstrated significant improvement between PIRLS cycles.

Of the 49 other countries participating in PIRLS 2016, the selected comparator countries are:

- Canada
- England
- New Zealand
- Poland
- Republic of Ireland
- Singapore.

These are referenced throughout the summary and report as applicable. Reported findings relate to Northern Ireland unless otherwise specified. Findings are based on the international PIRLS reports (Martin *et al.*, 2017 and Mullis *et al.*, 2017a and 2017b), available through the NFER website¹.

¹ <https://www.nfer.ac.uk/research/centre-for-international-education/>

Attainment

- Pupils in Northern Ireland significantly² outperformed 41 of the 49 other participating countries in reading and were significantly outperformed by two countries.
- The average score for reading (565) in Northern Ireland is statistically similar to six other countries, including two comparator countries (Republic of Ireland and Poland).
- Northern Ireland's performance in reading has remained stable from 2011 to 2016, with no significant difference in the overall average score. This was also the case for Singapore. In contrast, the Republic of Ireland and England have improved significantly since 2011, while Canada and New Zealand's scores have significantly decreased³.
- Of the four countries that outperformed Northern Ireland in 2011, only the Russian Federation and Singapore outperformed Northern Ireland again in 2016.
- In Northern Ireland, and all comparator countries, there were significant gender differences in attainment in reading, favouring girls. This was in line with the gender differences seen internationally.
- The gender difference in attainment in Northern Ireland in reading was apparent in both the 2011 and 2016 PIRLS cycles. This was the same in Canada, England, New Zealand, the Republic of Ireland and Singapore⁴.
- The gap between boys and girls has increased slightly since 2011. Northern Ireland has shown an increase of two scale points, whereas the international average increased by three scale points.
- Compared to Northern Ireland and the other comparator countries, England has shown the largest reduction (eight scale points) in the difference between girls' and boys' average scale scores in reading since 2011.
- Over a fifth of pupils in Northern Ireland (22 per cent) reached the 'Advanced International Benchmark' in reading, the third highest percentage internationally.
- Only three per cent of pupils in Northern Ireland failed to reach the 'Low International Benchmark'. In comparison, the international average was four per cent.
- There was a significant increase in the percentage of pupils in Northern Ireland reaching the 'Advanced International Benchmark' in PIRLS 2016 compared with 2011 (22 per cent in 2016; 19 per cent in 2011).
- In Northern Ireland, there was a relatively wide spread of attainment for reading between the highest and the lowest attainers. Only one of the comparator countries, New Zealand, had a greater gap in mean scores between the highest and lowest attainers.

² Throughout this report, the term 'significant' refers to statistical significance.

³ Comparable trend data is not available for Poland.

⁴ The pattern across cycles was similar in Poland although the samples are not directly comparable.

Attainment by content and skill

- **Reading purposes** – Compared to the overall national average reading score, pupils in Northern Ireland:
 - scored significantly better on *Literary purposes*
 - scored significantly less well on *Informational purposes*.
- **Reading comprehension processes** – Compared to the overall national average reading score, pupils in Northern Ireland:
 - scored significantly less well on the *Retrieving and Straightforward Inferencing* scale
 - were not significantly different from the national average on *Interpreting, Integrating and Evaluating*.
- Between 2011 and 2016, there was no significant change in Northern Ireland’s scores for reading purposes or for reading comprehension processes.
- In Northern Ireland, girls’ scores were significantly higher than boys’ in both of the reading purposes and both of the reading comprehension processes. This was also the case in all six comparator countries.

Pupils’ engagement

- In Northern Ireland, the proportion of pupils who ‘Very Much Like Reading’ (39 per cent) was lower than the international average (43 per cent). Pupil engagement was in line with the international average (61 and 60 per cent respectively) and pupil confidence was higher than internationally (50 and 45 per cent respectively)⁵.
- In Northern Ireland, and internationally, pupils who most liked reading had higher average attainment scores than those who did not like reading.
- In Northern Ireland, pupils who were categorised as ‘Very Confident’ had higher attainment scores than those who were less confident. This was also seen internationally.
- Pupils who were ‘Less than Engaged’ in their reading lessons were likely to have a lower average attainment score than pupils who were ‘Somewhat Engaged’ or ‘Very Engaged’.
- Compared to the six comparator countries, Northern Ireland had the second highest percentage of pupils categorised as ‘Very Engaged’ in their reading lessons but the third lowest percentage of pupils feeling ‘Very Confident’ in reading. However, the percentages for these two categories were greater than the international average in Northern Ireland.

Education Workforce

- Northern Ireland had a high proportion of pupils (80 per cent) attending schools run by principals who have completed a postgraduate university degree, relative to the international average (48 per cent).

⁵ No significance tests have been conducted internationally.

- The proportion of pupils taught by teachers who have completed a postgraduate university degree was 19 per cent, and similar to the international average (20 per cent).
- Of the comparator countries, Poland had the highest percentage of pupils attending schools run by principals and taught by teachers who have completed a postgraduate university degree (99 and 100 per cent respectively).
- Of the three specialist areas surveyed (language, pedagogy/teaching reading and reading theory), 69 per cent of pupils in Northern Ireland were taught by teachers who had specialised in language, a proportion similar to the international average (70 per cent).
- The percentage of pupils whose teachers reported being very satisfied with their jobs was higher in Northern Ireland (62 per cent) than in all six comparator countries and higher than the international average (57 per cent).

