

PIRLS 2021:  
**Exploring the contexts for reading of  
primary school pupils in Ireland**

Vasiliki Pitsia, Sarah McAteer, Gráinne McHugh, and Emer Delaney

Educational Research Centre

**CHAPTER 3**

# Chapter 3:

## Reading Achievement by Pupil and Home Characteristics

As part of PIRLS 2021, participating pupils and their parents were asked to complete questionnaires, as described in Chapter 1. The focus of this chapter is on the relationships of selected pupil and home characteristics, as captured through these questionnaires, with the reading achievement of pupils in Ireland. As also described in Chapter 1, the PIRLS framework explores reading according to the *purposes* for which children read, covering "Literary" and "Informational" purposes, and the comprehension *processes* they use when reading, covering the processes of "Retrieve", "Infer", "Interpret", and "Evaluate". Overall performance by purpose is reflected in separate "Literary" and "Informational" subscales, while, for reporting, the comprehension processes have been combined to also create two subscales: "Retrieve/ Infer" and "Interpret/Evaluate". In this chapter, reading achievement overall and across the four subscales is presented. Ireland's data are compared to those of selected reference countries and the corresponding averages across all PIRLS countries, while data from PIRLS 2011 and 2016 are also compared to those from 2021, where appropriate.

### Demographic background and home environment

#### Country of birth

Parents of PIRLS pupils were asked whether their child was born in the country in which the PIRLS test took place. Table 3.1 shows the percentages and mean achievement of pupils *born in country* and *born outside country* in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, as in all reference countries, the vast majority (92%) of pupils were born in the country of the test. While pupils born in Ireland had a higher mean score than those born outside of Ireland (583 vs 572), this difference was not statistically significant. Overall, the magnitude and direction of mean achievement differences between pupils *born in country* and *born outside country* varied across countries. The largest mean difference (56 points) was in Finland, favouring pupils born in the country, while the smallest difference (4 points) was in Singapore, with a slight but not statistically significant advantage for pupils born outside the country.

Table 3.1: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by pupils' country of birth (2021)

	<b>Overall mean</b>	<b>Born in country</b>		<b>Born outside country</b>		<b>Mean difference between born in country and born outside country</b>	
		<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>		
<b>Start G5</b>	Ireland	577	92	583	8	572	-10
	Northern Ireland	566	94	575	6	598	<b>+23</b>
	Croatia	557	98	558	2	~	~
	Lithuania	552	95	571	5	547	<b>-24</b>
<b>End G4</b>	Australia <i>✉</i>	540	-	-	-	-	-
	England <i>✉</i>	558	-	-	-	-	-
	Hong Kong SAR	573	91	575	9	569	-6
	Poland	549	97	550	3	553	+3
	<i>Finland</i>	549	96	555	4	499	<b>-56</b>
	New Zealand	521	83	538	17	559	<b>+20</b>
	Singapore	587	85	591	15	595	+4
	PIRLS	503	93	504	7	495	<b>-9</b>

Source: Appendix Table A3.1.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on pupils' country of birth were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Tables 3.2 and 3.3 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils *born in country* and those *born outside country* in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils born in Ireland tended to achieve higher scores across all four subscales compared to their peers who were born outside Ireland, with mean differences on the Literary and Retrieve/Infer subscales being larger compared to those for the other two subscales and statistically significant.

Table 3.2: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by pupils' country of birth (2021)

		Literary		Mean difference between born in country and born outside country	Informational		Mean difference between born in country and born outside country
		Born in country	Born outside country		Born in country	Born outside country	
	Ireland	589	574	<b>-16</b>	579	570	-9
<b>Start G5</b>	Northern Ireland	583	601	<b>+19</b>	571	600	<b>+29</b>
	<i>Croatia</i>	569	~	~	554	~	~
	<i>Lithuania</i>	568	553	-15	574	544	<b>-29</b>
<b>End G4</b>	Australia ✖	-	-	-	-	-	-
	England ✖	-	-	-	-	-	-
	Hong Kong SAR	566	565	-2	585	573	-12
	Poland	553	559	+6	549	551	+1
	<i>Finland</i>	553	495	<b>-58</b>	556	494	<b>-62</b>
	<i>New Zealand</i>	540	560	<b>+20</b>	538	557	<b>+20</b>
	<i>Singapore</i>	595	599	+3	590	595	+5
	PIRLS	505	496	<b>-8</b>	503	494	<b>-9</b>

Source: Appendix Tables A3.2 and A3.3.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on pupils' country of birth were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Table 3.3: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by pupils' country of birth (2021)

		Retrieve/Infer			Interpret/Evaluate		
		Born in country	Born outside country	Mean difference between born in country and born outside country	Born in country	Born outside country	Mean difference between born in country and born outside country
	Ireland	577	563	<b>-14</b>	587	579	-7
<b>Start G5</b>	Northern Ireland	567	588	<b>+21</b>	583	605	<b>+23</b>
	<i>Croatia</i>	554	~	~	563	~	~
	<i>Lithuania</i>	574	550	<b>-24</b>	570	546	-23
<b>End G4</b>	Australia ✎	-	-	-	-	-	-
	England ✎	-	-	-	-	-	-
	Hong Kong SAR	580	573	-6	574	567	-8
	Poland	546	549	+3	554	553	-1
	<i>Finland</i>	556	500	<b>-56</b>	555	498	<b>-57</b>
	<i>New Zealand</i>	536	553	<b>+17</b>	540	562	<b>+22</b>
	<i>Singapore</i>	587	593	+6	595	596	+1
	PIRLS	504	494	<b>-10</b>	503	496	<b>-8</b>

Source: Appendix Tables A3.4 and A3.5.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on pupils' country of birth were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

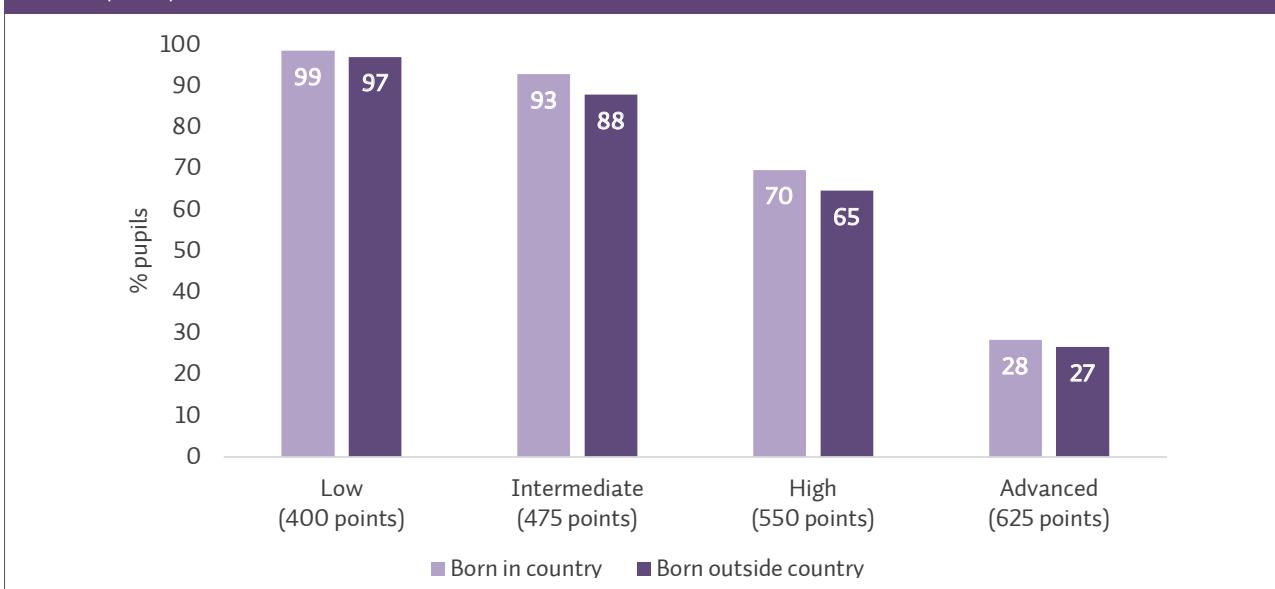
✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by their country of birth are shown in Figure 3.1. Percentages of pupils reaching each of the four International Benchmarks were broadly similar between the two categories. Although those *born in country* appear to have a slight advantage over those *born outside country* at all four benchmarks, the only statistically significant difference was the one at the Intermediate Benchmark (93% vs 88%).

Figure 3.1: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by pupils' country of birth (2021)



Source: Appendix Table A3.6.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The question related to pupils' country of birth was included in the 2016 but not in the 2011 parent questionnaire. Although the proportions of pupils in the *born in country* and *born outside country* categories remained stable between 2016 and 2021, mean achievement differences between the two categories slightly narrowed between the two cycles across both overall reading achievement and all subscales (Table 3.4).

Table 3.4: Percentages and mean reading achievement of pupils in Ireland, by pupils' country of birth (2016, 2021)

		<b>Born in country</b>		<b>Born outside country</b>		<b>Mean difference between born in country and born outside country</b>
		<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	
<b>Overall</b>	<b>2016</b>	91	572	9	556	<b>-16</b>
	<b>2021</b>	92	583	8	572	-10
<b>Literary</b>	<b>2016</b>	91	576	9	559	<b>-18</b>
	<b>2021</b>	92	589	8	574	<b>-16</b>
<b>Informational</b>	<b>2016</b>	91	570	9	555	<b>-15</b>
	<b>2021</b>	92	579	8	570	-9
<b>Retrieve/Infer</b>	<b>2016</b>	91	572	9	553	<b>-18</b>
	<b>2021</b>	92	577	8	563	<b>-14</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	91	574	9	561	<b>-13</b>
	<b>2021</b>	92	587	8	579	-7

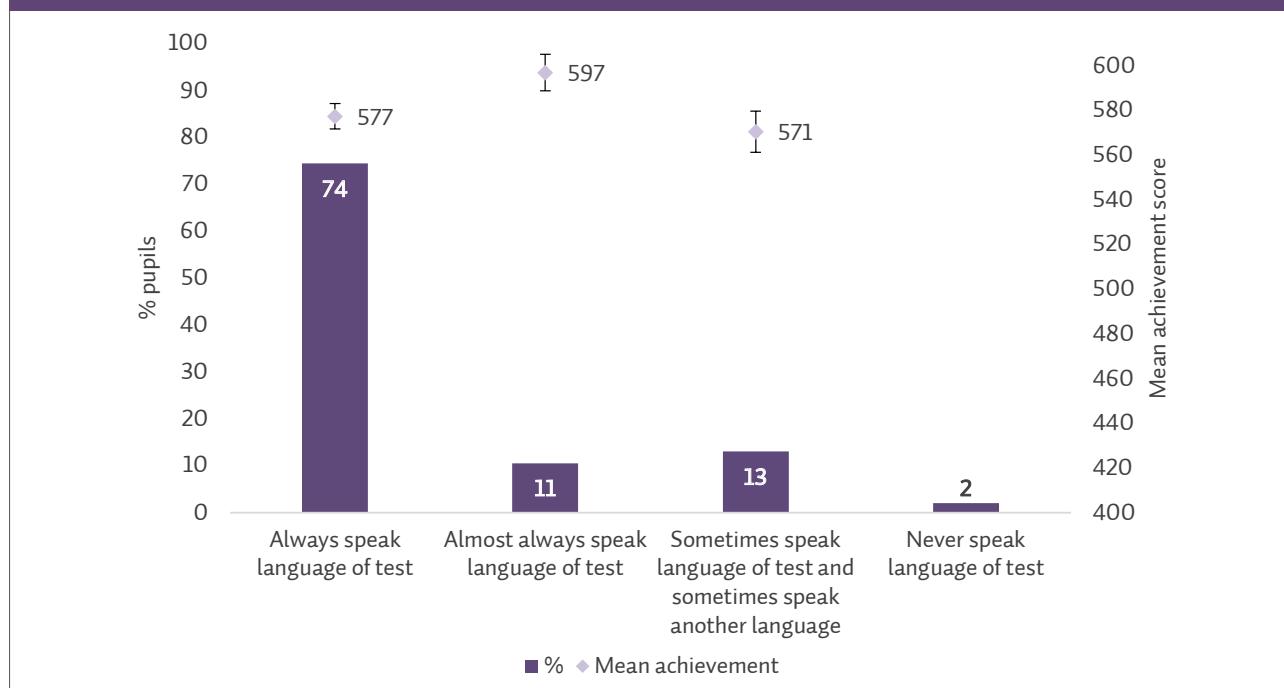
Source: Appendix Table A3.7.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Language(s) spoken at home

Figure 3.2 shows the percentages and mean achievement of pupils in Ireland in 2021 who always, almost always, sometimes, and never spoke the language of the PIRLS test at home. Approximately three-quarters of pupils (74%) indicated that they always spoke the language of the test at home, 11% and 13% that they almost always and sometimes did so, respectively, and 2% that they never spoke the language of the test at home. Pupils who almost always spoke the language of the test at home achieved the highest mean score (597), which was statistically significantly higher than the score of those who always spoke the language of the test at home, which was used as the reference category (577). Due to small number of pupils and resulting error margins, the estimate of mean achievement for pupils in the *never speak language of test* category is not presented here as no clear conclusions can be drawn about their relative performance.

Figure 3.2: Percentages and mean achievement of pupils in Ireland by language(s) spoken at home, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.8.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. Mean achievement is not reported for the *never speak language of test* category due to insufficient data.

Table 3.5 shows the percentages and mean achievement of pupils by the frequency with which they spoke the language of the PIRLS test at home in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident internationally, with pupils who almost always spoke the language of the test at home achieving the highest mean scores. Finland was an exception to this pattern, with pupils who always and almost always spoke the language of the test at home achieving similar scores.

Table 3.5: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by language(s) spoken at home (2021)

	Overall mean	Always speak language of test		Almost always speak language of test		Sometimes speak language of test and sometimes speak another language		Never speak language of test		Mean difference between always and never speak language of test
		%	Mean	%	Mean	%	Mean	%	Mean	
Ireland	577	74	578	11	597	13	571	2	~	~
<b>Start G5</b>	Northern Ireland	566	84	566	9	576	6	560	1	~
Croatia	557	72	557	19	568	9	539	1	~	~
Lithuania	552	56	552	28	563	15	540	1	~	~
Australia	540	67	536	15	557	18	550	1	~	~
England	558	69	556	12	573	17	557	2	~	~
Hong Kong SAR	573	43	575	17	584	34	568	6	558	<b>-17</b>
<b>End G4</b>	Poland	549	74	549	19	559	6	544	0	~
Finland	549	71	555	17	554	10	513	2	~	~
New Zealand	521	-	-	-	-	-	-	-	-	-
Singapore	587	33	587	20	610	44	581	3	532	<b>-55</b>
PIRLS	503	63	505	15	510	18	499	4	460	<b>-45</b>

Source: Appendix Table A3.8.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on language(s) spoken at home were not available for New Zealand.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✉ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Tables 3.6 and 3.7 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils who always, almost always, sometimes, and never spoke the language of the PIRLS test at home in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils who almost always spoke the language of the test at home tended to achieve higher mean scores across all four subscales compared to their peers, with some exceptions in Finland.

Table 3.6: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by language(s) spoken at home (2021)

		Literary				Informational					
		Always speak language of test	Almost always speak language of test	Sometimes speak language of test and sometimes speak another language	Never speak language of test	Mean difference between always and never speak language of test	Always speak language of test	Almost always speak language of test	Sometimes speak language of test and sometimes speak another language	Never speak language of test	Mean difference between always and never speak language of test
Start G5	Ireland	584	603	578	~	~	574	592	567	~	~
	Northern Ireland	573	583	571	~	~	562	574	552	~	~
	<i>Croatia</i>	567	579	548	~	~	552	565	537	~	~
	<i>Lithuania</i>	551	565	541	~	~	553	563	540	~	~
End G4	Australia ✎	540	560	552	~	~	535	557	549	~	~
	England ✎	557	575	556	~	~	557	577	559	~	~
	Hong Kong SAR	566	573	561	555	-10	584	596	578	560	<b>-24</b>
	Poland	551	563	549	~	~	548	558	538	~	~
	<i>Finland</i>	552	556	509	~	~	556	555	513	~	~
	<i>New Zealand</i>	-	-	-	-	-	-	-	-	-	-
	Singapore	589	617	586	535	<b>-54</b>	587	610	579	533	<b>-54</b>
PIRLS		506	511	500	460	<b>-46</b>	504	510	498	460	<b>-44</b>

Source: Appendix Tables A3.9 and A3.10.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on language(s) spoken at home were not available for New Zealand.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Table 3.7: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by language(s) spoken at home (2021)

		Retrieve/Infer				Interpret/Evaluate					
		Always speak language of test	Almost always speak language of test	Sometimes speak language of test and sometimes speak another language	Never speak language of test	Mean difference between always and never speak language of test	Always speak language of test	Almost always speak language of test	Sometimes speak language of test and sometimes speak another language	Never speak language of test	Mean difference between always and never speak language of test
Start G5	Ireland	571	587	569	~	~	582	603	572	~	~
	Northern Ireland	558	569	555	~	~	574	583	563	~	~
	Croatia	552	563	534	~	~	561	572	546	~	~
	Lithuania	555	563	542	~	~	549	563	540	~	~
End G4	Australia ✕	530	547	545	~	~	544	564	555	~	~
	England ✕	552	576	553	~	~	560	576	560	~	~
	Hong Kong SAR	578	593	573	561	<b>-18</b>	575	581	568	558	<b>-17</b>
	Poland	545	556	538	~	~	552	560	548	~	~
	Finland	555	556	514	~	~	555	553	512	~	~
	New Zealand	-	-	-	-	-	-	-	-	-	-
	Singapore	584	607	577	530	<b>-54</b>	591	614	585	537	<b>-54</b>
PIRLS		505	509	499	459	<b>-46</b>	505	510	499	461	<b>-44</b>

Source: Appendix Tables A3.11 and A3.12.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on language(s) spoken at home were not available for New Zealand.Countries in *italics* took the test on computer, while those not in italics took it on paper.

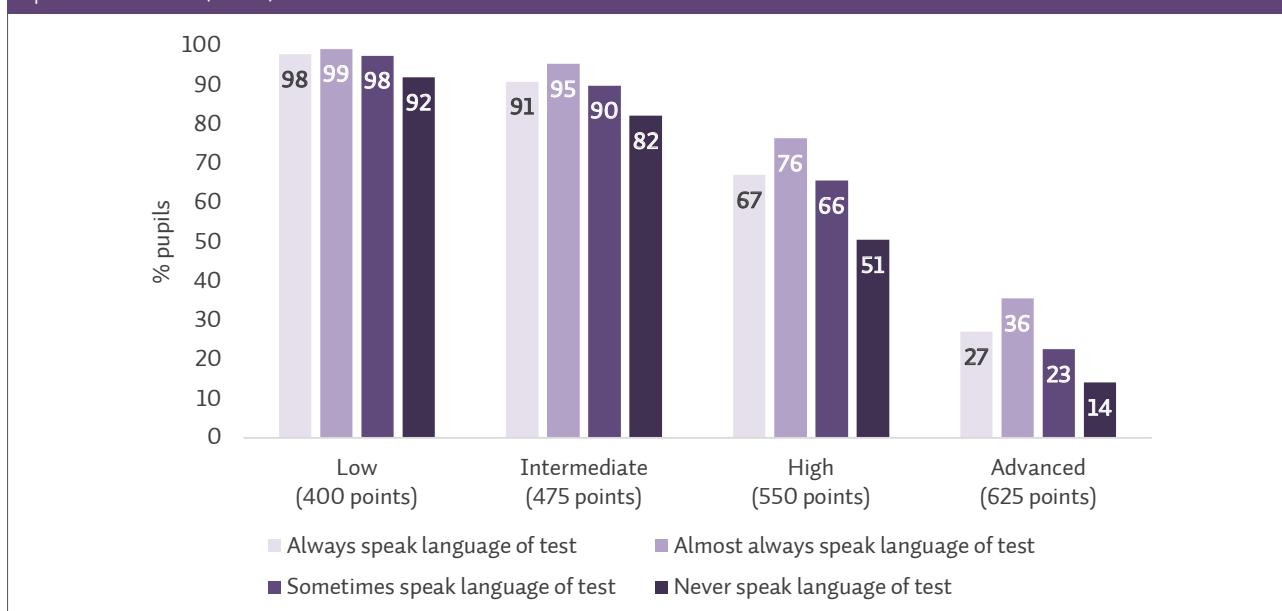
✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which they spoke the language of the PIRLS test at home are shown in Figure 3.3. Higher percentages reaching each of the benchmarks were noted for pupils who almost always spoke the language of the test at home, with the advantage of this group being more apparent with every subsequent benchmark. Percentages for the *never speak language of test* category should be interpreted with caution as this category is represented by only 2% of the sample.

Figure 3.3: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by language(s) spoken at home (2021)



Source: Appendix Table A3.13.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils about the frequency with which they spoke the language of the PIRLS test at home; however, categories were different in 2011 (the categories of *always speak language of test* and *almost always speak language of test* were part of one response option). Hence, only 2016 and 2021 are presented here (2011 data can be found in Appendix Table A3.14). Consistent with patterns noted in 2021, pupils who almost always spoke the language of the test at home in 2016 had the highest scores across both overall reading achievement and all subscales (Table 3.8).

Table 3.8: Percentages and mean reading achievement of pupils in Ireland, by language(s) spoken at home (2016, 2021)

	Always speak language of test		Almost always speak language of test		Sometimes speak language of test and sometimes speak another language		Never speak language of test		Mean difference between always and never speak language of test
	%	Mean	%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2016</b>	79	567	10	587	10	559	2	~
	<b>2021</b>	74	578	11	597	13	571	2	~
<b>Literary</b>	<b>2016</b>	79	571	10	594	10	562	2	~
	<b>2021</b>	74	584	11	603	13	578	2	~
<b>Informational</b>	<b>2016</b>	79	565	10	585	10	557	2	~
	<b>2021</b>	74	574	11	592	13	567	2	~
<b>Retrieve/Infer</b>	<b>2016</b>	79	566	10	584	10	558	2	~
	<b>2021</b>	74	571	11	587	13	569	2	~
<b>Interpret/Evaluate</b>	<b>2016</b>	79	569	10	592	10	561	2	~
	<b>2021</b>	74	582	11	603	13	572	2	~

Source: Appendix Table A3.14.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

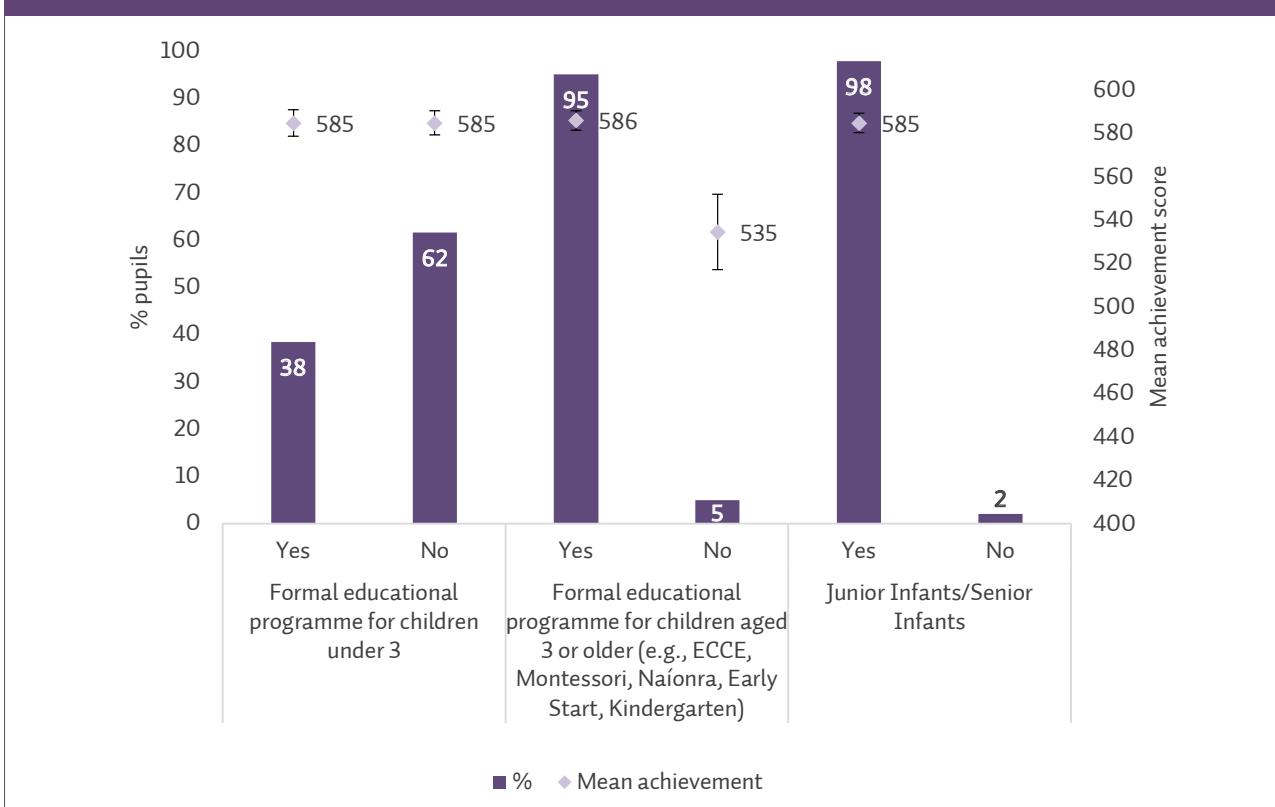
~ Mean achievement is not reported due to insufficient data.

## Preschool attendance

Parents of PIRLS pupils in Ireland were asked whether their child attended different types of formal educational programmes before starting First Class. Specifically, parents were asked about their child's attendance at the following: (i) formal educational programme for children under 3, (ii) formal educational programme for children aged 3 or older (e.g., ECCE, Montessori, Naónra, Early Start, Kindergarten), and (iii) Junior Infants/Senior Infants.

Figure 3.4 shows the percentages and mean achievement of pupils who attended and those who did not attend each of these kinds of educational programmes in Ireland. While the vast majority of pupils (95% and 98%, respectively), as expected, attended a formal educational programme for children aged 3 or older and Junior Infants/Senior Infants, approximately 60% attended a formal educational programme for children under 3. Pupils who attended the latter type of programme did not perform differently from their peers who did not. Pupils who attended a formal educational programme for children aged 3 or older achieved a statistically significantly higher mean score (586) than their peers who did not (535). Due to small number of pupils and resulting error margins, the estimate of mean achievement for pupils who did not attend Junior/Senior Infants is not presented here as no clear conclusions can be drawn about their relative performance.

Figure 3.4: Percentages and mean achievement of pupils in Ireland by preschool attendance, with confidence intervals around estimates of achievement (2021)



Source: Appendix Tables A3.15, A3.16, and A3.17.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. Mean achievement is not reported for the no category (Junior Infants/Senior Infants) due to insufficient data.

Table 3.9 shows the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the three variables related to preschool attendance in Ireland. Reflecting the patterns noted for overall reading achievement, pupils who attended a formal educational programme for children under 3 did not perform differently across the four subscales from their peers who did not. Pupils who attended a formal educational programme for children aged 3 or older achieved statistically significantly higher scores, with mean differences being similar in magnitude across the four subscales. Mean achievement differences between pupils who attended Junior Infants/Senior Infants and those who did not are not reported due to the very low percentage of pupils belonging to the latter group.

Table 3.9: Mean achievement on reading **purpose** and **process** subscales of pupils in Ireland, by preschool attendance (2021)

		Yes	No	Mean difference between yes and no
<b>Formal educational programme for children under 3</b>	<b>Literary</b>	590	592	+2
	<b>Informational</b>	581	582	+1
	<b>Retrieve/Infer</b>	579	579	0
	<b>Interpret/Evaluate</b>	588	590	+1
<b>Formal educational programme for children aged 3 or older (e.g., ECCE, Montessori, Naíonra, Early Start, Kindergarten)</b>	<b>Literary</b>	593	540	<b>-52</b>
	<b>Informational</b>	583	532	<b>-51</b>
	<b>Retrieve/Infer</b>	580	530	<b>-50</b>
	<b>Interpret/Evaluate</b>	590	539	<b>-51</b>
<b>Junior Infants/Senior Infants</b>	<b>Literary</b>	591	~	~
	<b>Informational</b>	582	~	~
	<b>Retrieve/Infer</b>	579	~	~
	<b>Interpret/Evaluate</b>	589	~	~

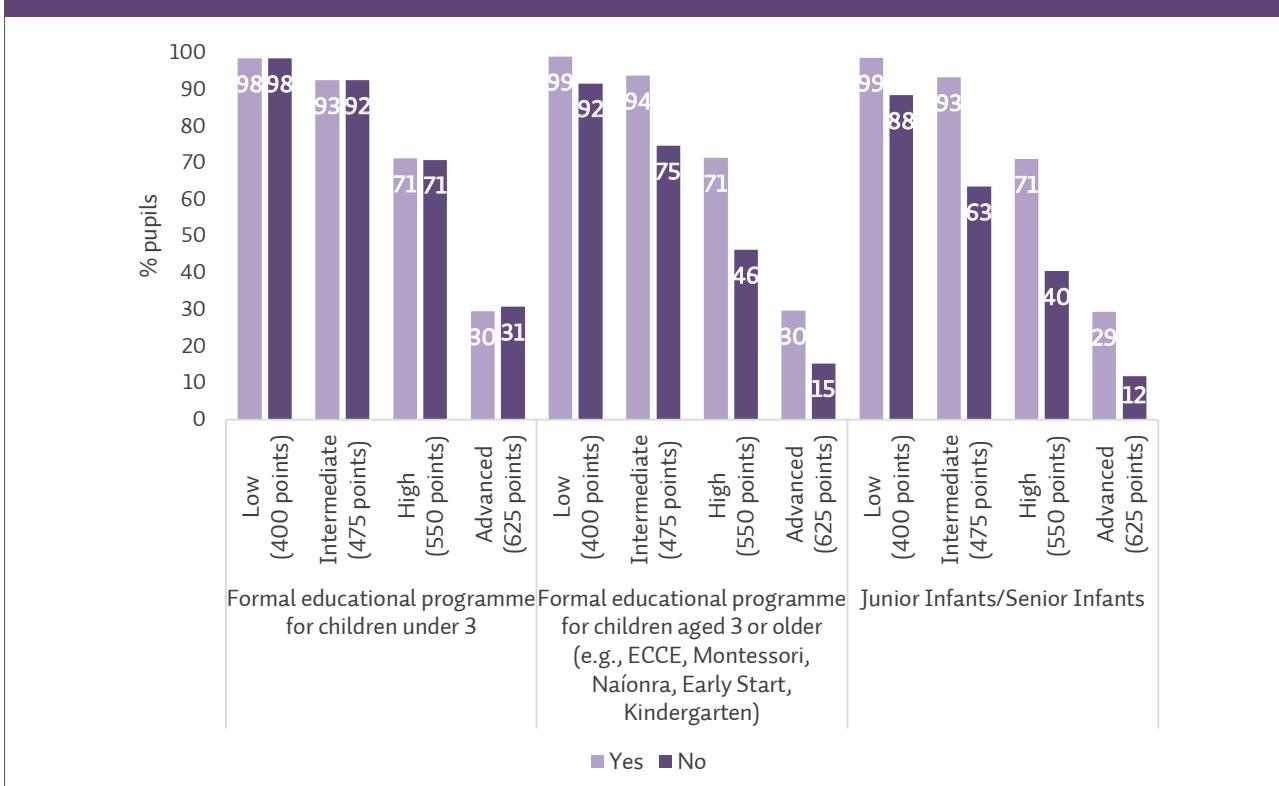
Source: Appendix Tables A3.15, A3.16, and A3.17.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

~ Mean achievement is not reported due to insufficient data.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by their preschool attendance are shown in Figure 3.5. Percentages of pupils reaching each of the benchmarks were virtually identical between pupils who attended vs did not attend a formal educational programme for children under 3. Percentage differences between pupils who attended vs did not attend a formal educational programme for children aged 3 or older were statistically significant across all benchmarks, with the former group having an advantage. These differences increased in magnitude between the Low and the High Benchmarks, going from seven percentage points to 25 percentage points, but decreased back to 14 percentage points at the Advanced Benchmark. Percentage differences for the third variable (attendance vs non-attendance at Junior Infants/Senior Infants) should be interpreted with caution as the *no* category is represented by only 2% of the sample.

Figure 3.5: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by preschool attendance (2021)



Source: Appendix Tables A3.18, A3.19, and A3.20.

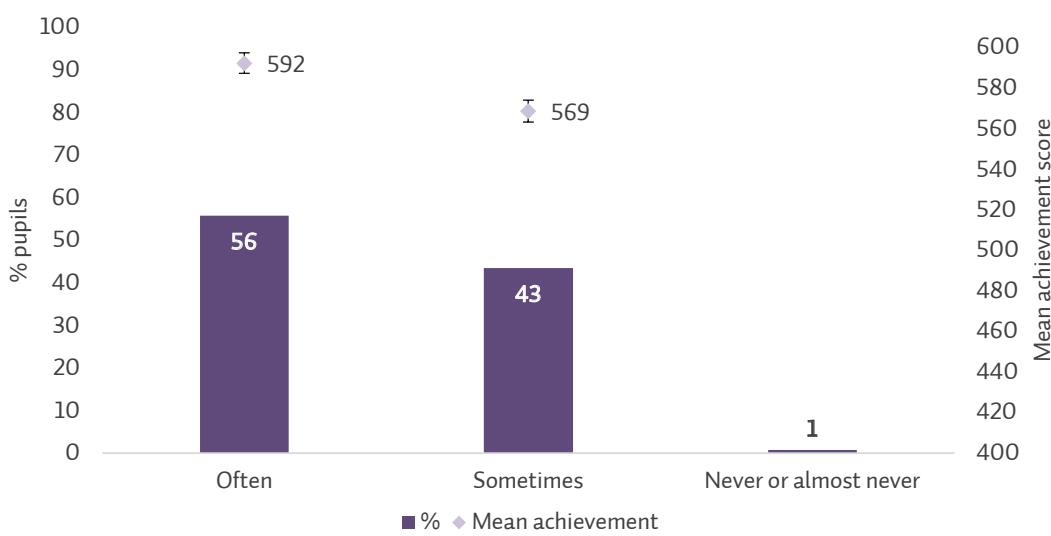
Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Early literacy activities

Parents of PIRLS pupils were asked about the frequency with which they or someone else in their home engaged their child in a range of early literacy activities before the child started First Class. The early literacy activities were: *Read books; Tell stories; Sing songs; Play with alphabet toys (e.g., blocks with letters of the alphabet); Talk about things you had done; Talk about what you had read; Play word games; Write letters or words; Read aloud signs and labels*, and response options ranged from *often* to *never or almost never*. Parents' responses were used to create the PIRLS *Early Literacy Activities* scale, on the basis of which pupils were grouped into three categories: *often, sometimes, or never or almost never*.

Figure 3.6 shows the percentages and mean achievement of pupils who *often, sometimes, or never or almost never* did these early literacy activities with their parents or someone else at home before they started First Class in Ireland in 2021. More than half of pupils (56%) were reported by their parents to be *often* involved in early literacy activities, 43% were reported to be *sometimes* involved in such activities, and only 1% were reported to *never or almost never* be involved in such activities. Pupils who were *often* involved in early literacy activities achieved the highest mean score (592), which was statistically significantly higher than the score of their peers who were *sometimes* involved in early literacy activities (569). Due to small number of pupils and resulting error margins, the estimate of mean achievement for pupils in the *never or almost never* category is not presented here as no clear conclusions can be drawn about their relative performance.

Figure 3.6: Percentages and mean achievement of pupils in Ireland by frequency of involvement in early literacy activities, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.21.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. Mean achievement is not reported for the *never or almost never* category due to insufficient data.

Table 3.10 shows the percentages and mean achievement of pupils in each category of the PIRLS *Early Literacy Activities* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident internationally, with score differences between pupils in the *often* and the *sometimes* categories being statistically significant and ranging from 17 points in Lithuania to 33 in New Zealand. Due to the small numbers of pupils in the *never or almost never* category across most reference countries, the estimates of mean achievement for pupils in this category are not reported for most of the countries, including Ireland.

Table 3.10: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of involvement in early literacy activities (2021)

	Overall mean	Often		Sometimes		Never or almost never		Mean difference between often and never or almost never
		%	Mean	%	Mean	%	Mean	
Start G5	Ireland	577	56	592	43	569	1	~
	Northern Ireland	566	64	584	35	565	1	~
	Croatia	557	58	569	42	543	0	~
End G4	Lithuania	552	47	579	53	562	1	~
	Australia ✎	540	-	-	-	-	-	-
	England ✎	558	-	-	-	-	-	-
	Hong Kong SAR	573	16	591	81	571	3	560
	Poland	549	53	559	47	541	0	~
	Finland	549	33	565	66	547	1	~
	New Zealand	521	59	556	40	523	1	~
	Singapore	587	35	613	62	582	4	553
	PIRLS	503	42	519	55	496	2	~

Source: Appendix Table A3.21.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on early literacy activities were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Tables 3.11 and 3.12 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Early Literacy Activities* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils who were *often* involved in early literacy activities tended to achieve statistically significantly higher scores across all four subscales compared to their peers who were *sometimes* involved in such activities across all reference countries, with mean differences being similar in magnitude across the four subscales.

Table 3.11: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of involvement in early literacy activities (2021)

		Literary			Mean difference between often and never or almost never	Informational			Mean difference between often and never or almost never
		Often	Sometimes	Never or almost never		Often	Sometimes	Never or almost never	
<b>Start G5</b>	Ireland	599	575	~	~	589	566	~	~
	Northern Ireland	591	572	~	~	579	561	~	~
	<i>Croatia</i>	580	554	~	~	565	539	~	~
	Lithuania	579	558	~	~	581	565	~	~
<b>End G4</b>	Australia <i>✉</i>	-	-	-	-	-	-	-	-
	England <i>✉</i>	-	-	-	-	-	-	-	-
	Hong Kong SAR	583	562	556	<b>-28</b>	600	581	564	<b>-36</b>
	Poland	561	545	~	~	557	540	~	~
	<i>Finland</i>	562	545	~	~	566	547	~	~
	<i>New Zealand</i>	558	524	~	~	554	524	~	~
	Singapore	619	585	553	<b>-66</b>	613	581	553	<b>-60</b>
	PIRLS	520	497	~	~	519	496	~	~

Source: Appendix Tables A3.22 and A3.23.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on early literacy activities were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

Table 3.12: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of involvement in early literacy activities (2021)

		Retrieve/Infer				Interpret/Evaluate			
		Often	Sometimes	Never or almost never	Mean difference between often and never or almost never	Often	Sometimes	Never or almost never	Mean difference between often and never or almost never
<b>Start G5</b>	Ireland	587	563	~	~	597	573	~	~
	Northern Ireland	576	557	~	~	591	573	~	~
	<i>Croatia</i>	564	539	~	~	574	547	~	~
	Lithuania	581	565	~	~	577	562	~	~
<b>End G4</b>	Australia <i>✉</i>	-	-	-	-	-	-	-	-
	England <i>✉</i>	-	-	-	-	-	-	-	-
	Hong Kong SAR	597	576	563	<b>-34</b>	590	570	560	<b>-30</b>
	Poland	554	537	~	~	562	546	~	~
	<i>Finland</i>	566	548	~	~	565	546	~	~
	<i>New Zealand</i>	553	520	~	~	558	525	~	~
	Singapore	610	579	549	<b>-61</b>	616	586	558	<b>-58</b>
	PIRLS	519	496	~	~	519	496	~	~

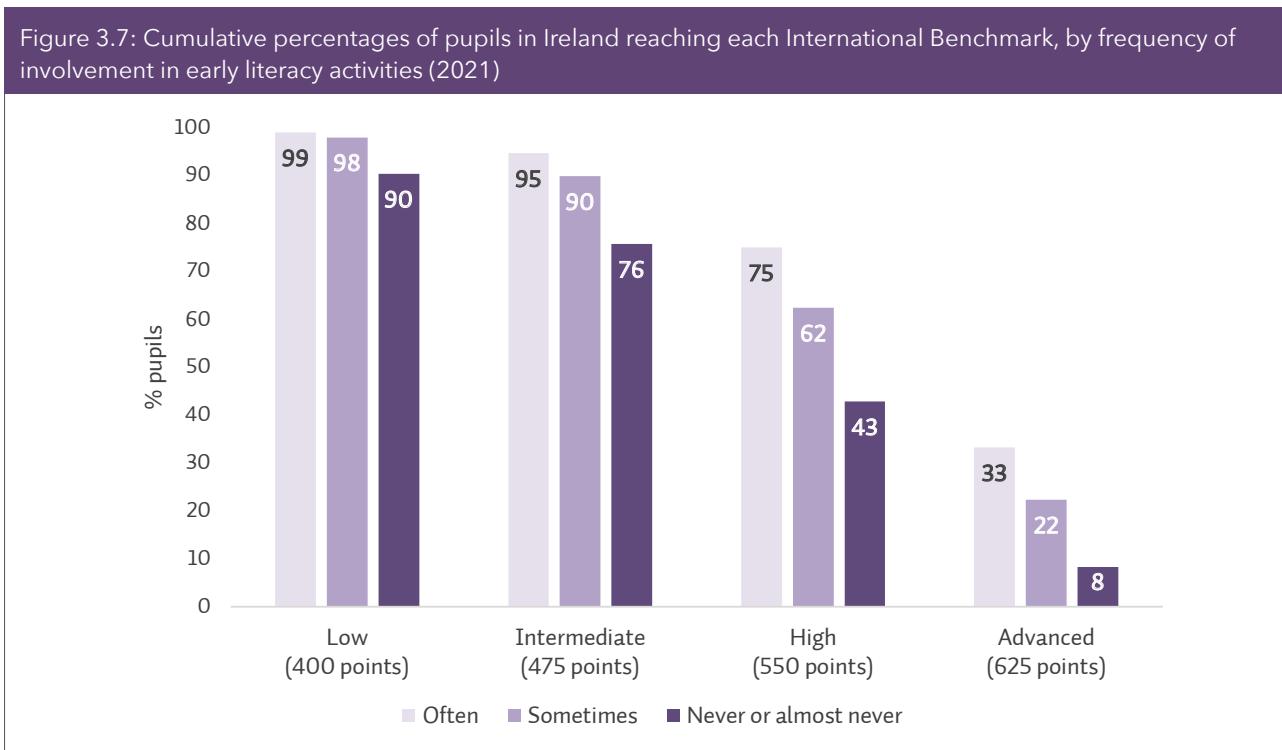
Source: Appendix Tables A3.24 and A3.25.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on early literacy activities were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which they were involved in early literacy activities with parents before starting First Class are shown in Figure 3.7. Percentage differences between the *often* and *sometimes* categories were statistically significant across three of the four benchmarks (Intermediate, High, and Advanced), with the former category tending to have an advantage compared to the latter. Given that only 1% of pupils belonged to the *never or almost never* category, comparisons of the cumulative percentages of pupils within this category reaching each of the four International Benchmarks should be interpreted very cautiously.



Source: Appendix Table A3.26.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils' parents about the frequency with which they were involved, together with their children, in early literacy activities. However, in 2011, pupils' parents were asked about their child's involvement in such activities before they started primary school (i.e., before starting Junior Infants), while in 2016 and 2021, they were asked about their child's involvement in such activities before they started First Class. Provided that comparisons of 2016 and 2021 data to those from 2011 are not directly comparable, these are not presented here (additional information about 2011 can be found in Appendix Table A3.27). The proportions of pupils who were *often*, *sometimes*, and *never or almost never* involved in early literacy activities remained stable between 2016 and 2021. Across overall reading and the four subscales, all mean achievement differences between the *often* and *sometimes* categories, favouring the former, were statistically significant in both 2016 and 2021. They were exactly 32 points in all cases in 2016 and they ranged from 23 to 25 points in 2021 (Table 3.13).

Table 3.13: Percentages and mean reading achievement of pupils in Ireland, by frequency of involvement in early literacy activities (2016, 2021)

	Often		Sometimes		Never or almost never		<b>Mean difference between often and never or almost never</b>
	%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2016</b>	55	586	45	554	1	~
	<b>2021</b>	56	592	43	569	1	~
<b>Literary</b>	<b>2016</b>	55	590	45	558	1	~
	<b>2021</b>	56	599	43	575	1	~
<b>Informational</b>	<b>2016</b>	55	584	45	552	1	~
	<b>2021</b>	56	589	43	566	1	~
<b>Retrieve/Infer</b>	<b>2016</b>	55	585	45	553	1	~
	<b>2021</b>	56	587	43	563	1	~
<b>Interpret/Evaluate</b>	<b>2016</b>	55	588	45	556	1	~
	<b>2021</b>	56	597	43	573	1	~

Source: Appendix Table A3.27.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

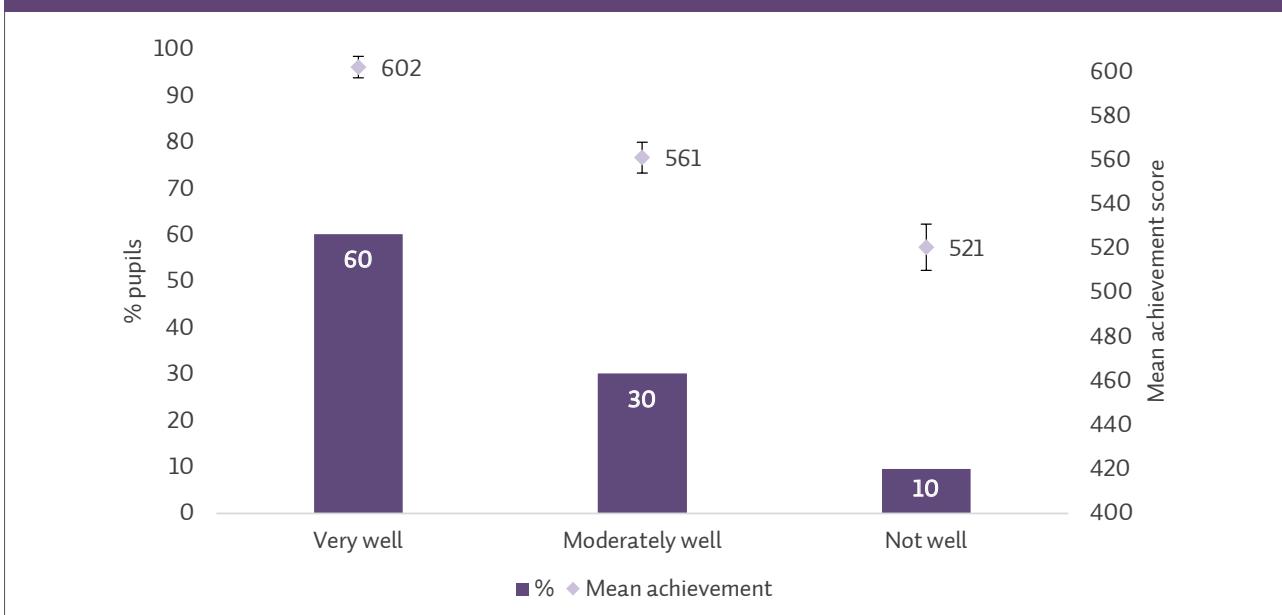
~ Mean achievement is not reported due to insufficient data.

## Literacy readiness

Parents of PIRLS pupils were asked about how well their child could do six literacy tasks when they began First Class. These literacy tasks were: *Recognise most of the letters of the alphabet; Read some words; Read sentences; Read a story; Write letters of the alphabet; Write their own name; Write words other than their own name*, and response options ranged from *very well* to *not at all*. Parents' responses were used to create the PIRLS Early Literacy Tasks scale, on the basis of which pupils were grouped into three categories: *very well*, *moderately well*, or *not well*.

Figure 3.8 shows the percentages and mean achievement of pupils in Ireland in 2021 who were able to do the aforementioned literacy tasks *very well*, *moderately well*, or *not well* before they started First Class. More than half of pupils (60%) were reported by their parents to be able to do these literacy tasks *very well*, 30% were reported to be able to do them *moderately well*, and 10% were reported to be able to do them *not well*. Pupils who were able to do these literacy tasks *very well* achieved the highest mean score (602), which was statistically significantly higher than the scores of the rest of their peers in the *moderately well* (561) and *not well* (521) categories.