School resources

- Overall, Northern Ireland was categorised as ‘Somewhat Affected’ by shortages in reading resources. However, the percentage of pupils who, according to principals, were ‘Not Affected’ by shortages (44 per cent) was higher than the international average (31 per cent).
- All comparator countries were categorised as being ‘Not Affected’ by shortages in reading resources, except the Republic of Ireland which, like Northern Ireland, was ‘Somewhat Affected’.
- Principals in Northern Ireland reported that only three to seven per cent of pupils were taught in schools where teaching was affected ‘A Lot’ by a shortage or inadequacy of the following four technological resources:
 - technically competent staff
 - audio-visual resources
 - computer technology for teaching and learning
 - computer software / applications for reading.

In each of these, the percentage of pupils affected in Northern Ireland was lower than international averages.

- Four-fifths of pupils attended schools in which the principals indicated that there were sufficient computers to equip one or two pupils per computer.
- Findings from the teacher questionnaire indicated that over three-quarters of pupils had computers available to use for reading lessons and that pupils in Northern Ireland were more likely to use computers for reading activities than the average internationally.
- Northern Ireland had a lower percentage of pupils attending schools equipped with a school library (74 per cent) than the international average (87 per cent). However, nearly all Year 6 classes in Northern Ireland had a well-stocked classroom library (93 per cent), used regularly by the pupils. This was much higher than the international average of 72 per cent.

School learning environment

- Principals and teachers in Northern Ireland reported some of the highest levels of emphasis on academic success of any nation. Teachers reported similar, but slightly lower, levels of emphasis on academic success than principals did. This is similar to the findings from 2011.
- The majority (83 per cent) of pupils in Northern Ireland attended schools which were categorised as 'Very Safe and Orderly' (as reported by teachers). This had improved significantly since the 2011 PIRLS survey.
- Eighty-five per cent of pupils in Northern Ireland attended schools categorised by principals as having 'Hardly Any' discipline problems; the third highest proportion internationally.
- Pupils in Northern Ireland reported experiencing bullying behaviours less frequently than those in most other participating countries, leading them to be categorised as being 'Almost Never' bullied. This was also the case in 2011.
- Teachers in Northern Ireland reported that their teaching was rarely limited by disruptive or uninterested pupils. Nearly two-thirds of pupils had teachers who reported that their teaching of reading was 'Not at All' limited by disruptive pupils. 'Uninterested' pupils were a greater problem, although 41 per cent of pupils still had teachers who reported that this did 'Not at All' limit their teaching of reading.

The curriculum and learning activities

- In Northern Ireland, over a quarter of teaching time (27 per cent) was spent on teaching English (including reading, writing, speaking, literature and other language skills)⁶. This was proportionally similar to the international average. This compares with the 23 per cent of teaching time spent on mathematics but is much greater than the four per cent for science, both reported in TIMSS 2015.
- The proportion of time spent specifically on teaching reading, including reading across the curriculum, was 14 per cent. The international average was 18 per cent.
- Of 14 identified skills and strategies for reading, seven were emphasised one grade (year group) earlier in Northern Ireland than internationally. Only two of the key skills ('Describing the Style or Structure of a Text' and 'Determining the Author's Perspective or Intention') were introduced in Year 5, the remaining 12 were introduced earlier.
- All key reading skills were taught to the vast majority of Year 6 pupils at least weekly. The two most commonly taught skills were 'Locate Information Within the Text' and 'Explain or Support Their Understanding of What They Have Read' at least weekly.

⁶ Referred to in the Northern Ireland curriculum as Communication in English

- The skill that received least attention in Northern Ireland, and across most comparator countries, was to ‘Determine the Author’s Perspective or Intention’, which was nonetheless taught at least weekly to around two-thirds of pupils in Northern Ireland.
- Teachers in Northern Ireland were most likely to report creating same-ability groups ‘Always or Almost Always’ to teach reading. This was also the case in England and New Zealand.
- The most common approach internationally on average (as well as in the comparator countries of Singapore, the Republic of Ireland and Canada) was to teach reading as a whole-class activity.
- The most common type of literary text that was frequently given to pupils by teachers in Northern Ireland was a ‘Longer Fiction Book with Chapters’. Teachers were more likely to report using these with students at least weekly than ‘Short Stories’ or ‘Plays’.
- The most common non-fiction text type that was frequently given to pupils by teachers in Northern Ireland was a ‘Non-Fiction Subject Area Book’. Teachers were more likely to report using these with students at least weekly than ‘Longer Non-Fiction Books with Chapters’ or ‘Non-Fiction Articles’.

Characteristics of pupils and their homes

- In Northern Ireland, two-fifths of children reported having ‘Many Resources’ for learning at home. Children with access to more home resources for learning had higher average achievement in reading.
- A higher proportion of children in Northern Ireland reported having ‘Many Resources’ (42 per cent) compared with the comparator countries and the international average (20 per cent).
- Just under half of pupils’ parents who responded to the survey (49 per cent) reported they ‘Very Much Like’ reading. This percentage was greater than in any comparator country. Children with parents who ‘Very Much Like’ reading had higher average achievement in reading.
- The teachers of the majority of pupils (67 per cent) reported that their teaching was limited, to ‘Some’ extent, by pupils’ lack of prerequisite knowledge or skills, and teachers of a further seven per cent stated they were limited ‘A Lot’. The proportion was similar to those, on average, internationally.
- Teachers of pupils in Northern Ireland were more likely to report pupils’ lack of sleep as limiting their teaching than their pupils’ lack of nutrition (55 per cent compared to 22 per cent respectively).
- The proportion of pupils whose teachers reported lack of sleep as a limiting factor (‘Some’ or ‘A Lot’ of the time) was slightly higher in Northern Ireland than internationally (59 per cent and 54 per cent respectively).