Figure 3.8: Percentages and mean achievement of pupils in Ireland by the extent to which pupils could do early literacy tasks before the first grade of primary school, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.28.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.14 shows the percentages and mean achievement of pupils in each category of the PIRLS *Early Literacy Tasks* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The extent to which pupils were reported by their parents to be able to do a range of literacy tasks before starting the first grade of primary school varied across countries; Ireland had the highest proportion of pupils in the *very well* category among the reference countries (but also among all participating countries) (60%), while New Zealand had the lowest among the reference countries (23%). The magnitude of mean achievement differences between the *very well* and *not well* categories also varied across countries, ranging from 32 points in New Zealand to 105 in Singapore. Mean differences across all countries, though, favoured the *very well* category and were statistically significant, in line with the pattern observed in Ireland. It should be noted that, in some countries, this question asked about ability to carry out early literacy tasks when starting school, whereas pupils in Ireland would typically have completed Junior and Senior Infants prior to starting First Class.

Table 3.14: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which pupils could do early literacy tasks before the first grade of primary school (2021)

	Overall mean	Very well		Moderately well		Not well		Mean difference between very well and not well	
		%	Mean	%	Mean	%	Mean		
Start G5	Ireland	577	60	602	30	561	10	521	<b>-82</b>
	Northern Ireland	566	-	-	-	-	-	-	-
	Croatia	557	44	580	37	546	18	528	<b>-52</b>
	Lithuania	552	38	603	40	563	23	529	<b>-75</b>
End G4	Australia <i>✉</i>	540	-	-	-	-	-	-	-
	England <i>✉</i>	558	-	-	-	-	-	-	-
	Hong Kong SAR	573	46	596	43	565	11	525	<b>-71</b>
	Poland	549	47	570	35	541	17	518	<b>-51</b>
	Finland	549	28	587	29	553	44	530	<b>-57</b>
	New Zealand	521	23	561	34	546	43	529	<b>-32</b>
	Singapore	587	52	619	37	575	11	514	<b>-105</b>
	PIRLS	503	31	527	35	501	34	479	<b>-48</b>

Source: Appendix Table A3.28.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 53 rather than 57 countries as data on early literacy tasks were not available for Australia, England, Northern Ireland, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Tables 3.15 and 3.16 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Early Literacy Tasks* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils who were able to do a range of literacy tasks *very well* before starting the first grade of primary school tended to achieve statistically significantly higher scores across all four subscales compared to their peers who were *not well* able to do these tasks. In Ireland, mean differences were roughly similar in magnitude across the four subscales.

Table 3.15: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which pupils could do early literacy tasks before the first grade of primary school (2021)

		Literary			Informational				
		Very well	Moderately well	Not well	Mean difference between very well and not well	Very well	Moderately well	Not well	Mean difference between very well and not well
Start G5	Ireland	609	566	525	<b>-85</b>	599	557	517	<b>-82</b>
	Northern Ireland	-	-	-	-	-	-	-	-
	<i>Croatia</i>	591	559	535	<b>-56</b>	576	541	525	<b>-51</b>
	<i>Lithuania</i>	600	562	526	<b>-74</b>	606	566	530	<b>-76</b>
End G4	Australia ✎	-	-	-	-	-	-	-	-
	England ✎	-	-	-	-	-	-	-	-
	Hong Kong SAR	587	557	517	<b>-70</b>	606	574	534	<b>-72</b>
	Poland	572	544	522	<b>-50</b>	570	537	518	<b>-52</b>
	<i>Finland</i>	584	551	528	<b>-56</b>	590	554	530	<b>-60</b>
	<i>New Zealand</i>	560	549	530	<b>-30</b>	561	545	528	<b>-33</b>
	<i>Singapore</i>	625	578	518	<b>-107</b>	618	575	513	<b>-106</b>
	PIRLS	527	502	479	<b>-49</b>	527	501	478	<b>-49</b>

Source: Appendix Tables A3.29 and A3.30.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 53 rather than 57 countries as data on early literacy tasks were not available for Australia, England, Northern Ireland, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Table 3.16: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which pupils could do early literacy tasks before the first grade of primary school (2021)

		Retrieve/Infer			Interpret/Evaluate				
		Very well	Moderately well	Not well	Mean difference between very well and not well	Very well	Moderately well	Not well	Mean difference between very well and not well
<b>Start G5</b>	Ireland	596	555	515	<b>-81</b>	607	564	526	<b>-81</b>
	Northern Ireland	-	-	-	-	-	-	-	-
	Croatia	576	542	524	<b>-52</b>	585	552	531	<b>-53</b>
	Lithuania	609	564	529	<b>-79</b>	602	560	531	<b>-71</b>
<b>End G4</b>	Australia ✕	-	-	-	-	-	-	-	-
	England ✕	-	-	-	-	-	-	-	-
	Hong Kong SAR	601	569	527	<b>-74</b>	593	565	528	<b>-65</b>
	Poland	564	537	515	<b>-49</b>	573	543	524	<b>-49</b>
	Finland	590	555	529	<b>-62</b>	585	553	531	<b>-54</b>
	New Zealand	558	544	525	<b>-32</b>	561	548	532	<b>-29</b>
	Singapore	615	573	514	<b>-101</b>	624	577	521	<b>-103</b>
PIRLS		528	501	479	<b>-49</b>	526	500	479	<b>-47</b>

Source: Appendix Tables A3.31 and A3.32.

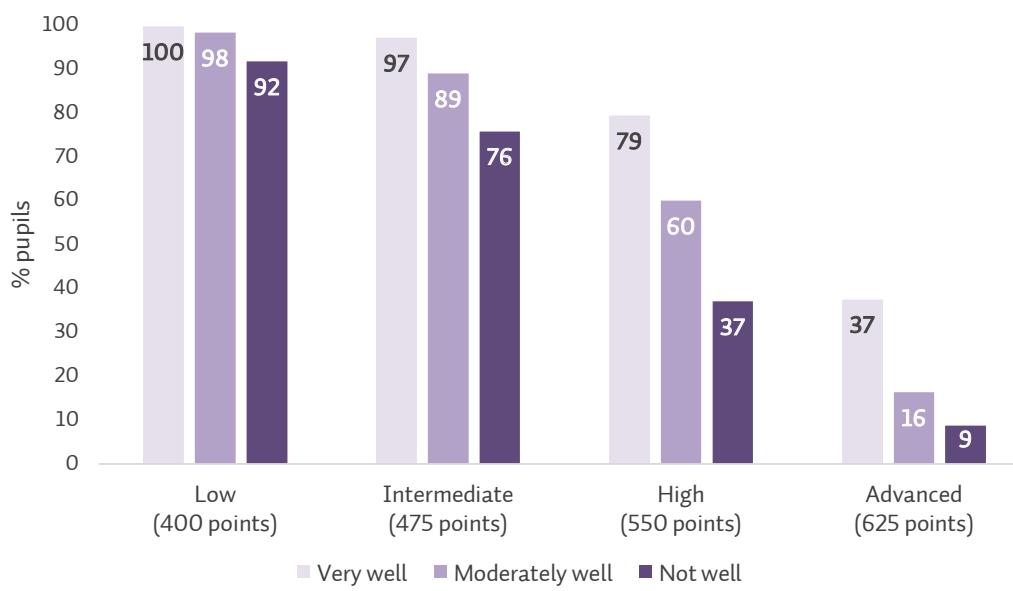
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 53 rather than 57 countries as data on early literacy tasks were not available for Australia, England, Northern Ireland, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by how well they could do a range of literacy tasks when they began First Class based on their parents' reports are shown in Figure 3.9. Percentage differences between the *very well* and *not well* categories were statistically significant across all four benchmarks, with the former tending to have an advantage compared to the latter. These percentage differences ranged from eight percentage points at the Low Benchmark to 42 percentage points at the High Benchmark.

Figure 3.9: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which pupils could do early literacy tasks before the first grade of primary school (2021)



Source: Appendix Table A3.33.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 included an *Early Literacy Tasks* scale; however, the 2011 scale was slightly different to the corresponding 2016 and 2021 scales.<sup>20</sup> This means that comparisons are only possible between the 2016 and 2021 data (additional information about the scale components across cycles can be found in Appendix Table A3.35). While proportions of pupils in each of the three categories remained stable between 2016 and 2021, mean achievement differences between the *very well* and *not well* categories widened between the two cycles across both overall reading achievement and all four subscales (Table 3.17).

<sup>20</sup> In 2016 and 2021, the scale included one item that was not included in the 2011 scale: *Read a story* (Martin et al., 2017; Martin & Mullis, 2012).

Table 3.17: Percentages and mean reading achievement of pupils in Ireland, by the extent to which pupils could do early literacy tasks before the first grade of primary school (2016, 2021)

		Very well		Moderately well		Not well		Mean difference between very well and not well
		%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2016</b>	61	590	29	548	10	519	<b>-72</b>
	<b>2021</b>	60	602	30	561	10	521	<b>-82</b>
<b>Literary</b>	<b>2016</b>	61	595	29	553	10	521	<b>-74</b>
	<b>2021</b>	60	609	30	566	10	525	<b>-85</b>
<b>Informational</b>	<b>2016</b>	61	589	29	546	10	514	<b>-76</b>
	<b>2021</b>	60	599	30	557	10	517	<b>-82</b>
<b>Retrieve/Infer</b>	<b>2016</b>	61	591	29	547	10	516	<b>-75</b>
	<b>2021</b>	60	596	30	555	10	515	<b>-81</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	61	593	29	549	10	522	<b>-71</b>
	<b>2021</b>	60	607	30	564	10	526	<b>-81</b>

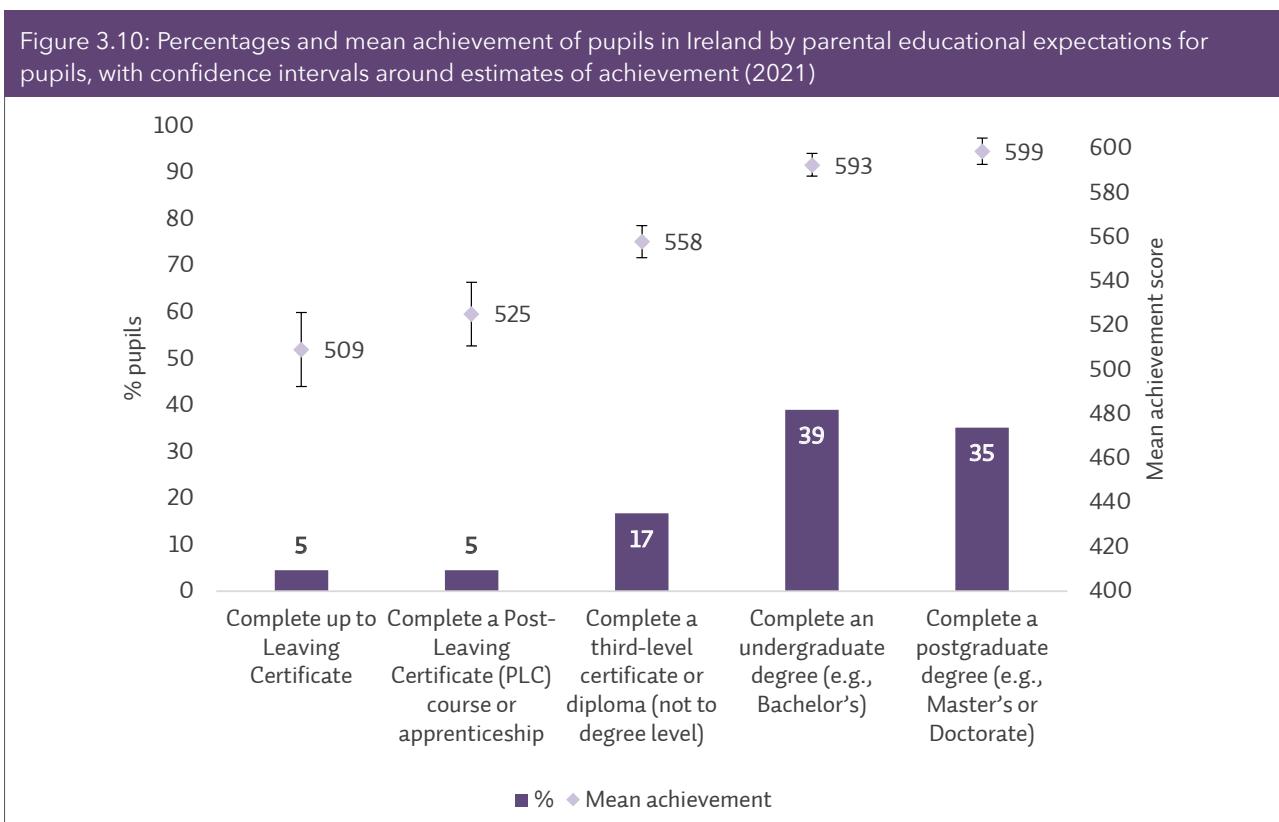
Source: Appendix Table A3.34.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2016 and 2021, the scale included one item that was not included in the 2011 scale: *Read a story*. One of the items included in 2011 and 2016 was split into two items in 2021; *Write some words* was split into *Write their name* and *Write words other than their own name*, but only the *Write words other than their own name* was included in the scale.

## Expectation of pupil education level

Parents of PIRLS pupils were asked about the highest education level they expected their child to complete. Figure 3.10 shows the percentages and mean achievement of pupils at each of these levels, based on their parents' expectations in Ireland in 2021. Approximately 40% of pupils were expected by their parents to complete an undergraduate degree, while 35% of pupils were expected to complete a postgraduate degree. Only 5% of pupils were expected to complete up to the Leaving Certificate (only) and a Post-Leaving Certificate (PLC) course or apprenticeship, respectively, and 17% were expected to complete a third-level certificate or diploma (not to degree level). Pupils' mean scores gradually increased with every higher expected education level, going from 509 at the lowest level to 599 at the highest level. Pupils expected to complete up to the Leaving Certificate (only) achieved a statistically significantly lower mean score (509) than the rest of their peers except for those expected to complete a PLC course or apprenticeship (525).

Figure 3.10: Percentages and mean achievement of pupils in Ireland by parental educational expectations for pupils, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.36.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.18 shows the mean achievement on each of the reading purpose and comprehension process subscales for pupils expected to reach the various education levels in Ireland. Reflecting the patterns noted for overall reading achievement, pupils who were expected to complete up to the Leaving Certificate (only) tended to achieve statistically significantly lower scores across all four subscales compared to their peers who were expected to complete a postgraduate degree. This difference was slightly larger for the Informational subscale compared to the rest of the subscales.

Table 3.18: Mean achievement on reading **purpose** and **process** subscales of pupils in Ireland, by parental educational expectations for pupils (2021)

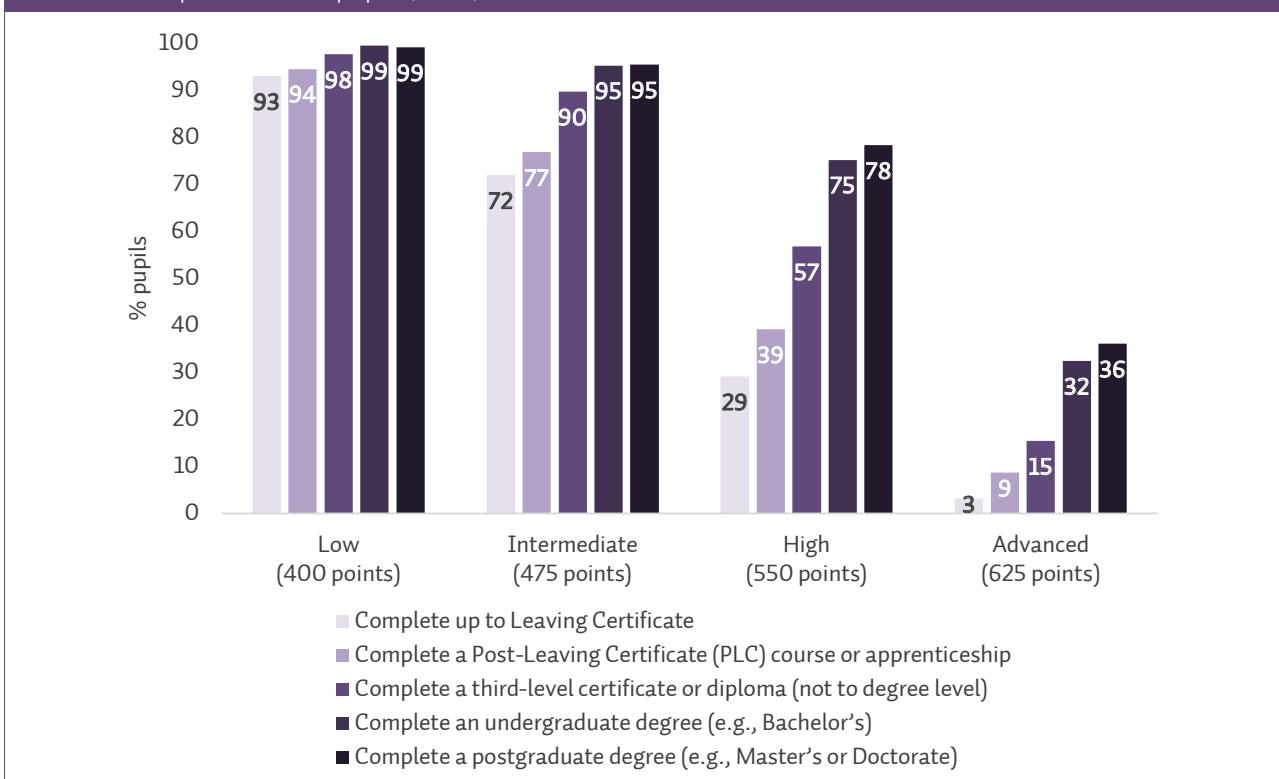
	Complete up to Leaving Certificate	Complete a Post-Leaving Certificate (PLC) course or apprenticeship	Complete a third-level certificate or diploma (not to degree level)	Complete an undergraduate degree (e.g., Bachelor's)	Complete a postgraduate degree (e.g., Master's or Doctorate)	Mean difference between complete up to Leaving Certificate and complete a postgraduate degree (e.g., Master's or Doctorate)
<b>Literary</b>	515	530	568	598	604	<b>+89</b>
<b>Informational</b>	502	521	554	590	596	<b>+94</b>
<b>Retrieve/Infer</b>	505	524	554	586	591	<b>+86</b>
<b>Interpret/Evaluate</b>	513	526	565	597	602	<b>+89</b>

Source: Appendix Table A3.36.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by parents' expectation of pupil education level are shown in Figure 3.11. While percentage differences between the *complete up to Leaving Certificate* and the *complete a Post-Leaving Certificate (PLC) course or apprenticeship* were not statistically significant across any of the benchmarks, percentage differences between the *complete up to Leaving Certificate* and the *complete a third-level certificate or diploma (not to degree level)*, *complete an undergraduate degree* (e.g., *Bachelor's*), and *complete a postgraduate degree* (e.g., *Master's or Doctorate*) categories were statistically significant across all benchmarks except for the Low Benchmark, with the *complete up to Leaving Certificate* category tending to have a disadvantage compared to the rest.

Figure 3.11: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by parental educational expectations for pupils (2021)



Source: Appendix Table A3.37.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils' parents about the highest education level they expect their child to complete. Although percentages of pupils who were expected to *complete up to Leaving Certificate* and *complete a Post-Leaving Certificate (PLC) course or apprenticeship* remained relatively stable across years, percentages of pupils who were expected to *complete a third-level certificate or diploma (not to degree level)* and *complete an undergraduate degree* (e.g., *Bachelor's*) slightly decreased, and percentages of pupils who were expected to *complete a postgraduate degree* (e.g., *Master's or Doctorate*) increased (mostly between 2011 and 2016). Mean differences for overall reading achievement and across the four subscales between the *complete up to Leaving Certificate* and the *complete a postgraduate degree* (e.g., *Master's or Doctorate*) categories, favouring the latter, were statistically significant and similar in magnitude across all three PIRLS cycles, ranging between 86 and 93 points in 2011, 83 and 95 points in 2016, and 86 and 94 points in 2021 (Table 3.19).

Table 3.19: Percentages and mean reading achievement of pupils in Ireland, by parental educational expectations for pupils (2011, 2016, 2021)

	Complete up to Leaving Certificate		Complete a Post-Leaving Certificate (PLC) course or apprenticeship		Complete a third-level certificate or diploma (not to degree level)		Complete an undergraduate degree (e.g., Bachelor's)		Complete a postgraduate degree (e.g., Master's or Doctorate)		Mean difference between complete up to Leaving Certificate and complete a postgraduate degree (e.g., Master's or Doctorate)	
	%	Mean	%	Mean	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2011</b>	5	492	5	504	20	531	42	566	27	582	<b>+89</b>
	<b>2016</b>	5	501	3	497	11	536	48	575	34	591	<b>+90</b>
	<b>2021</b>	5	509	5	525	17	558	39	593	35	599	<b>+90</b>
<b>Literary</b>	<b>2011</b>	5	498	5	508	20	535	42	570	27	591	<b>+93</b>
	<b>2016</b>	5	511	3	515	11	541	48	580	34	594	<b>+83</b>
	<b>2021</b>	5	515	5	530	17	568	39	598	35	604	<b>+89</b>
<b>Informational</b>	<b>2011</b>	5	492	5	501	20	530	42	563	27	578	<b>+86</b>
	<b>2016</b>	5	495	3	482	11	534	48	574	34	590	<b>+95</b>
	<b>2021</b>	5	502	5	521	17	554	39	590	35	596	<b>+94</b>
<b>Retrieve/Infer</b>	<b>2011</b>	5	491	5	501	20	531	42	567	27	581	<b>+89</b>
	<b>2016</b>	5	502	3	496	11	533	48	575	34	592	<b>+90</b>
	<b>2021</b>	5	505	5	524	17	554	39	586	35	591	<b>+86</b>
<b>Interpret/Evaluate</b>	<b>2011</b>	5	497	5	505	20	532	42	567	27	586	<b>+89</b>
	<b>2016</b>	5	500	3	496	11	540	48	578	34	593	<b>+93</b>
	<b>2021</b>	5	513	5	526	17	565	39	597	35	602	<b>+89</b>

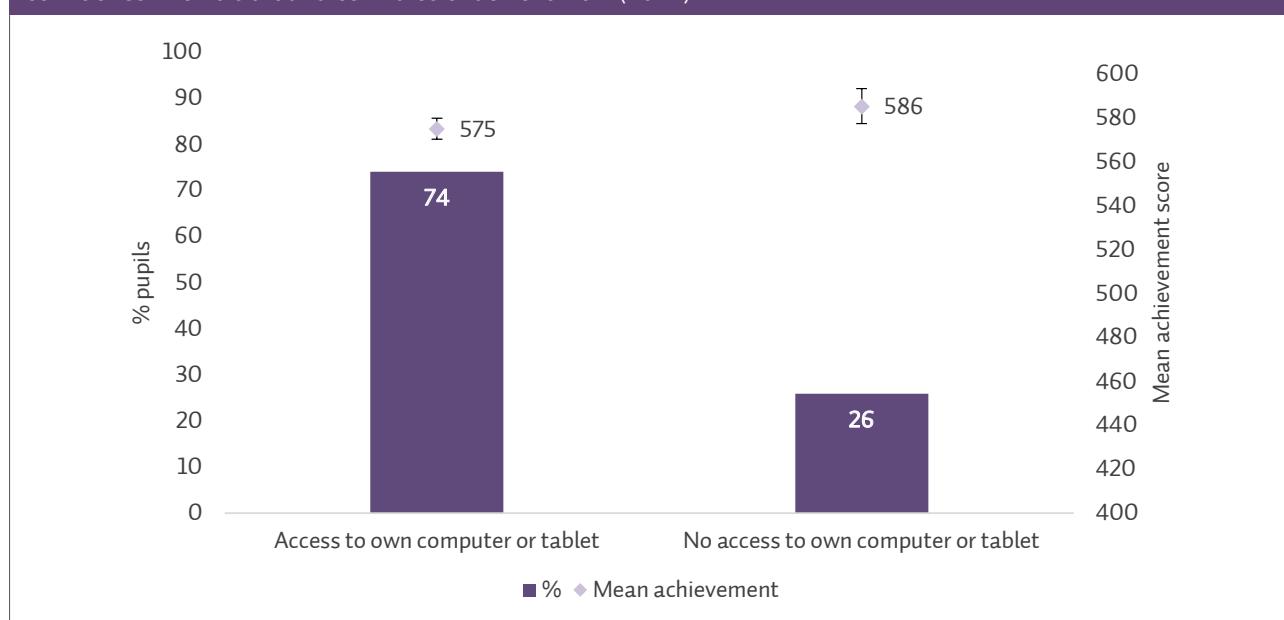
Source: Appendix Table A3.38.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. The *Complete a third-level certificate or diploma (not to degree level)* category was phrased slightly differently in 2011 and 2016, though still capturing the same education level/degree; in 2011, it was *Complete a certificate or diploma (e.g., from an Institute of Technology)* and, in 2016, it was *A third-level cert. or diploma NOT to degree level (e.g., from an Institute of Technology)*. Similarly, the *Complete an undergraduate degree (e.g., Bachelor's)* category was phrased as *Complete a degree* and *A degree* in 2011 and 2016, respectively.

## Access to own computer or tablet

Pupils were asked about whether they had their own computer or tablet at home. Figure 3.12 shows the percentages and mean achievement of pupils by whether or not they had their own computer or tablet at home in Ireland in 2021. Based on pupils' reports, approximately three out of four had their own computer or tablet, while one out of four did not. Pupils with their own computer or tablet achieved a statistically significantly lower mean score (575) than their peers without their own computer or tablet (586).

Figure 3.12: Percentages and mean achievement of pupils in Ireland by access to own computer or tablet, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.39.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.20 shows the percentages and mean achievement of pupils with *access to own computer or tablet* at home and pupils with *no access to own computer or tablet* at home in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, as in all reference countries, the majority of pupils reported having their own computer or tablet at home, with the lowest percentage noted in Finland (55%). In most of the countries, the mean achievement difference between the two groups of pupils was not statistically significant. Among the statistically significant mean differences, two (in Ireland and Hong Kong) were in favour of pupils with *no access to own computer or tablet* and two (in Lithuania and New Zealand) were in favour of pupils with *access to own computer or tablet*.

Table 3.20: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own computer or tablet (2021)

	<b>Overall mean</b>	<b>Access to own computer or tablet</b>		<b>No access to own computer or tablet</b>		<b>Mean difference between access and no access to own computer or tablet</b>	
		<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>		
<b>Start G5</b>	Ireland	577	74	575	26	586	<b>+10</b>
	Northern Ireland	566	82	565	18	573	+7
	<i>Croatia</i>	557	74	559	26	553	-6
	<i>Lithuania</i>	552	75	555	25	547	<b>-8</b>
<b>End G4</b>	Australia <i>✉</i>	540	78	541	22	542	0
	England <i>✉</i>	558	80	558	20	558	0
	Hong Kong SAR	573	68	569	32	582	<b>+13</b>
	Poland	549	81	549	19	553	+4
	<i>Finland</i>	549	55	548	45	552	+4
	<i>New Zealand</i>	521	68	530	32	512	<b>-17</b>
	<i>Singapore</i>	587	60	586	40	590	+3
	PIRLS	503	61	505	39	500	<b>-5</b>

Source: Appendix Table A3.39.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own computer or tablet were not available for the United States.

Countries in *italics* took the test on computer, while those not in *italics* took it on paper.

*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.21 and 3.22 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by whether or not they had their own computer or tablet at home in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, mean achievement differences between pupils with and without their own computer or tablet were statistically significant for the Informational and Retrieve/Infer subscales, but not for the other two subscales. Reflecting the patterns noted for overall reading achievement, the magnitude and direction of mean achievement differences between the two groups of pupils varied across countries.

Table 3.21: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own computer or tablet (2021)

		Literary		Mean difference between access and no access to own computer or tablet	Informational		Mean difference between access and no access to own computer or tablet
		Access to own computer or tablet	No access to own computer or tablet		Access to own computer or tablet	No access to own computer or tablet	
Start G5	Ireland	583	589	+6	572	582	<b>+10</b>
	Northern Ireland	572	581	+9	561	567	+5
	Croatia	568	566	-2	555	548	-7
	Lithuania	555	547	<b>-8</b>	556	546	<b>-9</b>
End G4	Australia ✕	545	544	-1	540	541	+1
	England ✕	559	559	0	560	559	-1
	Hong Kong SAR	560	575	<b>+15</b>	579	592	<b>+14</b>
	Poland	552	556	+4	548	552	+4
	Finland	545	550	+5	549	553	<b>+5</b>
	New Zealand	532	514	<b>-18</b>	529	511	<b>-18</b>
	Singapore	592	593	+1	586	589	+3
PIRLS		506	501	<b>-5</b>	505	499	<b>-6</b>

Source: Appendix Tables A3.40 and A3.41.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own computer or tablet were not available for the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.22: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own computer or tablet (2021)

		Retrieve/Infer		Interpret/Evaluate			
		Access to own computer or tablet	No access to own computer or tablet	Mean difference between access and no access to own computer or tablet	Access to own computer or tablet	No access to own computer or tablet	Mean difference between access and no access to own computer or tablet
Start G5	Ireland	569	580	<b>+10</b>	581	588	+7
	Northern Ireland	557	563	+5	573	579	+6
	Croatia	555	547	-8	563	559	-4
	Lithuania	557	549	-8	554	544	<b>-9</b>
End G4	Australia ↗	535	534	-1	548	548	0
	England ↗	555	557	+2	562	560	-3
	Hong Kong SAR	574	585	<b>+10</b>	568	584	<b>+16</b>
	Poland	545	550	+5	553	554	+2
	<i>Finland</i>	548	552	+4	548	552	+4
	<i>New Zealand</i>	529	512	<b>-16</b>	531	512	<b>-20</b>
	<i>Singapore</i>	583	586	+3	591	592	+1
PIRLS		505	500	<b>-5</b>	506	499	<b>-6</b>

Source: Appendix Tables A3.42 and A3.43.

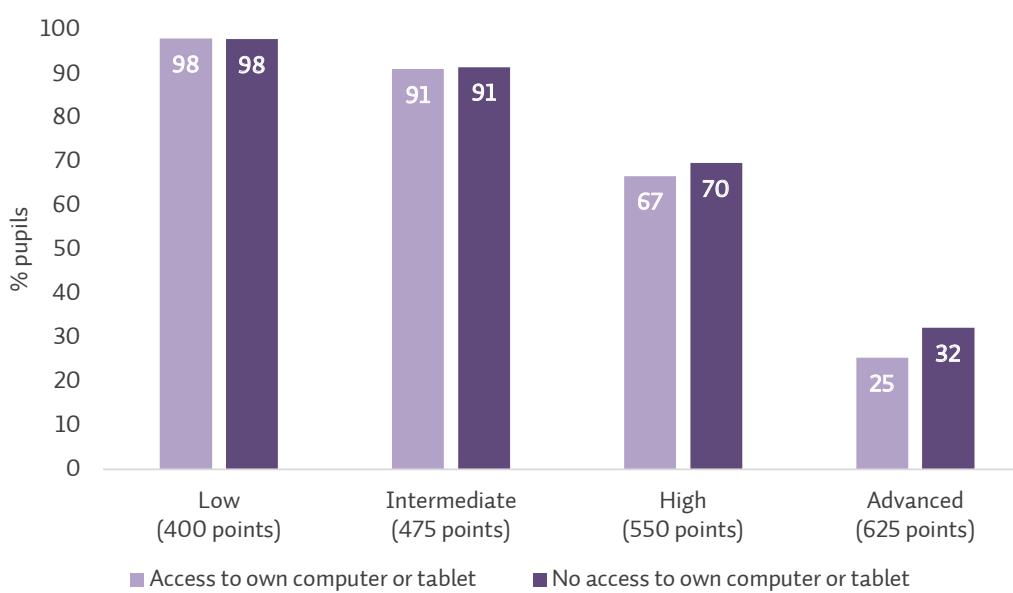
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own computer or tablet were not available for the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by whether or not they had their own computer or tablet at home are shown in Figure 3.13. Percentages of pupils reaching the Low and Intermediate Benchmarks were identical between the two groups of pupils. At the High Benchmark, there was a difference of three percentage points, which was not statistically significant, while at the Advanced Benchmark, the difference of seven percentage points (25% vs 32%), favouring pupils without their own computer or tablet, was statistically significant.

Figure 3.13: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by access to own computer or tablet (2021)



Source: Appendix Table A3.44.

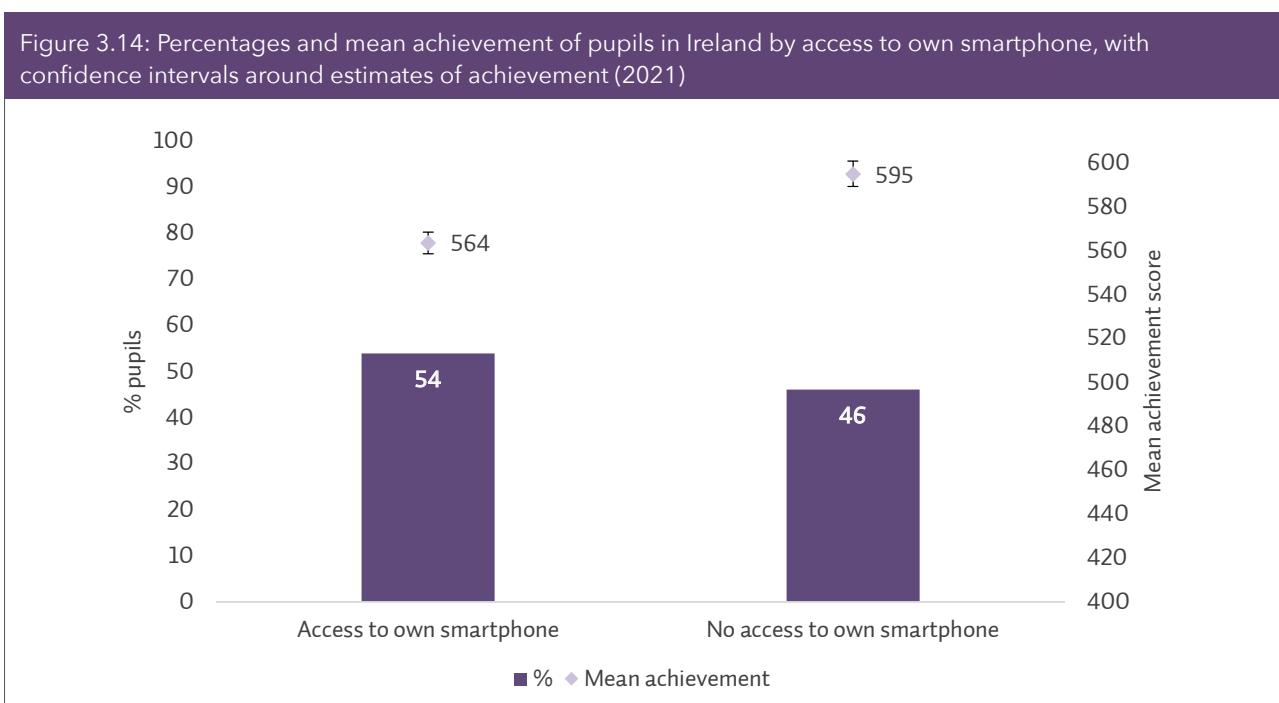
Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

In previous PIRLS cycles, pupils were asked about their access to a computer at home (in 2011) or access to a computer or tablet at home (in 2016), but not specifically about access to *their own* computer/tablet. This means that pupils with access to a shared computer/tablet at home would have said yes to these questions in 2011 and 2016, while in 2021, access to a shared computer/tablet was captured through a separate question. Hence, comparisons of the 2021 data to previous cycles can be misleading and are not reported here.

### Access to own smartphone

Pupils were asked about whether they had their own smartphone at home. Figure 3.14 shows the percentages and mean achievement of pupils by whether or not they had their own smartphone in Ireland in 2021. More than half of pupils reported having their own smartphone. Pupils who had their own smartphone achieved a statistically significantly lower mean score (564) than their peers who did not have their own smartphone (595), a difference approaching one-third of a standard deviation.

Figure 3.14: Percentages and mean achievement of pupils in Ireland by access to own smartphone, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.45.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.23 shows the percentages and mean achievement of pupils with *access to own smartphone* and pupils with *no access to own smartphone* in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The proportions of pupils owning a smartphone varied across the reference countries (with percentages ranging from 34% in Australia to 98% in Finland) as did the magnitude and direction of mean achievement differences between the two groups of pupils. The mean difference between the two groups of pupils was statistically significant for each of the countries, but in seven countries (including Ireland) this difference was in favour of pupils who did not have their own smartphone and in three countries the difference was in favour of pupils who had their own smartphone.

Table 3.23: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own smartphone (2021)

		<b>Overall mean</b>	<b>Access to own smartphone</b>		<b>No access to own smartphone</b>		<b>Mean difference between access and no access to own smartphone</b>
			<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	
<b>Start G5</b>	Ireland	577	54	564	46	595	<b>+32</b>
	Northern Ireland	566	65	558	35	583	<b>+25</b>
	<i>Croatia</i>	557	92	561	8	517	<b>-44</b>
	<i>Lithuania</i>	552	96	555	4	500	<b>-55</b>
<b>End G4</b>	Australia <i>✉</i>	540	34	525	66	550	<b>+25</b>
	England <i>✉</i>	558	62	552	38	567	<b>+15</b>
	Hong Kong SAR	573	61	565	39	586	<b>+21</b>
	Poland	549	93	551	7	532	<b>-18</b>
	<i>Finland</i>	549	98	551	2	~	~
	<i>New Zealand</i>	521	36	512	64	531	<b>+19</b>
	<i>Singapore</i>	587	61	581	39	597	<b>+15</b>
PIRLS		503	64	502	36	497	<b>-5</b>

Source: Appendix Table A3.45.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own smartphone were not available for the United States.

Countries in *italics* took the test on computer, while those not in *italics* took it on paper.

*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

Tables 3.24 and 3.25 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by whether or not they had their own smartphone in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, mean differences were similar in magnitude across the four subscales. Reflecting the patterns noted for overall reading achievement, the magnitude and direction of mean achievement differences between the two groups of pupils varied across countries.

Table 3.24: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own smartphone (2021)

		Literary		Mean difference between access and no access to own smartphone	Informational		Mean difference between access and no access to own smartphone
		Access to own smartphone	No access to own smartphone		Access to own smartphone	No access to own smartphone	
	Ireland	570	602	<b>+32</b>	559	593	<b>+34</b>
<b>Start G5</b>	Northern Ireland	565	589	<b>+24</b>	553	580	<b>+27</b>
	<i>Croatia</i>	572	520	<b>-52</b>	557	513	<b>-44</b>
	<i>Lithuania</i>	555	504	<b>-51</b>	556	496	<b>-59</b>
<b>End G4</b>	Australia ✎	528	553	<b>+25</b>	525	548	<b>+24</b>
	England ✎	553	567	<b>+14</b>	553	571	<b>+18</b>
	Hong Kong SAR	556	578	<b>+22</b>	575	595	<b>+21</b>
	Poland	554	535	<b>-19</b>	550	528	<b>-22</b>
	<i>Finland</i>	549	~	~	553	~	~
	New Zealand	515	532	<b>+17</b>	510	531	<b>+21</b>
	<i>Singapore</i>	587	600	<b>+13</b>	581	596	<b>+16</b>
	PIRLS	503	497	<b>-6</b>	501	497	<b>-4</b>

Source: Appendix Tables A3.46 and A3.47.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own smartphone were not available for the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

Table 3.25: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by access to own smartphone (2021)

		Retrieve/Infer		Mean difference between access and no access to own smartphone	Interpret/Evaluate		Mean difference between access and no access to own smartphone
		Access to own smartphone	No access to own smartphone		Access to own smartphone	No access to own smartphone	
	Ireland	558	588	<b>+30</b>	569	599	<b>+30</b>
<b>Start G5</b>	Northern Ireland	549	576	<b>+26</b>	566	590	<b>+24</b>
	<i>Croatia</i>	557	512	<b>-45</b>	565	522	<b>-43</b>
	<i>Lithuania</i>	558	500	<b>-57</b>	554	502	<b>-52</b>
<b>End G4</b>	Australia $\bowtie$	518	544	<b>+26</b>	532	557	<b>+24</b>
	England $\bowtie$	549	565	<b>+16</b>	556	571	<b>+16</b>
	Hong Kong SAR	569	591	<b>+21</b>	564	586	<b>+22</b>
	Poland	547	530	<b>-17</b>	554	535	<b>-20</b>
	<i>Finland</i>	552	~	~	551	~	~
	New Zealand	510	530	<b>+20</b>	512	532	<b>+19</b>
	<i>Singapore</i>	578	593	<b>+15</b>	585	600	<b>+15</b>
	PIRLS	502	496	<b>-5</b>	502	497	<b>-5</b>

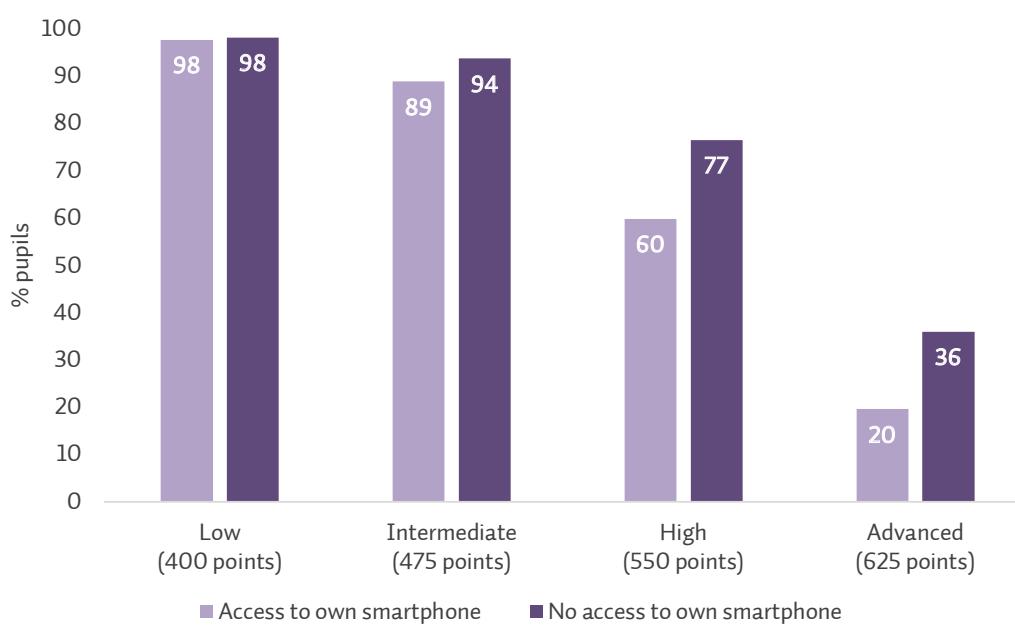
Source: Appendix Tables A3.48 and A3.49.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on access to own smartphone were not available for the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper. $\bowtie$  Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by whether or not they had their own smartphone are shown in Figure 3.15. Percentages of pupils reaching the Low Benchmark were identical between the two groups of pupils. At the Intermediate Benchmark, there was a statistically significant difference of five percentage points, favouring pupils who did not have their own smartphone. Percentage differences increased in magnitude at the High and Advanced Benchmarks, going up to 17 and 16 points, respectively, again, favouring those pupils who did not have their own smartphone.

Figure 3.15: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by access to own smartphone (2021)



Source: Appendix Table A3.50.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils about whether they owned a smartphone. However, in 2011, pupils were asked about whether they owned an iPhone rather than a smartphone more generally. This means that it is likely that pupils owning a smartphone other than an iPhone responded *no* to this question in 2011, and this needs to be considered in the interpretation of the data in Table 3.26. Notably, percentages of pupils reporting that they own a smartphone were identical in 2016 and 2021. Across all three cycles, pupils who reported owning a smartphone achieved statistically significantly lower scores than their peers who reported not owning one (Table 3.26).

Table 3.26: Percentages and mean reading achievement of pupils in Ireland, by access to own smartphone (2011, 2016, 2021)

		Access to own smartphone		No access to own smartphone		Mean difference between access and no access to own smartphone
		%	Mean	%	Mean	
<b>Overall</b>	<b>2011</b>	13	506	87	559	<b>+53</b>
	<b>2016</b>	54	553	46	583	<b>+29</b>
	<b>2021</b>	54	564	46	595	<b>+32</b>
<b>Literary</b>	<b>2011</b>	13	507	87	565	<b>+58</b>
	<b>2016</b>	54	560	46	585	<b>+26</b>
	<b>2021</b>	54	570	46	602	<b>+32</b>
<b>Informational</b>	<b>2011</b>	13	506	87	556	<b>+50</b>
	<b>2016</b>	54	551	46	582	<b>+31</b>
	<b>2021</b>	54	559	46	593	<b>+34</b>
<b>Retrieve/Infer</b>	<b>2011</b>	13	505	87	559	<b>+54</b>
	<b>2016</b>	54	553	46	582	<b>+30</b>
	<b>2021</b>	54	558	46	588	<b>+30</b>
<b>Interpret/Evaluate</b>	<b>2011</b>	13	508	87	561	<b>+53</b>
	<b>2016</b>	54	556	46	585	<b>+29</b>
	<b>2021</b>	54	569	46	599	<b>+30</b>

Source: Appendix Table A3.51.

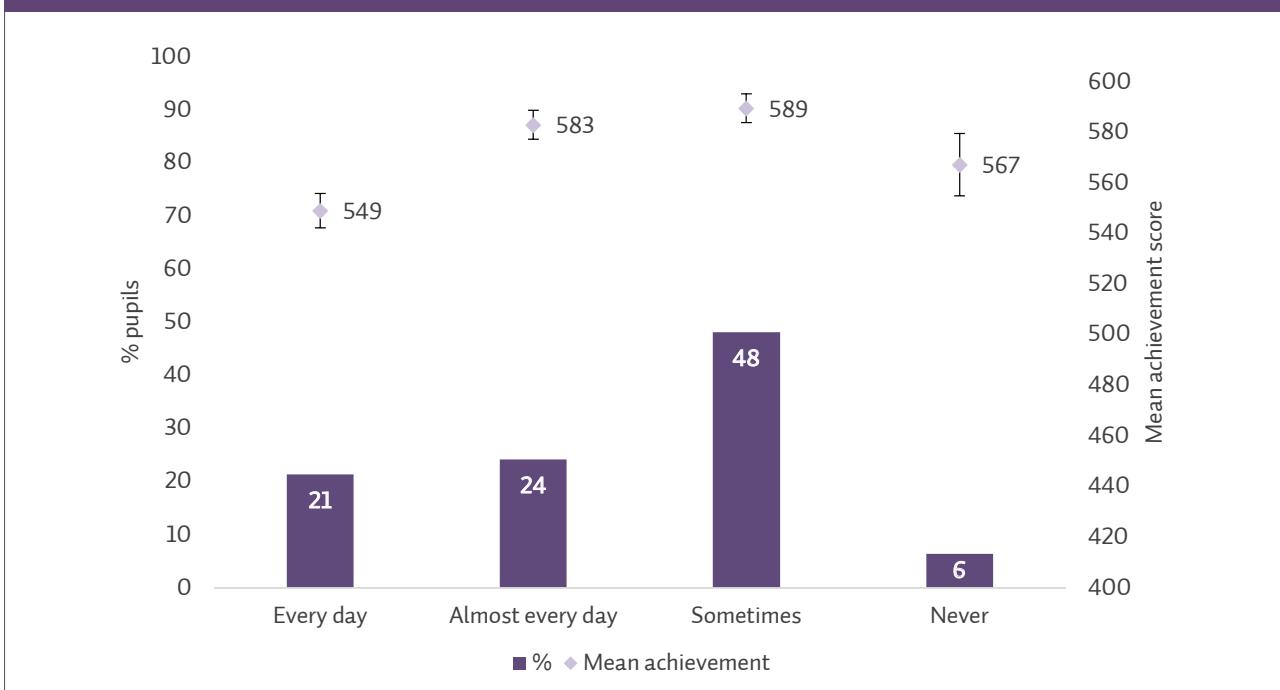
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. The differences in the percentages of pupils in each category and the corresponding mean differences across cycles should be interpreted considering that in 2011 pupils were asked about access to their own iPhone at home, while in 2016 and 2021, they were asked about access to their own smartphone at home. This means that pupils owning smartphones other than an iPhone might be included in the no access to own smartphone for 2011.

## Wellbeing

### Feeling tired upon arrival at school

Pupils were asked about the frequency with which they felt tired upon school arrival, with response options ranging from *every day* to *never*. Figure 3.16 shows the percentages and mean achievement of pupils who arrived at school tired *every day*, *almost every day*, *sometimes*, and *never* in Ireland in 2021. As mentioned in the PIRLS 2021 national report for Ireland by Delaney et al. (2023), approximately half of pupils (48%) reported that they *sometimes* felt tired when they arrived at school, 24% and 21% that they felt that way *almost every day* and *every day*, respectively, and 6% that they *never* felt that way. Pupils who reported feeling tired when they arrived at school *every day* achieved the lowest mean score (549), which was statistically significantly lower than the scores of the rest of their peers.

Figure 3.16: Percentages and mean achievement of pupils in Ireland by frequency of feeling tired upon arriving at school, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.52.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.27 shows the percentages and mean achievement of pupils by the frequency with which they felt tired upon school arrival in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Although within each of the countries, including Ireland, the highest concentration of pupils was noted in the *sometimes* category, the frequency with which pupils felt tired upon school arrival varied to some extent across the reference countries. The highest percentage of pupils feeling tired upon school arrival *every day* was noted in New Zealand (30%), and the lowest was noted in Finland (12%). Notably, these two countries had the lowest percentages of pupils (5%, respectively) reporting *never* feeling tired upon school arrival. While, in most countries, achievement was highest for pupils reporting *sometimes* feeling tired, the achievement of the two most extreme categories (*every day* and *never*) is compared in Table 3.27. Mean differences across all countries were in favour of the *never* category, but in four countries this difference was not statistically significant.

Table 3.27: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling tired upon arriving at school (2021)

		<b>Overall mean</b>	<b>Every day</b>		<b>Almost every day</b>		<b>Sometimes</b>		<b>Never</b>		<b>Mean difference between every day and never</b>
			%	Mean	%	Mean	%	Mean	%	Mean	
	Ireland	577	21	549	24	583	48	589	6	567	<b>+18</b>
<b>Start G5</b>	Northern Ireland	566	26	543	24	574	45	578	6	559	+16
	<i>Croatia</i>	557	25	546	20	562	47	561	8	561	+15
	<i>Lithuania</i>	552	23	535	27	558	44	562	7	543	+8
	Australia ✕	540	21	512	24	543	46	555	10	540	<b>+28</b>
	England ✕	558	24	533	23	563	47	570	6	557	<b>+24</b>
<b>End G4</b>	Hong Kong SAR	573	14	554	14	572	59	577	13	578	<b>+24</b>
	Poland	549	23	523	20	543	46	566	10	553	<b>+30</b>
	<i>Finland</i>	549	12	518	25	548	58	558	5	542	<b>+23</b>
	<i>New Zealand</i>	521	30	501	26	533	39	545	5	510	+9
	<i>Singapore</i>	587	27	568	21	596	43	596	9	588	<b>+19</b>
	PIRLS	503	20	480	17	506	46	516	17	503	<b>+23</b>

Source: Appendix Table A3.52.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling tired upon arriving at school were not available for Belgium (French).

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.28 and 3.29 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the frequency with which they felt tired upon school arrival in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, pupils who indicated that they felt tired upon school arrival *every day* achieved statistically significantly lower scores compared to their peers who indicated that they *never* felt tired across three of the four subscales (the mean difference on the Literary subscale was of similar magnitude to the rest of the differences, but it was not statistically significant). A similar pattern was noted in the majority of the countries.

Table 3.28: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling tired upon arriving at school (2021)

		Literary					Informational				
		Every day	Almost every day	Sometimes	Never		Every day	Almost every day	Sometimes	Never	
	Ireland	555	589	596	572	+17	546	578	587	563	+17
<b>Start G5</b>	Northern Ireland	552	583	583	567	+15	539	568	574	555	+16
	Croatia	556	574	572	564	+8	543	558	556	559	+16
	Lithuania	535	560	561	544	+10	534	558	563	543	+9
<b>End G4</b>	Australia ✎	513	548	558	542	+29	511	543	552	543	+32
	England ✎	533	564	570	559	+26	534	563	572	557	+22
	Hong Kong SAR	545	560	570	569	+25	563	586	586	588	+25
	Poland	525	549	569	555	+30	523	541	565	551	+28
	Finland	518	545	556	537	+19	518	549	559	541	+23
	New Zealand	504	535	546	509	+6	499	533	544	512	+13
	Singapore	572	602	601	588	+16	567	595	595	589	+22
	PIRLS	481	508	517	502	+22	479	505	515	503	+25

Source: Appendix Tables A3.53 and A3.54.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling tired upon arriving at school were not available for Belgium (French).Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries)

Table 3.29: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling tired upon arriving at school (2021)

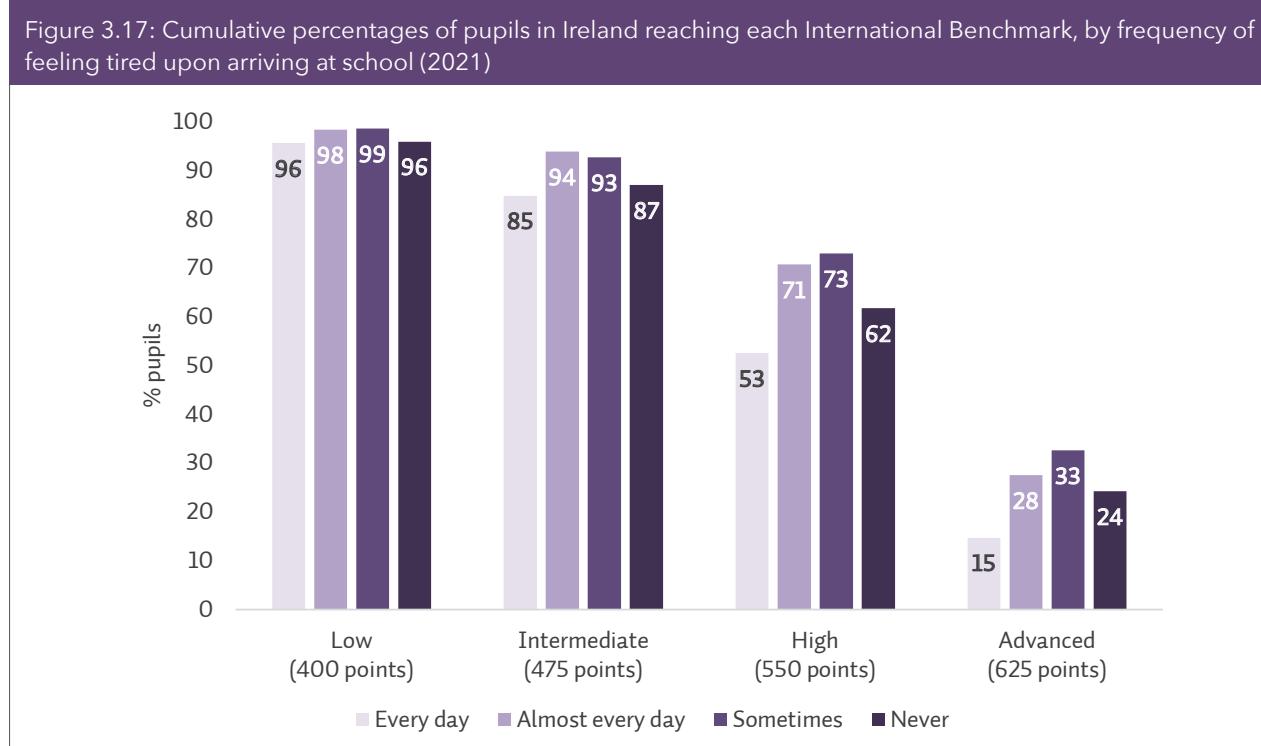
		Retrieve/Infer					Interpret/Evaluate					
		Every day	Almost every day	Sometimes	Never	Mean difference between every day and never	Every day	Almost every day	Sometimes	Never	Mean difference between every day and never	
	Ireland	544	576	583	562	<b>+18</b>	555	589	593	571	<b>+17</b>	
<b>Start G5</b>	Northern Ireland	536	567	568	554	+18	553	580	585	565	+13	
	Croatia	541	559	556	557	<b>+16</b>	553	566	565	565	+11	
	Lithuania	538	558	564	549	+11	533	559	560	538	+4	
		Australia ✎	505	539	547	533	<b>+28</b>	518	549	562	550	<b>+32</b>
		England ✎	529	560	566	560	<b>+31</b>	537	565	574	557	<b>+20</b>
<b>End G4</b>	Hong Kong SAR	555	577	581	585	<b>+30</b>	554	570	577	578	<b>+24</b>	
	Poland	521	540	561	550	<b>+29</b>	525	547	570	556	<b>+31</b>	
	Finland	518	547	560	540	<b>+22</b>	519	550	556	542	<b>+23</b>	
	New Zealand	501	532	544	509	+8	502	535	545	513	+12	
	Singapore	566	593	592	584	<b>+18</b>	573	599	600	592	<b>+18</b>	
	PIRLS	479	505	515	503	<b>+24</b>	480	507	516	503	<b>+23</b>	

Source: Appendix Tables A3.55 and A3.56.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling tired upon arriving at school were not available for Belgium (French).Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which they felt tired upon school arrival are shown in Figure 3.17. Notably, pupils in the *every day* category had a statistically significant disadvantage compared to their peers in the *almost every day* and *sometimes* categories across all four benchmarks, with this disadvantage ranging between two percentage points at the Low Benchmark and 20 percentage points at the High Benchmark. The percentages of pupils reaching each of the benchmarks did not statistically significantly differ, though, between the *every day* and *never* categories.



Source: Appendix Table A3.57.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The question related to pupil tiredness upon school arrival was included in the 2016 but not in the 2011 pupil questionnaire. The percentage of pupils feeling tired *every day* or *almost every day* increased between 2016 and 2021 by more than 10 percentage points (33% vs 46%) and, accordingly, the percentage of pupils *sometimes* or *never* feeling tired decreased (67% vs 54%). Mean achievement differences between pupils who reported feeling tired upon school arrival *every day* and those who reported *never* or *sometimes* feeling this way narrowed between 2016 and 2021 by more than 10 points and up to nine points, on average, respectively, across both overall reading achievement and all subscales (Table 3.30).

Table 3.30: Percentages and mean reading achievement of pupils in Ireland, by frequency of feeling tired upon arriving at school (2016, 2021)

	Every day		Almost every day		Sometimes		Never		Mean difference between every day and never	
	%	Mean	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2016</b>	16	531	17	574	55	577	12	560	<b>+29</b>
	<b>2021</b>	21	549	24	583	48	589	6	567	<b>+18</b>
<b>Literary</b>	<b>2016</b>	16	535	17	581	55	581	12	567	<b>+33</b>
	<b>2021</b>	21	555	24	589	48	596	6	572	+17
<b>Informational</b>	<b>2016</b>	16	528	17	572	55	576	12	556	<b>+28</b>
	<b>2021</b>	21	546	24	578	48	587	6	563	<b>+17</b>
<b>Retrieve/Infer</b>	<b>2016</b>	16	531	17	574	55	577	12	559	<b>+28</b>
	<b>2021</b>	21	544	24	576	48	583	6	562	<b>+18</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	16	533	17	577	55	580	12	564	<b>+31</b>
	<b>2021</b>	21	555	24	589	48	593	6	571	<b>+17</b>

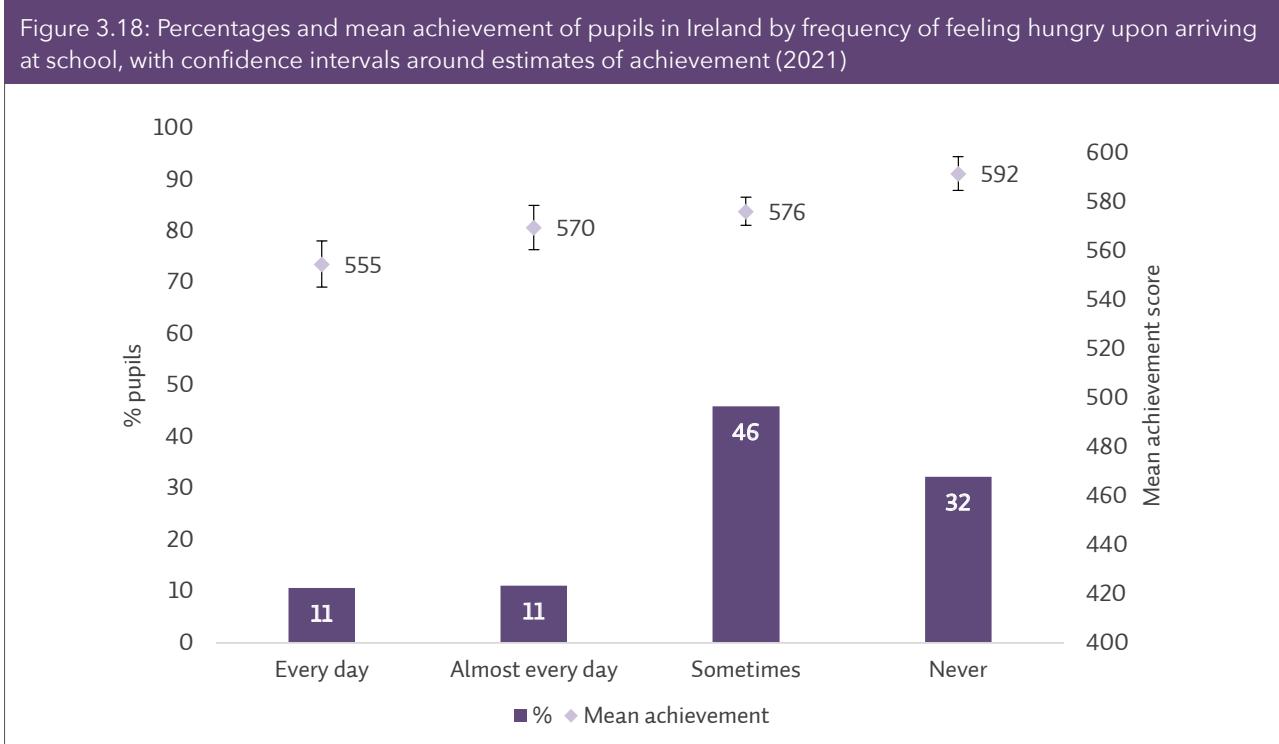
Source: Appendix Table A3.58.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. The question about the frequency of pupils feeling tired upon arriving at school was introduced in PIRLS 2016, so there are no available data for PIRLS 2011.

### Feeling hungry upon arrival at school

Pupils were asked about the frequency with which they felt hungry upon school arrival, with response options ranging from *every day* to *never*. Figure 3.18 shows the percentages and mean achievement of pupils who arrived at school hungry *every day*, *almost every day*, *sometimes*, and *never* in Ireland in 2021. Approximately half of pupils (46%) reported that they *sometimes* felt hungry when they arrived at school, 11% that they felt that way *almost every day* and *every day*, respectively, and 32% that they *never* felt that way. Pupils who reported feeling hungry when they arrived at school *every day* achieved the lowest mean score (555), which was statistically significantly lower than the scores of their peers in the *sometimes* and *never* categories.

Figure 3.18: Percentages and mean achievement of pupils in Ireland by frequency of feeling hungry upon arriving at school, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.59.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.31 shows the percentages and mean achievement of pupils by the frequency with which they felt hungry upon school arrival in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Although within each of the countries, including Ireland, the highest concentration of pupils was noted in the *sometimes* category (with only one exception - Poland - having the highest concentration in the *never* category), the frequency with which pupils felt hungry upon school arrival varied to some extent across the reference countries. The highest percentage of pupils feeling hungry upon school arrival *every day* was noted in New Zealand (28%), and the lowest was noted in Ireland and Finland (11%). Croatia had the lowest percentage of pupils (14%) reporting *never* feeling hungry upon school arrival. Mean achievement differences between the *every day* and *never* categories, going up to 55 points and all in favour of the *never* category, were statistically significant across all countries except for Hong Kong.

Table 3.31: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling hungry upon arriving at school (2021)

		<b>Overall mean</b>	<b>Every day</b>		<b>Almost every day</b>		<b>Sometimes</b>		<b>Never</b>		<b>Mean difference between every day and never</b>
			%	Mean	%	Mean	%	Mean	%	Mean	
	Ireland	577	11	555	11	570	46	576	32	592	<b>+37</b>
<b>Start G5</b>	Northern Ireland	566	19	544	13	554	42	570	26	586	<b>+41</b>
	<i>Croatia</i>	557	25	542	19	554	41	568	14	562	<b>+19</b>
	<i>Lithuania</i>	552	18	540	19	550	43	558	20	567	<b>+26</b>
<b>End G4</b>	Australia ✕	540	20	510	14	538	43	550	23	558	<b>+48</b>
	England ✕	558	19	535	15	553	41	562	25	577	<b>+42</b>
	Hong Kong SAR	573	21	564	18	577	45	578	17	570	+6
	Poland	549	13	519	9	538	35	550	42	568	<b>+49</b>
	<i>Finland</i>	549	11	521	17	538	51	556	21	568	<b>+47</b>
	<i>New Zealand</i>	521	28	499	16	515	37	540	20	554	<b>+55</b>
	<i>Singapore</i>	587	19	558	14	575	41	593	26	612	<b>+54</b>
PIRLS		503	21	486	14	500	39	513	26	518	<b>+33</b>

Source: Appendix Table A3.59.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling hungry upon arriving at school were not available for Belgium (French).

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.32 and 3.33 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the frequency with which they felt hungry upon school arrival in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, across all subscales, pupils who indicated that they felt hungry upon school arrival *every day* achieved statistically significantly lower scores compared to their peers who indicated that they *never* felt hungry, and the magnitude of these differences was similar across the subscales. A similar pattern was noted in all countries except for Hong Kong, where the mean achievement differences between the two groups of pupils were not statistically significant on any subscale.

Table 3.32: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling hungry upon arriving at school (2021)

		Literary					Informational				
		Every day	Almost every day	Sometimes	Never		Every day	Almost every day	Sometimes	Never	
<b>Start G5</b>	Ireland	559	576	584	597	<b>+38</b>	553	564	573	588	<b>+36</b>
	Northern Ireland	555	563	577	591	<b>+36</b>	539	552	566	582	<b>+42</b>
	Croatia	557	563	577	572	<b>+15</b>	538	549	564	558	<b>+20</b>
	Lithuania	544	551	556	567	<b>+23</b>	539	552	559	566	<b>+26</b>
<b>End G4</b>	Australia ✕	515	541	553	561	<b>+46</b>	509	537	549	557	<b>+48</b>
	England ✕	536	553	562	578	<b>+43</b>	533	556	564	580	<b>+48</b>
	Hong Kong SAR	556	566	569	563	+7	574	589	586	579	+6
	Poland	523	542	553	570	<b>+48</b>	516	534	550	567	<b>+51</b>
	Finland	525	535	553	565	<b>+40</b>	519	540	557	570	<b>+51</b>
	New Zealand	501	517	544	551	<b>+50</b>	497	513	540	553	<b>+56</b>
	Singapore	563	580	598	614	<b>+52</b>	556	573	592	613	<b>+57</b>
	PIRLS	487	502	514	519	<b>+32</b>	485	499	513	518	<b>+33</b>

Source: Appendix Tables A3.60 and A3.61.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling hungry upon arriving at school were not available for Belgium (French).Countries in *italics* took the test on computer, while those not in italics took it on paper.

✕ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.33: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of feeling hungry upon arriving at school (2021)

		Retrieve/Infer					Interpret/Evaluate				
		Every day	Almost every day	Sometimes	Never	Mean difference between every day and never	Every day	Almost every day	Sometimes	Never	Mean difference between every day and never
<b>Start G5</b>	Ireland	549	566	571	584	<b>+35</b>	560	573	581	596	<b>+36</b>
	Northern Ireland	537	546	562	577	<b>+40</b>	554	564	577	593	<b>+39</b>
	Croatia	539	550	564	557	<b>+18</b>	549	558	571	569	<b>+20</b>
	Lithuania	540	553	560	570	<b>+29</b>	540	550	556	564	<b>+23</b>
<b>End G4</b>	Australia ✕	505	529	544	550	<b>+46</b>	516	546	556	567	<b>+51</b>
	England ✕	531	545	561	574	<b>+43</b>	538	557	565	582	<b>+43</b>
	Hong Kong SAR	565	583	582	577	+11	566	575	576	570	+3
	Poland	516	538	548	562	<b>+47</b>	522	539	554	571	<b>+50</b>
	Finland	520	537	557	570	<b>+50</b>	519	540	555	566	<b>+47</b>
	New Zealand	499	515	539	551	<b>+52</b>	497	514	542	557	<b>+60</b>
	Singapore	555	571	590	608	<b>+53</b>	562	579	596	616	<b>+54</b>
PIRLS		485	500	513	518	<b>+32</b>	486	501	513	518	<b>+33</b>

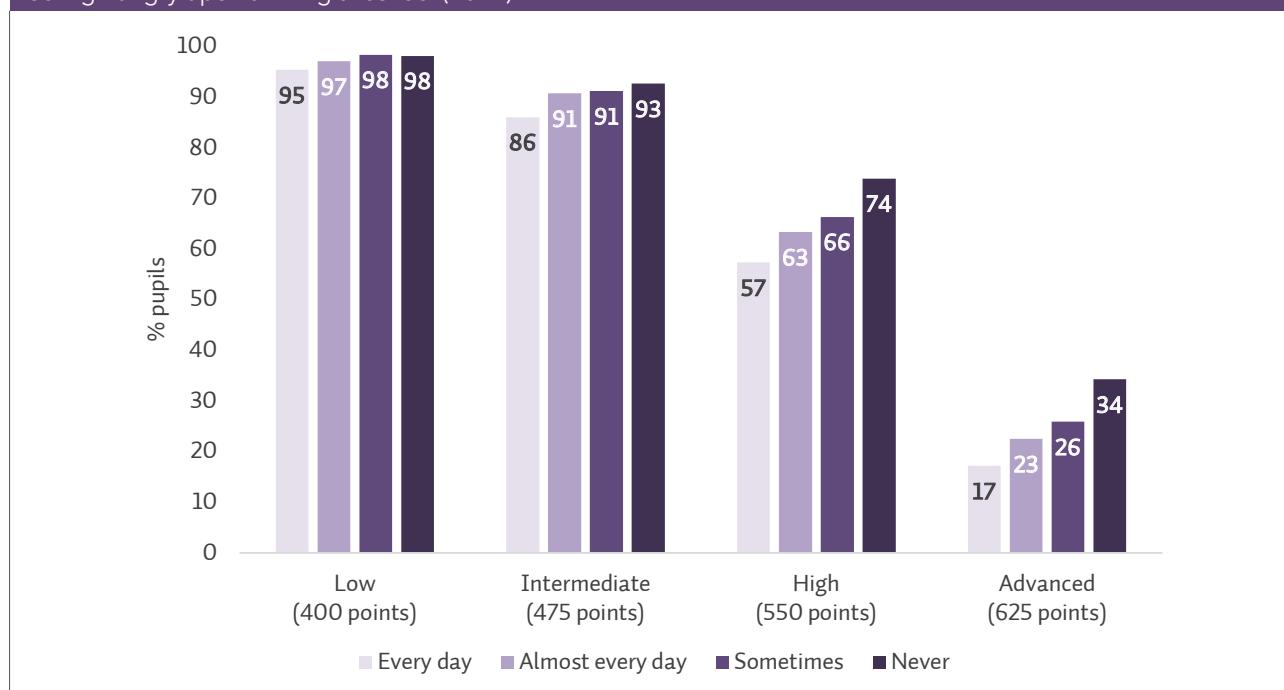
Source: Appendix Tables A3.62 and A3.63.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 56 rather than 57 countries as data on frequency of feeling hungry upon arriving at school were not available for Belgium (French).Countries in *italics* took the test on computer, while those not in italics took it on paper.

✕ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which they felt hungry upon school arrival are shown in Figure 3.19. Pupils in the *every day* category had a statistically significant disadvantage compared to their peers in the *never* category across the Intermediate, High, and Advanced Benchmarks, with this disadvantage ranging between seven percentage points at the Intermediate Benchmark and 17 percentage points at both the High and Advanced Benchmarks. Percentage differences with the *almost every day* and *sometimes* categories were less pronounced.

Figure 3.19: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by frequency of feeling hungry upon arriving at school (2021)



Source: Appendix Table A3.64.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The question related to pupil hunger upon school arrival was included in the 2016 but not in the 2011 pupil questionnaire. The percentage of pupils feeling hungry *every day*, *almost every day*, or *sometimes* increased between 2016 and 2021 by almost 10 percentage points (59% vs 68%) and, accordingly, the percentage of pupils *never* feeling hungry decreased (41% vs 32%). Mean achievement differences between pupils who reported feeling hungry upon school arrival *every day* and those who reported *never* feeling this way narrowed between 2016 and 2021 across both overall reading achievement and all subscales by approximately 20 points, on average (Table 3.34).

Table 3.34: Percentages and mean reading achievement of pupils in Ireland, by frequency of feeling hungry upon arriving at school (2016, 2021)

	Every day		Almost every day		Sometimes		Never		Mean difference between every day and never	
	%	Mean	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2016</b>	9	529	8	557	42	565	41	584	<b>+56</b>
	<b>2021</b>	11	555	11	570	46	576	32	592	<b>+37</b>
<b>Literary</b>	<b>2016</b>	9	535	8	560	42	570	41	589	<b>+54</b>
	<b>2021</b>	11	559	11	576	46	584	32	597	<b>+38</b>
<b>Informational</b>	<b>2016</b>	9	524	8	558	42	563	41	583	<b>+59</b>
	<b>2021</b>	11	553	11	564	46	573	32	588	<b>+36</b>
<b>Retrieve/Infer</b>	<b>2016</b>	9	529	8	554	42	564	41	585	<b>+56</b>
	<b>2021</b>	11	549	11	566	46	571	32	584	<b>+35</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	9	532	8	559	42	568	41	586	<b>+55</b>
	<b>2021</b>	11	560	11	573	46	581	32	596	<b>+36</b>

Source: Appendix Table A3.65.

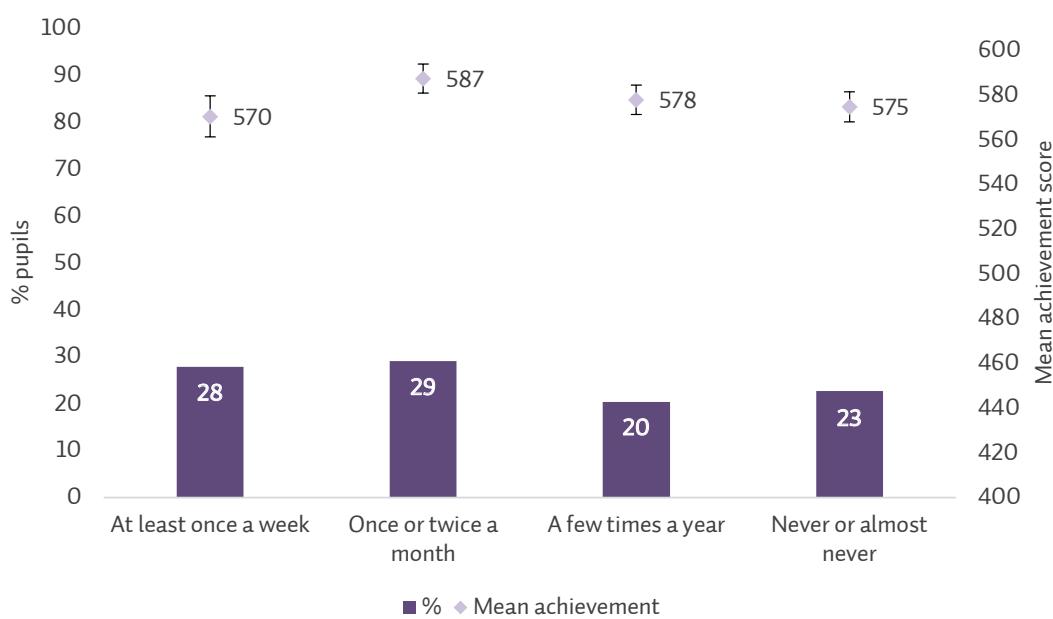
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. The question about the frequency of pupils feeling hungry upon arriving at school was introduced in PIRLS 2016, so there are no available data for PIRLS 2011.

## Reading behaviours

### Book borrowing from school/local library

Pupils were asked about the frequency with which they borrowed books or e-books from their school or local library, with response options ranging from *at least once a week* to *never or almost never*. Figure 3.20 shows the percentages and mean achievement of pupils who borrowed books or e-books from their school or local library *at least once a week, once or twice a month, a few times a year, and never or almost never* in Ireland in 2021. Approximately one-third of pupils, respectively, reported that they borrowed books or e-books from their school or local library *at least once a week or once or twice a month*, 20% that they did so *a few times a year*, and 23% that they *never or almost never* did so. Pupils who borrowed books or e-books from their school or local library *once or twice a month* achieved the highest mean score (587), which was statistically significantly higher than the score of those who borrowed books or e-books *at least once a week*, which was used as the reference category (570). The mean achievement difference between pupils who borrowed books or e-books from their school or local library *at least once a week* and those who *never or almost never* did so was not statistically significant.

Figure 3.20: Percentages and mean achievement of pupils in Ireland by frequency of using the school or local library, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.66.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.35 shows the percentages and mean achievement of pupils by the frequency with which they borrowed books or e-books from their school or local library in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The frequency with which pupils borrowed books or e-books from their school or local library varied across countries as did the magnitude and direction of mean achievement differences between the *at least once a week* and *never or almost never* categories. While this mean difference was in favour of the *never or almost never* category in Ireland (though it was not statistically significant), differences across countries seemed to favour either group, with most statistically significant differences favouring the *at least once a week* category.

Table 3.35: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of using the school or local library (2021)

		<b>Overall mean</b>	<b>At least once a week</b>		<b>Once or twice a month</b>		<b>A few times a year</b>		<b>Never or almost never</b>		<b>Mean difference between at least once a week and never or almost never</b>
			%	Mean	%	Mean	%	Mean	%	Mean	
	Ireland	577	28	570	29	587	20	578	23	575	+4
<b>Start G5</b>	Northern Ireland	566	34	561	30	582	18	569	19	553	-8
	<i>Croatia</i>	557	15	531	53	567	19	560	12	542	+11
	<i>Lithuania</i>	552	13	522	33	568	26	557	28	547	<b>+25</b>
	Australia ↗	540	56	546	17	552	13	537	13	513	<b>-33</b>
	England ↗	558	35	552	28	569	17	556	20	556	+4
<b>End G4</b>	Hong Kong SAR	573	31	581	34	579	22	565	12	552	<b>-29</b>
	Poland	549	12	534	31	557	38	555	18	540	+6
	<i>Finland</i>	549	20	543	44	562	24	548	11	523	<b>-21</b>
	<i>New Zealand</i>	521	51	527	20	539	13	517	16	496	<b>-31</b>
	<i>Singapore</i>	587	24	599	26	603	28	582	22	562	<b>-37</b>
	PIRLS	503	31	494	23	510	18	508	27	503	<b>+8</b>

Source: Appendix Table A3.66.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.36 and 3.37 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the frequency with which they borrowed books or e-books from their school or local library in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, mean achievement differences between the *at least once a week* and *never or almost never* categories were similar in magnitude across the subscales and not statistically significant. Reflecting the patterns noted for overall reading achievement, the magnitude and direction of mean achievement differences between the *at least once a week* and *never or almost never* categories across the four subscales varied across countries.

Table 3.36: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of using the school or local library (2021)

		Literary					Informational				
		At least once a week	Once or twice a month	A few times a year	Never or almost never	Mean difference between at least once a week and never or almost never	At least once a week	Once or twice a month	A few times a year	Never or almost never	Mean difference between at least once a week and never or almost never
Start G5	Ireland	577	594	584	581	+4	566	585	575	569	+3
	Northern Ireland	569	588	576	559	-9	556	578	564	548	-8
	Croatia	539	578	569	555	+16	526	563	557	536	+10
	Lithuania	526	568	559	545	<b>+18</b>	520	569	558	549	<b>+29</b>
End G4	Australia ✎	550	555	538	516	<b>-34</b>	545	552	535	511	<b>-34</b>
	England ✎	554	567	560	555	+2	554	571	554	559	+5
	Hong Kong SAR	574	570	555	542	<b>-32</b>	589	589	574	563	<b>-25</b>
	Poland	535	561	558	542	+7	531	554	554	542	+10
	Finland	540	560	545	524	<b>-17</b>	545	562	550	524	<b>-22</b>
	New Zealand	530	539	518	500	<b>-30</b>	526	540	517	495	<b>-31</b>
	Singapore	602	609	586	566	<b>-36</b>	599	602	581	561	<b>-38</b>
PIRLS		495	511	509	504	<b>+9</b>	493	510	507	502	<b>+8</b>

Source: Appendix Tables A3.67 and A3.68.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.37: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of using the school or local library (2021)

		Retrieve/Infer				Interpret/Evaluate						
		At least once a week	Once or twice a month	A few times a year	Never or almost never	Mean difference between at least once a week and never or almost never	At least once a week	Once or twice a month	A few times a year	Never or almost never	Mean difference between at least once a week and never or almost never	
Start G5		Ireland	565	579	574	568	+3	576	592	581	580	+4
		Northern Ireland	552	575	561	542	-10	569	588	575	561	-8
		Croatia	526	563	556	536	+10	537	572	562	548	+12
		Lithuania	525	570	559	550	<b>+25</b>	520	568	556	546	<b>+26</b>
End G4		Australia ✕	539	548	531	506	<b>-32</b>	555	554	542	523	<b>-32</b>
		England ✕	549	565	554	553	+4	556	572	560	560	+4
		Hong Kong SAR	586	584	569	554	<b>-33</b>	579	579	563	554	<b>-25</b>
		Poland	527	554	552	537	+10	543	559	557	544	+1
		Finland	544	563	548	524	<b>-21</b>	543	561	548	525	<b>-19</b>
		New Zealand	526	539	518	498	<b>-27</b>	530	541	516	495	<b>-35</b>
		Singapore	595	601	578	558	<b>-37</b>	601	606	586	568	<b>-34</b>
PIRLS		494	510	507	502	<b>+8</b>	495	510	508	503	<b>+8</b>	

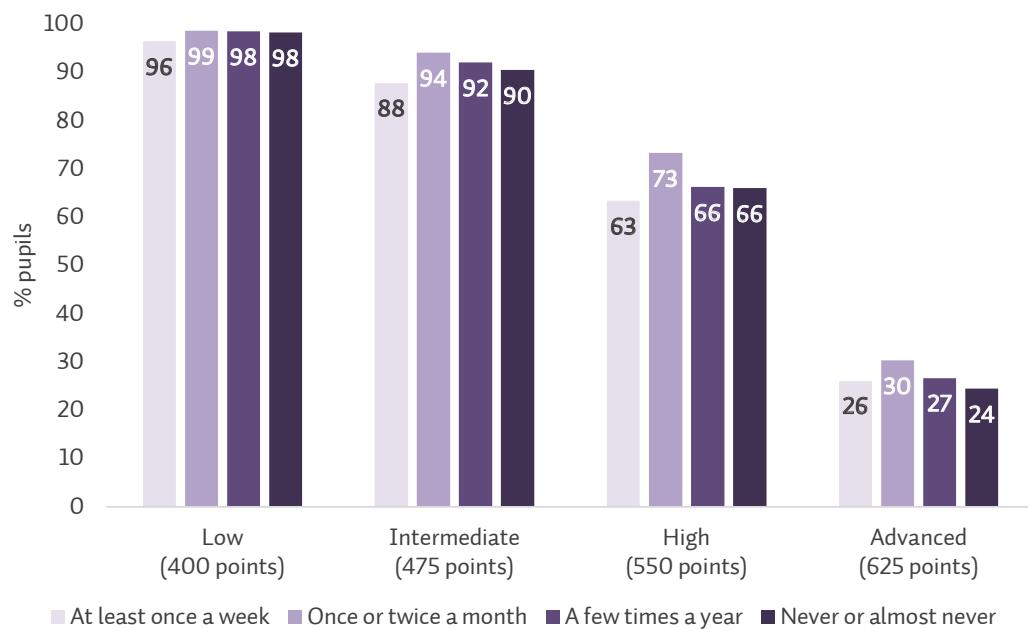
Source: Appendix Tables A3.69 and A3.70.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which they borrowed books or e-books from their school or local library are shown in Figure 3.21. No clear pattern was noted in terms of percentage differences across the different categories, with most differences not being statistically significant. Across the four benchmarks, pupils in the *once or twice a month* category tended to have an advantage compared to the rest of their peers, but this advantage did not exceed 10 percentage points (noted in the High Benchmark).

Figure 3.21: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by frequency of using the school or local library (2021)



Source: Appendix Table A3.71.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils about the frequency with which they borrowed books from their school or local library. Patterns observed in 2011 and 2016 were different to the ones noted in 2021. Firstly, the proportion of pupils who reported borrowing books or e-books from their school or local library *at least once a week* decreased across years (mostly between 2016 and 2021), going from 47% in 2011 to 28% in 2021, while the proportion of pupils who reported *never or almost never* doing so increased, going from 12% in 2011 to 23% in 2021. Secondly, while in 2021 pupils who reported borrowing books or e-books from their school or local library *at least once a week* achieved a slightly (though not statistically significantly) lower score than their peers who reported *never or almost never* doing so across both overall reading achievement and all subscales, the former group of pupils achieved statistically significantly higher scores than the latter group in 2011 and 2016, with this being consistent across both overall reading achievement and the four subscales (Table 3.38). However, these data need to be interpreted with caution given that the administration of PIRLS 2021 took place in the midst of the COVID-19 pandemic, and pupils' opportunities to use their school or local library were likely limited, or at least more limited compared to the previous PIRLS cycles.

Table 3.38: Percentages and mean reading achievement of pupils in Ireland, by frequency of using the school or local library (2011, 2016, 2021)

	At least once a week		Once or twice a month		A few times a year		Never or almost never		Mean difference between at least once a week and never or almost never	
	%	Mean	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2011</b>	47	549	26	568	15	553	12	530	<b>-19</b>
	<b>2016</b>	41	563	28	584	17	568	14	548	<b>-14</b>
	<b>2021</b>	28	570	29	587	20	578	23	575	+4
<b>Literary</b>	<b>2011</b>	47	555	26	575	15	557	12	534	<b>-21</b>
	<b>2016</b>	41	567	28	589	17	573	14	552	<b>-15</b>
	<b>2021</b>	28	577	29	594	20	584	23	581	+4
<b>Informational</b>	<b>2011</b>	47	546	26	565	15	552	12	530	<b>-16</b>
	<b>2016</b>	41	561	28	582	17	566	14	547	<b>-14</b>
	<b>2021</b>	28	566	29	585	20	575	23	569	+3
<b>Retrieve/Infer</b>	<b>2011</b>	47	550	26	569	15	549	12	530	<b>-20</b>
	<b>2016</b>	41	562	28	583	17	570	14	548	<b>-14</b>
	<b>2021</b>	28	565	29	579	20	574	23	568	+3
<b>Interpret/Evaluate</b>	<b>2011</b>	47	549	26	568	15	559	12	535	<b>-15</b>
	<b>2016</b>	41	566	28	587	17	568	14	552	<b>-14</b>
	<b>2021</b>	28	576	29	592	20	581	23	580	+4

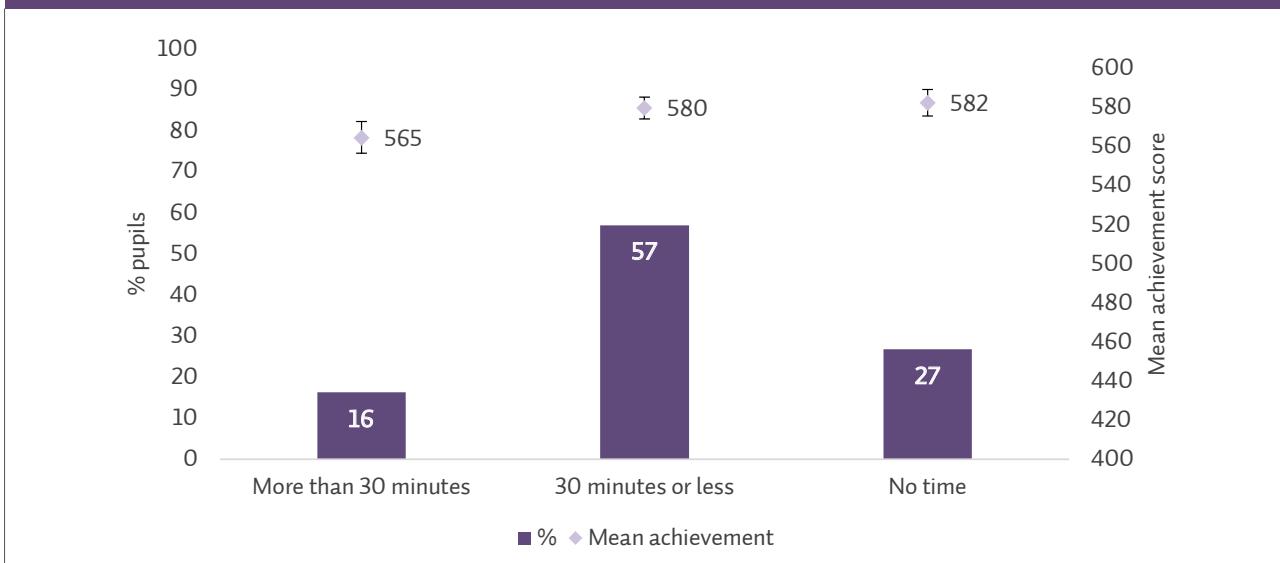
Source: Appendix Table A3.72.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2011, the question was *How often do you borrow books from your school or local library?*, while in 2016 and 2021, it was *How often do you borrow books (including e-books) from your school or local library?*.

## Use of digital devices to find and read information

Pupils were asked about the time they spent using digital devices to find and read information on a normal school day, with the response options being *more than 30 minutes*, *30 minutes or less*, and *no time*. Figure 3.22 shows the percentages and mean achievement of pupils belonging to each of these groups in Ireland in 2021. More than half of pupils reported that they spent *30 minutes or less* using digital devices to find and read information on a normal school day, 27% reported that they spent *no time*, and 16% that they spent *more than 30 minutes* on this activity. Pupils who reported spending *more than 30 minutes* achieved the lowest mean score (565), which was statistically significantly lower than the scores of their peers who reported spending *30 minutes or less* (580) or *no time* (582) using digital devices to find and read information on a normal school day.

Figure 3.22: Percentages and mean achievement of pupils in Ireland by time spent using digital devices to find and read information, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.73.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.39 shows the percentages and mean achievement of pupils by the time spent on using digital devices to find and read information on a normal school day, in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The time spent using digital devices to find and read information varied across countries as did the magnitude and direction of mean achievement differences between the *more than 30 minutes* and *no time* categories. While this mean difference was in favour of the *no time* category in Ireland (a statistically significant difference), differences across the reference countries, going up to 33 and 35 points in Singapore and Hong Kong, respectively, mostly favoured the *more than 30 minutes* category.

Table 3.39: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent using digital devices to find and read information (2021)

		<b>Overall mean</b>	<b>More than 30 minutes</b>		<b>30 minutes or less</b>		<b>No time</b>		<b>Mean difference between more than 30 minutes and no time</b>
			<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	
<b>Start G5</b>	Ireland	577	16	565	57	580	27	582	<b>+18</b>
	Northern Ireland	566	20	562	66	572	13	547	<b>-14</b>
	Croatia	557	25	545	64	566	12	536	-9
	Lithuania	552	24	547	63	559	13	536	-11
<b>End G4</b>	Australia ↗	540	27	545	57	547	17	516	<b>-29</b>
	England ↗	558	23	554	61	565	17	543	-11
	Hong Kong SAR	573	21	576	66	578	13	541	<b>-35</b>
	Poland	549	30	537	59	559	11	535	-2
	Finland	549	18	538	60	556	22	544	+6
	New Zealand	521	28	528	53	531	19	499	<b>-29</b>
	Singapore	587	28	594	57	592	15	561	<b>-33</b>
	PIRLS	503	25	502	52	512	23	486	<b>-16</b>

Source: Appendix Table A3.73.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.40 and 3.41 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the time spent using digital devices to find and read information on a normal school day in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, the magnitude and direction of mean achievement differences between the *more than 30 minutes* and *no time* categories varied across countries, with differences in most reference countries favouring the *more than 30 minutes* category. In Ireland, the largest mean difference (20 points) between these two categories was on the Literary subscale, favouring the *no time* category, while mean differences across the other three subscales were similar to one another in magnitude.

Table 3.40: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent using digital devices to find and read information (2021)

	Literary			Mean difference between more than 30 minutes and no time	Informational			Mean difference between more than 30 minutes and no time	
	More than 30 minutes	30 minutes or less	No time		More than 30 minutes	30 minutes or less	No time		
Start G5	Ireland	569	586	589	<b>+20</b>	564	576	578	<b>+14</b>
	Northern Ireland	569	579	556	-13	557	568	543	-15
	<i>Croatia</i>	553	579	541	<b>-12</b>	543	561	533	-11
	<i>Lithuania</i>	548	558	539	-9	546	561	535	<b>-11</b>
End G4	Australia $\bowtie$	549	550	517	<b>-32</b>	543	546	516	<b>-28</b>
	England $\bowtie$	553	565	546	-7	555	566	544	-11
	Hong Kong SAR	565	570	533	<b>-32</b>	588	587	550	<b>-38</b>
	Poland	539	563	536	-3	536	558	534	-2
	<i>Finland</i>	533	555	540	+7	541	556	546	+5
	New Zealand	529	532	502	<b>-27</b>	527	530	497	<b>-30</b>
	Singapore	601	596	564	<b>-37</b>	592	592	560	<b>-33</b>
	PIRLS	503	513	486	<b>-16</b>	502	511	485	<b>-16</b>

Source: Appendix Tables A3.74 and A3.75.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper. $\bowtie$  Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.41: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent using digital devices to find and read information (2021)

		Retrieve/Infer			Mean difference between <b>more than 30 minutes</b> and <b>no time</b>	Interpret/Evaluate			Mean difference between <b>more than 30 minutes</b> and <b>no time</b>
		More than 30 minutes	30 minutes or less	No time		More than 30 minutes	30 minutes or less	No time	
<b>Start G5</b>	Ireland	561	573	576	<b>+16</b>	570	585	584	<b>+14</b>
	Northern Ireland	553	564	538	-15	569	579	557	-12
	<i>Croatia</i>	541	561	534	-7	552	570	538	<b>-14</b>
	Lithuania	548	562	540	-8	545	558	536	-9
<b>End G4</b>	Australia ✎	538	541	509	<b>-30</b>	551	554	524	<b>-27</b>
	England ✎	550	562	541	-10	557	569	544	<b>-12</b>
	Hong Kong SAR	582	583	544	<b>-38</b>	575	578	542	<b>-33</b>
	Poland	534	555	531	-3	541	563	536	-5
	<i>Finland</i>	539	557	544	+5	538	555	545	+6
	New Zealand	526	530	500	<b>-25</b>	530	532	495	<b>-35</b>
	Singapore	590	590	557	<b>-32</b>	599	596	565	<b>-34</b>
	PIRLS	502	511	486	<b>-16</b>	502	512	485	<b>-17</b>

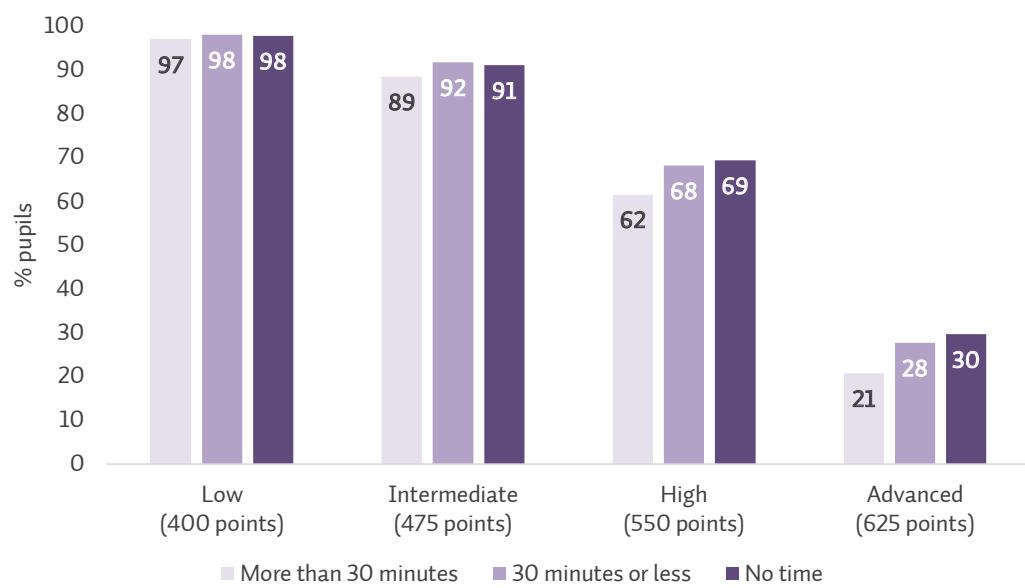
Source: Appendix Tables A3.76 and A3.77.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the time spent using digital devices to find and read information on a normal school day are shown in Figure 3.23. Percentage differences between the *more than 30 minutes* and *no time* categories, favouring the latter, widened with every subsequent benchmark and were statistically significant at the High and Advanced Benchmarks. For example, while 97% of pupils who reported spending *more than 30 minutes* on using digital devices to find and read information on a normal school day reached the Low Benchmark as opposed to 98% who spent *no time* doing so, a difference of one percentage point, the equivalent difference at the Advanced Benchmark was nine percentage points (21% vs 30%).

Figure 3.23: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by time spent using digital devices to find and read information (2021)



Source: Appendix Table A3.78.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The question related to the time pupils spent using digital devices to find and read information was included in the 2016 (although with slightly different phrasing) but not in the 2011 pupil questionnaire. Notably, the percentage of pupils spending *more than 30 minutes* on the use of digital devices to find and read information on a normal school day increased by five percentage points between 2016 and 2021, and the percentage of pupils spending *no time* on this activity decreased by 10 percentage points between 2016 and 2021. Mean achievement differences between the *more than 30 minutes* and *no time* categories, favouring the latter, narrowed between 2016 and 2021 across both overall reading achievement and all subscales (Table 3.42).

Table 3.42: Percentages and mean reading achievement of pupils in Ireland, by time spent using digital devices to find and read information (2016, 2021)

	More than 30 minutes		30 minutes or less		No time		Mean difference between more than 30 minutes and no time	
	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2016</b>	11	547	52	570	37	570	<b>+23</b>
	<b>2021</b>	16	565	57	580	27	582	<b>+18</b>
<b>Literary</b>	<b>2016</b>	11	550	52	574	37	575	<b>+26</b>
	<b>2021</b>	16	569	57	586	27	589	<b>+20</b>
<b>Informational</b>	<b>2016</b>	11	546	52	568	37	567	<b>+21</b>
	<b>2021</b>	16	564	57	576	27	578	<b>+14</b>
<b>Retrieve/Infer</b>	<b>2016</b>	11	544	52	569	37	570	<b>+27</b>
	<b>2021</b>	16	561	57	573	27	576	<b>+16</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	11	548	52	573	37	571	<b>+23</b>
	<b>2021</b>	16	570	57	585	27	584	<b>+14</b>

Source: Appendix Table A3.79.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2016, the question was *How much time do you spend using a computer or tablet to do these activities for your schoolwork on a normal school day?*, while in 2021, it was *How much time do you spend using a computer, tablet, or smartphone to do these activities for your schoolwork on a normal school day?*.

## Reading attitudes

### Confident in reading

The extent to which pupils felt confident in reading was captured through six items in the pupil questionnaire: *I usually do well in reading*; *Reading is easy for me*; *I have trouble reading stories with difficult words* (reverse coded); *Reading is harder for me than for many of my classmates* (reverse coded); *Reading is harder for me than any other subject* (reverse coded); *I am just not good at reading* (reverse coded). Pupils were asked how much they agreed or disagreed with each of these six statements and their responses were used to create the PIRLS Students Confident in Reading scale, on the basis of which pupils were described as *very confident*, *somewhat confident*, or *not confident* in reading.

Table 3.43 shows the percentages and mean achievement of pupils in each category of the PIRLS Students Confident in Reading scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, approximately half of pupils (49%) indicated that they were *very confident*, 34% *somewhat confident*, and 17% *not confident* in reading. *Very confident* pupils achieved a mean score of 609 points, which was statistically significantly higher than that of their *not confident* peers (516). This pattern observed in Ireland was also evident internationally, with score differences between *very confident* pupils and *not confident* pupils ranging from 66 points in Hong Kong to 111 in New Zealand.

Table 3.43: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were confident in reading (2021)

		Overall mean	Very confident		Somewhat confident		Not confident		Mean difference between very confident and not confident
			%	Mean	%	Mean	%	Mean	
	Ireland	577	49	609	34	564	17	516	<b>-93</b>
<b>Start G5</b>	Northern Ireland	566	47	603	37	550	16	501	<b>-102</b>
	Croatia	557	46	583	38	552	16	503	<b>-80</b>
	Lithuania	552	38	590	38	552	25	503	<b>-87</b>
<b>End G4</b>	Australia ✕	540	43	582	38	529	19	477	<b>-104</b>
	England ✕	558	45	594	34	544	21	504	<b>-90</b>
	Hong Kong SAR	573	32	605	39	573	29	539	<b>-66</b>
	Poland	549	55	572	34	539	11	482	<b>-90</b>
	<i>Finland</i>	549	57	574	30	534	13	488	<b>-86</b>
	New Zealand	521	34	577	38	527	28	466	<b>-111</b>
	Singapore	587	51	622	33	574	16	514	<b>-107</b>
	PIRLS	503	43	541	35	498	22	449	<b>-91</b>

Source: Appendix Table A3.80.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.44 and 3.45 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Students Confident in Reading* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils who indicated that they were *very confident* in reading tended to achieve statistically significantly higher scores across all four subscales compared to their *not confident* peers. In Ireland, the smallest mean difference between *very confident* and *not confident* pupils was on the Retrieve/Infer subscale – although this difference was still substantial and statistically significant. Mean differences across the other three subscales were similar to one another in magnitude.

Table 3.44: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were confident in reading (2021)

		Literary			Informational				
		Very confident	Somewhat confident	Not confident	Mean difference between very confident and not confident	Very confident	Somewhat confident	Not confident	Mean difference between very confident and not confident
	Ireland	615	572	520	<b>-95</b>	605	560	511	<b>-95</b>
<b>Start G5</b>	Northern Ireland	609	558	509	<b>-100</b>	600	545	498	<b>-102</b>
	<i>Croatia</i>	594	562	513	<b>-81</b>	580	547	498	<b>-82</b>
	<i>Lithuania</i>	587	553	506	<b>-81</b>	591	553	502	<b>-90</b>
<b>End G4</b>	Australia ✎	586	531	479	<b>-107</b>	582	527	475	<b>-107</b>
	England ✎	592	546	508	<b>-84</b>	598	545	503	<b>-95</b>
	Hong Kong SAR	595	566	531	<b>-64</b>	616	583	546	<b>-70</b>
	Poland	574	542	487	<b>-87</b>	572	537	479	<b>-93</b>
	<i>Finland</i>	572	532	486	<b>-86</b>	576	535	487	<b>-89</b>
	<i>New Zealand</i>	579	529	467	<b>-111</b>	577	526	465	<b>-112</b>
	<i>Singapore</i>	627	579	516	<b>-110</b>	621	572	514	<b>-107</b>
	PIRLS	542	499	449	<b>-93</b>	540	497	448	<b>-92</b>

Source: Appendix Tables A3.81 and Tables A3.82.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.45: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were confident in reading (2021)

		Retrieve/Infer				Interpret/Evaluate			
		Very confident	Somewhat confident	Not confident	Mean difference between very confident and not confident	Very confident	Somewhat confident	Not confident	Mean difference between very confident and not confident
	Ireland	600	561	511	<b>-89</b>	613	569	520	<b>-94</b>
<b>Start G5</b>	Northern Ireland	594	543	494	<b>-101</b>	610	557	514	<b>-96</b>
	<i>Croatia</i>	579	546	499	<b>-80</b>	587	556	509	<b>-78</b>
	Lithuania	591	555	505	<b>-86</b>	589	551	501	<b>-88</b>
<b>End G4</b>	Australia ✎	575	522	470	<b>-105</b>	589	536	484	<b>-105</b>
	England ✎	591	541	501	<b>-90</b>	597	548	510	<b>-87</b>
	Hong Kong SAR	614	577	539	<b>-74</b>	603	573	539	<b>-64</b>
	Poland	568	535	481	<b>-87</b>	575	543	486	<b>-90</b>
	<i>Finland</i>	575	535	485	<b>-91</b>	573	534	489	<b>-84</b>
	<i>New Zealand</i>	574	527	468	<b>-106</b>	582	528	463	<b>-119</b>
	Singapore	617	571	512	<b>-105</b>	626	577	517	<b>-109</b>
	PIRLS	540	498	449	<b>-91</b>	541	498	449	<b>-92</b>

Source: Appendix Tables A3.83 and Tables A3.84.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the extent to which they were confident in reading are shown in Figure 3.24. Although percentage differences between the *very confident* and *not confident* categories were statistically significant across all benchmarks, with the former tending to have an advantage compared to the latter, these differences widened with subsequent benchmarks. For example, while 100% of *very confident* pupils reached the Low Benchmark as opposed to 92% of *not confident* pupils, a difference of eight percentage points, the equivalent difference at the Advanced Benchmark was 37 percentage points (41% vs 4%).

Figure 3.24: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they were confident in reading (2021)



Source: Appendix Table A3.85.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 included a *Students Confident in Reading* scale; however, the 2011 scale was slightly different to the corresponding 2016 and 2021 scales.<sup>21</sup> This means that comparisons are only possible between the 2016 and 2021 data (additional information about the scale components across cycles can be found in Appendix Table A3.87). The proportion of *very confident* pupils decreased between 2016 and 2021, going from 55% to 49%, while the proportion of *not confident* pupils slightly increased, going from 14% to 17%. Mean achievement differences between *very confident* and *not confident* pupils widened between 2016 and 2021 across both overall reading achievement and most of the subscales. The Retrieve/Infer subscale was an exception to this pattern, with the mean difference remaining stable between 2016 and 2021 (Table 3.46).

<sup>21</sup> In 2011, the scale included two items that were not included in the 2016 and 2021 scales: *If a book is interesting, I don't care how hard it is to read* and *My teacher tells me I am a good reader*. In turn, the 2016 and 2021 scales included one item, *I am just not good at reading*, that was not included in the 2011 scale. Also, the highest category of the scale was titled *confident* in 2011 (Martin et al., 2017; Martin & Mullis, 2012).

Table 3.46: Percentages and mean reading achievement of pupils in Ireland, by the extent to which they were confident in reading (2016, 2021)

		Very confident		Somewhat confident		Not confident		Mean difference between very confident and not confident
		%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2016</b>	55	593	31	550	14	505	<b>-88</b>
	<b>2021</b>	49	609	34	564	17	516	<b>-93</b>
<b>Literary</b>	<b>2016</b>	55	597	31	556	14	510	<b>-86</b>
	<b>2021</b>	49	615	34	572	17	520	<b>-95</b>
<b>Informational</b>	<b>2016</b>	55	592	31	547	14	502	<b>-90</b>
	<b>2021</b>	49	605	34	560	17	511	<b>-95</b>
<b>Retrieve/Infer</b>	<b>2016</b>	55	593	31	550	14	504	<b>-89</b>
	<b>2021</b>	49	600	34	561	17	511	<b>-89</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	55	595	31	553	14	509	<b>-87</b>
	<b>2021</b>	49	613	34	569	17	520	<b>-94</b>

Source: Appendix Table A3.86.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2011, the scale components and index category labels differed slightly from those used in 2016 and 2021.

## Liking reading

The extent to which pupils liked reading was captured through 10 items in the pupil questionnaire: *I like talking about what I read with other people; I would be happy if someone gave me a book as a present; I think reading is boring (reverse coded); I would like to have more time for reading; I enjoy reading; I learn a lot from reading; I like to read things that make me think; I like it when a book helps me imagine other worlds; I read for fun; I read to find out about things I want to learn*. Pupils were asked how much they agreed or disagreed with the first eight statements and how often they did the last two reading activities outside of school (with response options ranging from *every day or almost every day* to *never or almost never*). Their responses were used to create the PIRLS Students Like Reading scale, on the basis of which pupils were grouped into three categories: *very much like reading*, *somewhat like reading*, or *do not like reading*.

Table 3.47 shows the percentages and mean achievement of pupils in each category of the PIRLS Students Like Reading scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. In Ireland, approximately one-third of pupils (31%) indicated that they *very much like reading*, 45% that they *somewhat like reading*, and 23% that they *do not like reading*. Pupils who *very much like reading* achieved a mean score of 593 points, which was statistically significantly higher than that of their peers who *do not like reading* (556). This pattern observed in Ireland was also evident in most of the reference countries, with score differences between pupils who *very much like reading* and those who *do not like reading* ranging from 19 points in Poland to 46 in Singapore. Croatia and Lithuania were exceptions to this pattern, whereby score differences between the two groups of pupils were small and not statistically significant.

Table 3.47: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they liked reading (2021)

	<b>Overall mean</b>	<b>Very much like reading</b>		<b>Somewhat like reading</b>		<b>Do not like reading</b>		<b>Mean difference between very much like reading and do not like reading</b>	
		<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>		
	Ireland	577	31	593	45	578	23	556	<b>-37</b>
<b>Start G5</b>	Northern Ireland	566	28	585	47	570	25	542	<b>-43</b>
	<i>Croatia</i>	557	23	560	52	557	25	554	-5
	<i>Lithuania</i>	552	22	555	48	555	30	548	-7
<b>End G4</b>	Australia ✕	540	29	562	45	542	26	517	<b>-45</b>
	England ✕	558	29	570	48	562	24	536	<b>-34</b>
	Hong Kong SAR	573	30	590	47	573	23	550	<b>-40</b>
	Poland	549	23	555	49	556	28	536	<b>-19</b>
	<i>Finland</i>	549	23	563	46	555	30	533	<b>-30</b>
	New Zealand	521	38	532	44	521	18	511	<b>-21</b>
	<i>Singapore</i>	587	33	607	47	586	20	560	<b>-46</b>
	PIRLS	503	42	513	40	501	18	486	<b>-27</b>

Source: Appendix Table A3.88.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.48 and 3.49 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Students Like Reading* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils who indicated that they *very much like reading* tended to achieve statistically significantly higher scores across all four subscales compared to their peers who indicated that they *do not like reading*, in Ireland and most of the reference countries. In Ireland, slightly smaller mean differences were noted on the process subscales (Retrieve/Infer and Interpret/Evaluate) compared to the purpose subscales (Literary and Informational) – however, all differences were substantial and statistically significant.

Table 3.48: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they liked reading (2021)

		Literary			Mean difference between very much like reading and do not like reading	Informational			Mean difference between very much like reading and do not like reading
		Very much like reading	Somewhat like reading	Do not like reading		Very much like reading	Somewhat like reading	Do not like reading	
	Ireland	601	585	561	<b>-41</b>	589	576	551	<b>-39</b>
<b>Start G5</b>	Northern Ireland	591	577	549	<b>-42</b>	582	564	539	<b>-43</b>
	Croatia	570	568	566	-3	557	553	550	-6
	Lithuania	551	556	550	-2	557	556	547	-10
<b>End G4</b>	Australia ✕	566	546	519	<b>-47</b>	560	541	517	<b>-43</b>
	England ✕	572	562	535	<b>-36</b>	572	563	539	<b>-33</b>
	Hong Kong SAR	582	565	541	<b>-41</b>	598	583	562	<b>-36</b>
	Poland	557	560	538	<b>-19</b>	553	555	536	<b>-17</b>
	Finland	560	553	530	<b>-30</b>	563	556	534	<b>-29</b>
	New Zealand	534	523	510	<b>-24</b>	531	520	510	<b>-21</b>
	Singapore	611	590	563	<b>-48</b>	606	585	559	<b>-48</b>
	PIRLS	514	502	487	<b>-27</b>	513	500	485	<b>-28</b>

Source: Appendix Tables A3.89 and A3.90.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✕ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.49: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they liked reading (2021)

		Retrieve/Infer			Interpret/Evaluate				
		Very much like reading	Somewhat like reading	Do not like reading	Mean difference between very much like reading and do not like reading	Very much like reading	Somewhat like reading	Do not like reading	Mean difference between very much like reading and do not like reading
Start G5	Ireland	586	573	550	<b>-36</b>	596	584	560	<b>-37</b>
	Northern Ireland	577	561	534	<b>-43</b>	591	576	552	<b>-39</b>
	Croatia	555	553	550	-5	566	561	559	-7
	Lithuania	557	557	550	-7	555	554	547	-8
End G4	Australia ✕	555	536	510	<b>-45</b>	567	549	525	<b>-42</b>
	England ✕	569	558	532	<b>-37</b>	573	565	541	<b>-32</b>
	Hong Kong SAR	596	578	552	<b>-44</b>	588	573	552	<b>-37</b>
	Poland	549	553	534	<b>-15</b>	561	559	538	<b>-23</b>
	Finland	563	555	534	<b>-29</b>	562	554	533	<b>-29</b>
	New Zealand	529	521	512	<b>-17</b>	534	522	508	<b>-26</b>
	Singapore	603	583	555	<b>-48</b>	610	589	565	<b>-45</b>
PIRLS		513	501	485	<b>-27</b>	513	501	486	<b>-27</b>

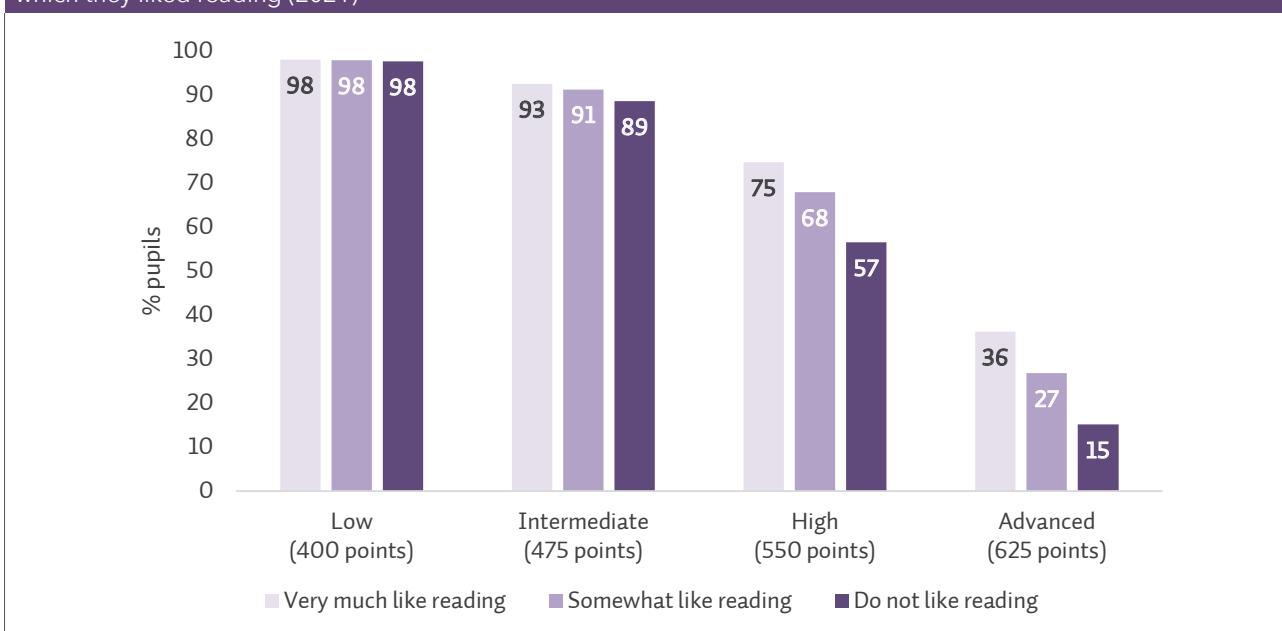
Source: Appendix Tables A3.91 and A3.92.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the extent to which they liked reading are shown in Figure 3.25. Although percentage differences between the *very much like reading* and *do not like reading* categories were statistically significant across all benchmarks except for the Low Benchmark, with the former group tending to have an advantage compared to the latter, these differences widened with every subsequent benchmark. For example, while 93% of pupils who *very much like reading* reached the Intermediate Benchmark as opposed to 89% of pupils who *do not like reading*, a difference of four percentage points, the equivalent difference at the Advanced Benchmark was 21 percentage points (36% vs 15%).

Figure 3.25: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they liked reading (2021)



Source: Appendix Table A3.93.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 included a *Students Like Reading* scale; however, the 2011 scale was different to the corresponding 2016 and 2021 scales.<sup>22</sup> This means that comparisons are only possible between the 2016 and 2021 data (additional information about the scale components across cycles can be found in Appendix Table A3.95). The proportion of pupils who *very much like reading* decreased substantially between 2016 and 2021, going from 46% to 31%, while the proportion of those who *do not like reading* increased, going from 15% to 23%. Mean achievement differences between pupils who *very much like reading* and those who *do not like reading* narrowed between 2016 and 2021 across both overall reading achievement and all subscales (Table 3.50).

22 In 2011, the scale included two items that were not included in the 2016 and 2021 scales: *I read only if I have to* and *I read things that I choose myself*. In turn, the 2016 and 2021 scales included four items, *I learn a lot from reading*; *I like to read things that make me think*; *I like it when a book helps me imagine other worlds*; and *I read to find out about things I want to learn*, that were not included in the 2011 scale. Also, the highest category of the scale was titled *like reading* in 2011 (Martin et al., 2017; Martin & Mullis, 2012).

Table 3.50: Percentages and mean reading achievement of pupils in Ireland, by the extent to which they liked reading (2016, 2021)

	Very much like reading		Somewhat like reading		Do not like reading		Mean difference between very much like reading and do not like reading	
	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2016</b>	46	580	40	565	15	534	<b>-46</b>
	<b>2021</b>	31	593	45	578	23	556	<b>-37</b>
<b>Literary</b>	<b>2016</b>	46	586	40	569	15	537	<b>-48</b>
	<b>2021</b>	31	601	45	585	23	561	<b>-41</b>
<b>Informational</b>	<b>2016</b>	46	578	40	563	15	533	<b>-45</b>
	<b>2021</b>	31	589	45	576	23	551	<b>-39</b>
<b>Retrieve/Infer</b>	<b>2016</b>	46	580	40	564	15	533	<b>-47</b>
	<b>2021</b>	31	586	45	573	23	550	<b>-36</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	46	582	40	568	15	536	<b>-46</b>
	<b>2021</b>	31	596	45	584	23	560	<b>-37</b>

Source: Appendix Table A3.94.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2011, the scale components and index category labels differed slightly from those used in 2016 and 2021.

## Engaged in reading lessons

The extent to which pupils were engaged in reading lessons was captured through nine items in the pupil questionnaire: *I like what I read about in school; My teacher gives me interesting things to read; I know what my teacher expects me to do; My teacher is easy to understand; I am interested in what my teacher says; My teacher encourages me to say what I think about what I have read; My teacher lets me show what I have learned; My teacher does a variety of things to help us learn; My teacher tells me how to do better when I make a mistake.* Pupils were asked how much they agreed or disagreed with each of these nine statements and their responses were used to create the PIRLS *Students Engaged in Reading Lessons* scale, on the basis of which pupils were described as *very engaged*, *somewhat engaged*, or *less than engaged* in reading lessons.

Figure 3.26 shows the percentages and mean achievement of pupils in each category of the PIRLS *Students Engaged in Reading Lessons* scale in Ireland in 2021. More than half of pupils (53%) indicated that they were *very engaged*, 42% that they were *somewhat engaged*, and 5% that they were *less than engaged* in reading lessons. *Very engaged* pupils achieved a mean score of 579 points, virtually identical to that of their *somewhat engaged* peers but statistically significantly higher than that of their *less than engaged* peers (561).

Figure 3.26: Percentages and mean achievement of pupils in Ireland by the extent to which they were engaged in reading lessons, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.96.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.51 shows the percentages and mean achievement of pupils in each category of the *PIRLS Students Engaged in Reading Lessons* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident internationally, with score differences between *very engaged* and *less than engaged* pupils ranging from seven points in Poland to 38 in Northern Ireland. Overall, the difference noted in Ireland was smaller in magnitude than the differences in most of the reference countries. Poland was an exception to this pattern, with the score difference between the two groups of pupils being small and not statistically significant.

Table 3.51: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were engaged in reading lessons (2021)

		<b>Overall mean</b>	<b>Very engaged</b>		<b>Somewhat engaged</b>		<b>Less than engaged</b>		<b>Mean difference between very engaged and less than engaged</b>
			%	Mean	%	Mean	%	Mean	
	Ireland	577	53	579	42	578	5	561	<b>-18</b>
<b>Start G5</b>	Northern Ireland	566	59	572	37	561	4	534	<b>-38</b>
	Croatia	557	41	562	53	555	5	538	<b>-24</b>
	Lithuania	552	42	556	50	553	8	537	<b>-19</b>
<b>End G4</b>	Australia ↗	540	52	547	42	539	7	512	<b>-35</b>
	England ↗	558	54	562	41	556	5	528	<b>-35</b>
	Hong Kong SAR	573	39	581	50	572	11	550	<b>-30</b>
	Poland	549	46	548	47	554	7	541	-7
	Finland	549	46	554	47	549	7	529	<b>-24</b>
	New Zealand	521	52	526	42	524	6	499	<b>-27</b>
	Singapore	587	48	593	45	585	7	558	<b>-36</b>
	PIRLS	503	61	510	34	495	5	465	<b>-45</b>

Source: Appendix Table A3.96.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Tables 3.52 and 3.53 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Students Engaged in Reading Lessons* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, *very engaged* pupils tended to achieve statistically significantly higher scores across all four subscales compared to their *less than engaged* peers across the reference countries, with Ireland's differences being among the smallest. In Ireland, slightly smaller mean achievement differences between *very engaged* and *less than engaged* pupils were noted on the Informational and Interpret/Evaluate subscales – although these differences were still statistically significant.

Table 3.52: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were engaged in reading lessons (2021)

		Literary			Mean difference between very engaged and less than engaged	Informational			Mean difference between very engaged and less than engaged
		Very engaged	Somewhat engaged	Less than engaged		Very engaged	Somewhat engaged	Less than engaged	
Start G5	Ireland	586	584	565	<b>-21</b>	575	575	558	<b>-17</b>
	Northern Ireland	579	569	542	<b>-37</b>	567	558	536	<b>-30</b>
	<i>Croatia</i>	571	567	548	<b>-23</b>	560	550	531	<b>-28</b>
	<i>Lithuania</i>	554	555	538	<b>-16</b>	558	553	536	<b>-22</b>
End G4	Australia ✎	551	542	514	<b>-37</b>	545	539	509	<b>-36</b>
	England ✎	564	556	525	<b>-39</b>	563	558	532	<b>-31</b>
	Hong Kong SAR	573	564	537	<b>-36</b>	589	582	563	<b>-26</b>
	Poland	551	556	545	-6	546	554	537	-9
	<i>Finland</i>	552	547	525	<b>-26</b>	555	550	531	<b>-24</b>
	<i>New Zealand</i>	528	526	500	<b>-28</b>	526	522	499	<b>-27</b>
	<i>Singapore</i>	597	590	565	<b>-33</b>	593	584	555	<b>-38</b>
	PIRLS	511	496	466	<b>-46</b>	510	494	464	<b>-46</b>

Source: Appendix Tables A3.97 and A3.98.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

Table 3.53: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by the extent to which they were engaged in reading lessons (2021)

		Retrieve/Infer			Interpret/Evaluate				
		Very engaged	Somewhat engaged	Less than engaged	Mean difference between very engaged and less than engaged	Very engaged	Somewhat engaged	Less than engaged	Mean difference between very engaged and less than engaged
Start G5	Ireland	573	573	551	<b>-23</b>	584	582	567	<b>-18</b>
	Northern Ireland	564	553	528	<b>-36</b>	579	570	544	<b>-35</b>
	<i>Croatia</i>	557	551	531	<b>-26</b>	567	559	541	<b>-26</b>
	<i>Lithuania</i>	558	555	539	<b>-19</b>	556	551	535	<b>-20</b>
End G4	Australia ✎	541	532	505	<b>-37</b>	553	547	519	<b>-34</b>
	England ✎	560	552	526	<b>-34</b>	566	561	527	<b>-38</b>
	Hong Kong SAR	587	576	552	<b>-35</b>	580	572	551	<b>-29</b>
	Poland	544	550	538	-6	552	557	544	-8
	<i>Finland</i>	555	549	531	<b>-23</b>	553	549	529	<b>-24</b>
	<i>New Zealand</i>	525	524	499	<b>-26</b>	529	523	497	<b>-32</b>
	<i>Singapore</i>	590	582	554	<b>-36</b>	597	589	562	<b>-36</b>
	PIRLS	510	494	465	<b>-44</b>	510	494	465	<b>-46</b>

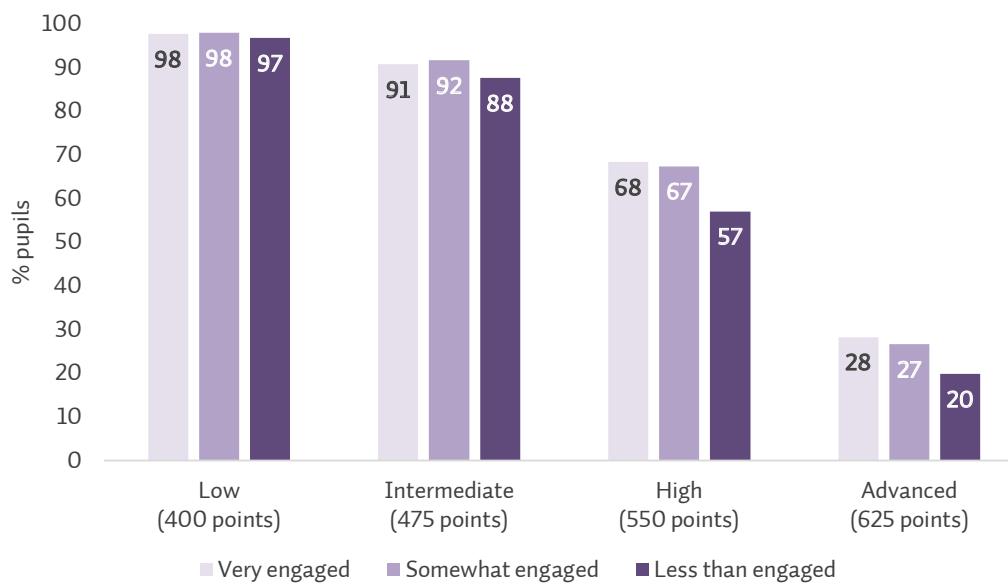
Source: Appendix Tables A3.99 and A3.100.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the extent to which they were engaged in reading lessons are shown in Figure 3.27. Percentage differences between the *very engaged* and *less than engaged* categories ranged between one and 11 percentage points but were only statistically significant at the High and Advanced Benchmarks, with the former group tending to have an advantage compared to the latter. Percentage differences between the *very engaged* and *somewhat engaged* categories were negligible across all benchmarks.

Figure 3.27: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they were engaged in reading lessons (2021)



Source: Appendix Table A3.101.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 included a *Students Engaged in Reading Lessons* scale; however, the 2011 scale was slightly different to the corresponding 2016 and 2021 scales.<sup>23</sup> This means that comparisons are only possible between the 2016 and 2021 data (additional information about the scale components across cycles can be found in Appendix Table A3.103). The proportion of *very engaged* pupils decreased between 2016 and 2021, going from 62% to 53%, while the proportion of *less than engaged* pupils remained stable (4% and 5%, respectively). Mean achievement differences between *very engaged* and *less than engaged* pupils widened slightly between 2016 and 2021 across overall reading achievement and the Literary and Retrieve/Infer subscales. Mean differences remained effectively stable on the Informational and Interpret/Evaluate subscales (Table 3.54).

<sup>23</sup> In 2011, the scale included two items that were not included in the 2016 and 2021 scales: *I think of things not related to the lesson* and *My teacher gives me interesting things to do*. In turn, the 2016 and 2021 scales included four items, *My teacher encourages me to say what I think about what I have read*; *My teacher lets me show what I have learned*; *My teacher does a variety of things to help us learn*; *My teacher tells me how to do better when I make a mistake*, that were not included in the 2011 scale. Also, the highest category of the scale was titled *engaged* and the lowest category was titled *not engaged* in 2011 (Martin et al., 2017; Martin & Mullis, 2012).

Table 3.54: Percentages and mean reading achievement of pupils in Ireland, by the extent to which they were engaged in reading lessons (2016, 2021)

	<b>Very engaged</b>	<b>Somewhat engaged</b>		<b>Less than engaged</b>		<b>Mean difference between very engaged and less than engaged</b>		
		<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>			
<b>Overall</b>	<b>2016</b>	62	569	34	566	4	553	-16
	<b>2021</b>	53	579	42	578	5	561	<b>-18</b>
<b>Literary</b>	<b>2016</b>	62	574	34	571	4	558	-16
	<b>2021</b>	53	586	42	584	5	565	<b>-21</b>
<b>Informational</b>	<b>2016</b>	62	566	34	566	4	550	-16
	<b>2021</b>	53	575	42	575	5	558	<b>-17</b>
<b>Retrieve/Infer</b>	<b>2016</b>	62	569	34	565	4	550	-19
	<b>2021</b>	53	573	42	573	5	551	<b>-23</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	62	571	34	570	4	553	-18
	<b>2021</b>	53	584	42	582	5	567	<b>-18</b>

Source: Appendix Table A3.102.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2011, the scale components and index category labels differed slightly from those used in 2016 and 2021.

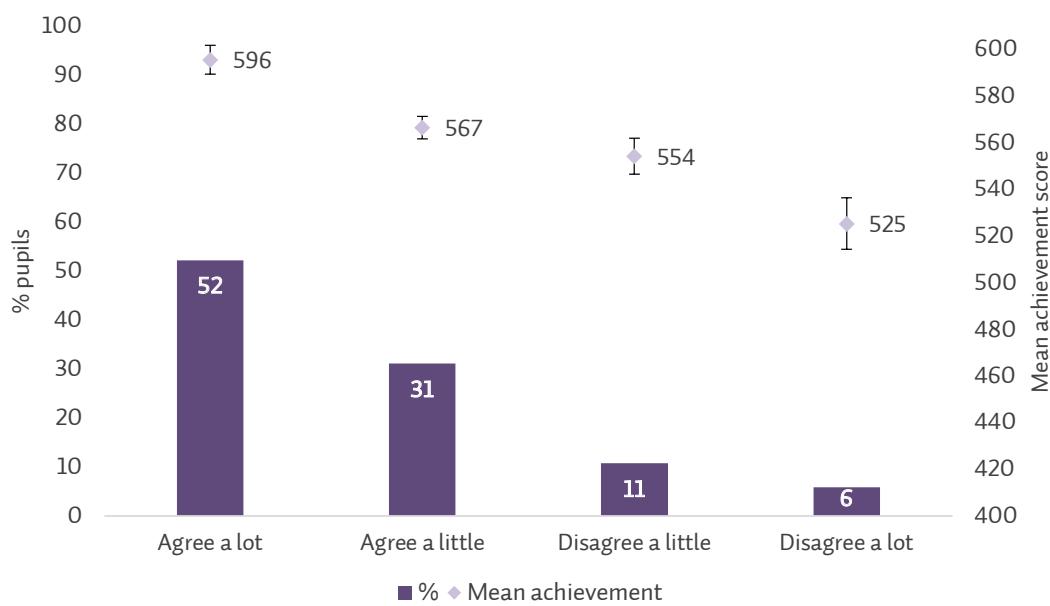
## Digital attitudes

### Attitudes towards reading in different modes

As a national addition in PIRLS 2021, pupils in Ireland were asked to indicate their agreement about the extent to which they enjoyed reading on paper and on a screen and found it easy to remember things they read on paper and on a screen.

Figures 3.28-3.31 show the percentages and mean achievement of pupils in each category of these four variables in Ireland in 2021. Overall, pupils enjoyed reading on paper more than reading on a screen, with 83% and 68%, respectively, agreeing a lot or a little with these statements. Similarly, when pupils were asked about the extent to which they found it easy to remember things they read on paper and on a screen, more pupils reported finding it easy to remember things they read on paper (76%) than on a screen (66%). Higher levels of enjoyment of reading on paper and finding it easy to remember things read on paper were associated with statistically significantly higher scores, while patterns were less clear-cut when it came to enjoying reading on a screen or finding it easy to remember things read on a screen.

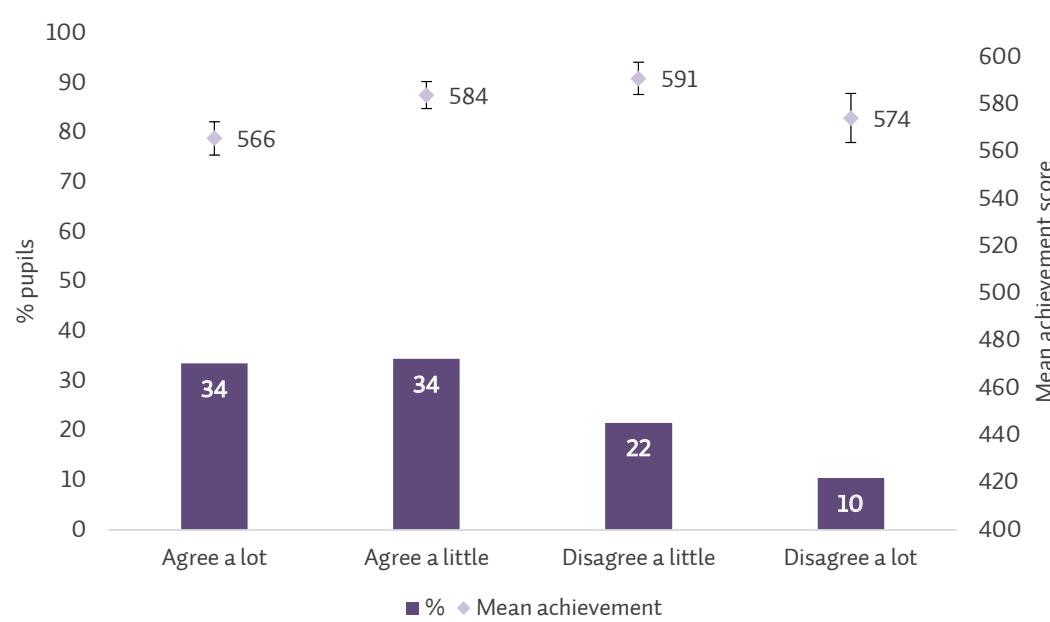
Figure 3.28: Percentages and mean achievement of pupils in Ireland by the extent to which they enjoyed reading on paper, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.104.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

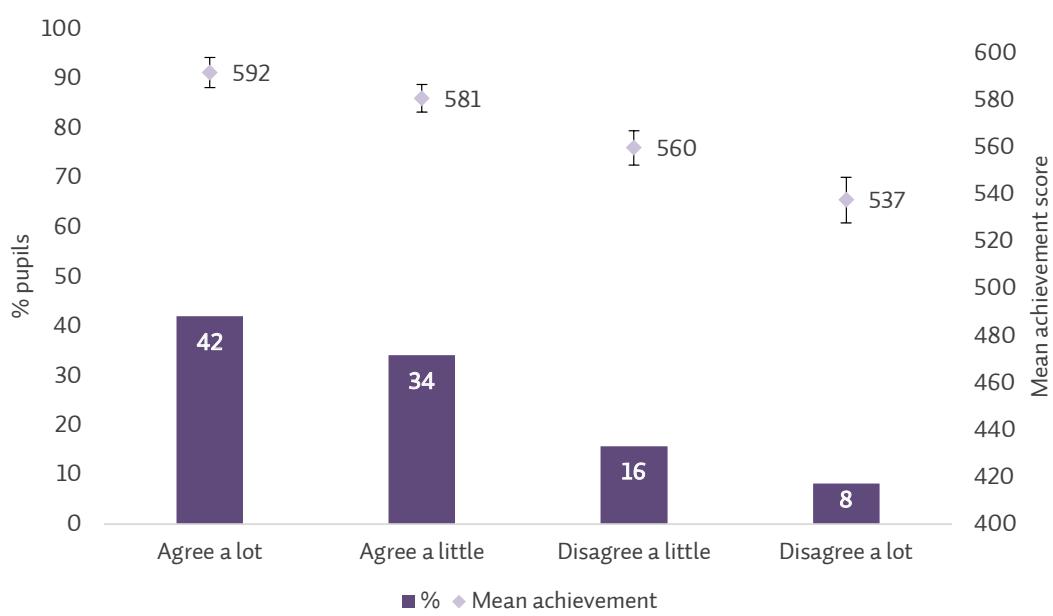
Figure 3.29: Percentages and mean achievement of pupils in Ireland by the extent to which they enjoyed reading on a screen, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.105.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

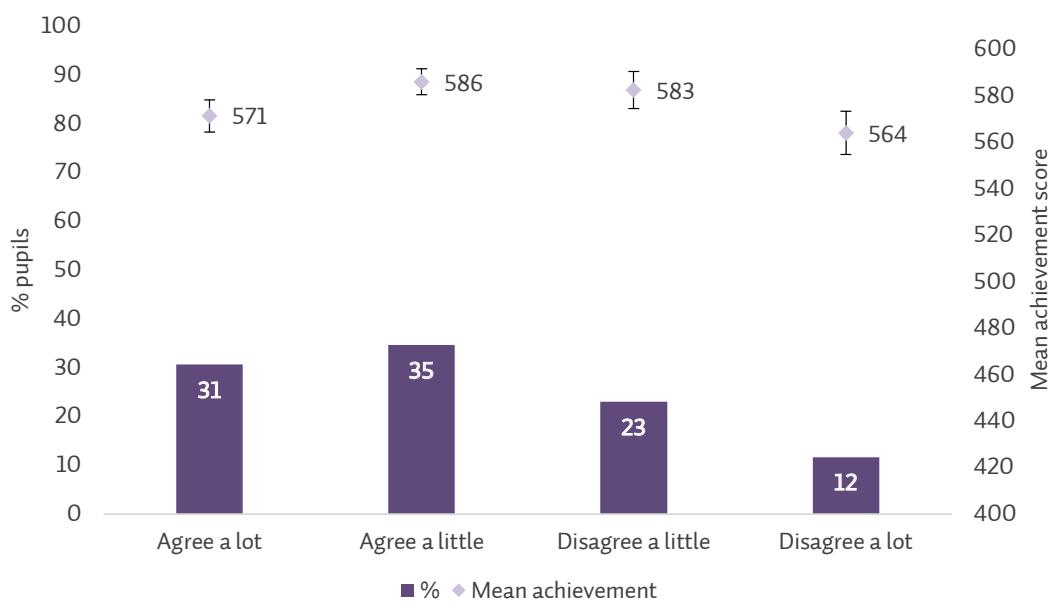
Figure 3.30: Percentages and mean achievement of pupils in Ireland by the extent to which they found it easy to remember things they read on paper, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.106.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Figure 3.31: Percentages and mean achievement of pupils in Ireland by the extent to which they found it easy to remember things they read on a screen, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.107.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.55 shows the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the four variables related to attitudes towards reading in different modes in Ireland in 2021. Reflecting the patterns noted for overall reading achievement, pupils who indicated that they enjoyed reading on paper or found it easy to remember things they read on paper tended to achieve statistically significantly higher scores across all four subscales compared to their peers who indicated that they did not enjoy reading on paper or did not find it easy to remember things they read on paper. Mean achievement

differences across the subscales were similar to one another in magnitude. Again, reflecting the patterns noted for overall reading achievement, no statistically significant differences were noted in any of the subscales between pupils who enjoyed reading on a screen or found it easy to remember things read on a screen and their peers who did not.

Table 3.55: Mean achievement on reading **purpose** and **process** subscales of pupils in Ireland, by the extent to which they enjoyed reading on paper or on a screen and the extent to which they found it easy to remember things they read on paper or on a screen (2021)

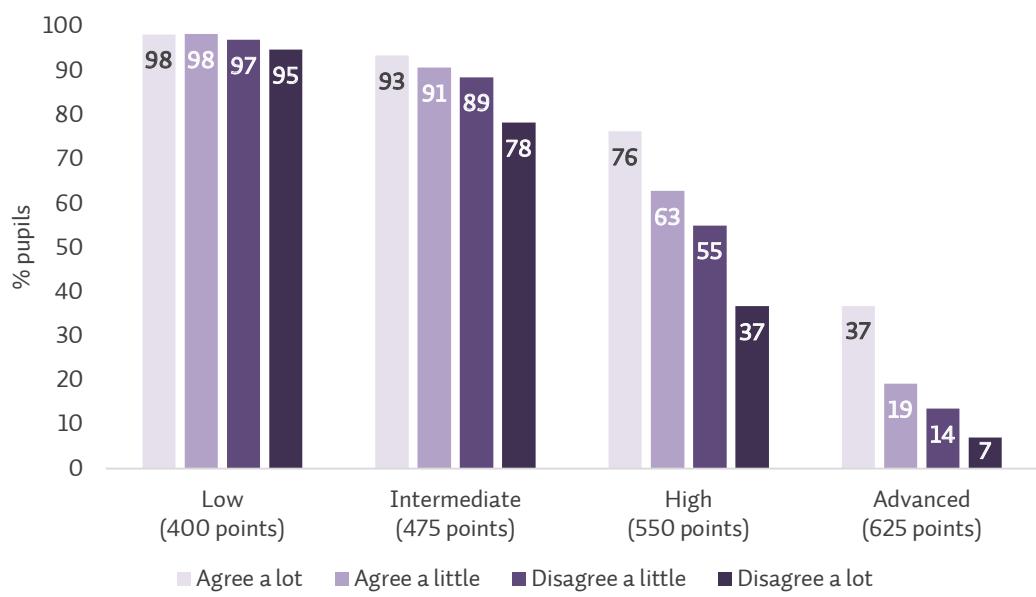
		Agree a lot	Agree a little	Disagree a little	Disagree a lot	Mean difference between agree a lot and disagree a lot
I enjoy reading on paper	<b>Literary</b>	602	573	561	530	<b>-72</b>
	<b>Informational</b>	593	562	549	521	<b>-72</b>
	<b>Retrieve/Infer</b>	589	561	549	520	<b>-69</b>
	<b>Interpret/Evaluate</b>	600	571	558	529	<b>-72</b>
I enjoy reading on a screen	<b>Literary</b>	572	590	598	580	+8
	<b>Informational</b>	562	580	587	570	+8
	<b>Retrieve/Infer</b>	559	578	584	568	+9
	<b>Interpret/Evaluate</b>	571	588	594	578	+7
I find it easy to remember things I read on paper	<b>Literary</b>	598	587	566	541	<b>-58</b>
	<b>Informational</b>	588	577	556	533	<b>-56</b>
	<b>Retrieve/Infer</b>	586	574	553	533	<b>-52</b>
	<b>Interpret/Evaluate</b>	597	585	564	542	<b>-54</b>
I find it easy to remember things I read on a screen	<b>Literary</b>	577	593	589	570	-7
	<b>Informational</b>	567	583	579	559	-8
	<b>Retrieve/Infer</b>	564	580	577	559	-5
	<b>Interpret/Evaluate</b>	577	590	587	568	-9

Source: Appendix Tables A3.104, A3.105, A3.106, and A3.107.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the extent to which they enjoyed reading on paper and on a screen and found it easy to remember things they read on paper and on a screen are shown in Figures 3.32-3.35. Percentage differences between the *agree a lot* and *disagree a lot* categories in the *I enjoy reading on paper* and *I find it easy to remember things I read on paper* questions were statistically significant across all benchmarks except for the Low Benchmark, with the former group of pupils tending to have an advantage compared to the latter. However, these differences widened with subsequent benchmarks. For example, as seen in Figure 3.32, while 93% of pupils who agreed a lot that they enjoy reading on paper reached the Intermediate Benchmark as opposed to 78% of pupils who disagreed a lot, a difference of 15 percentage points, the equivalent difference at the Advanced Benchmark was 30 percentage points (37% vs 7%). Regarding pupils' levels of enjoyment of reading on a screen and the extent to which they found it easy to remember things they read on a screen, clear-cut patterns were not detected, with percentage differences between the different categories mostly not being statistically significant.

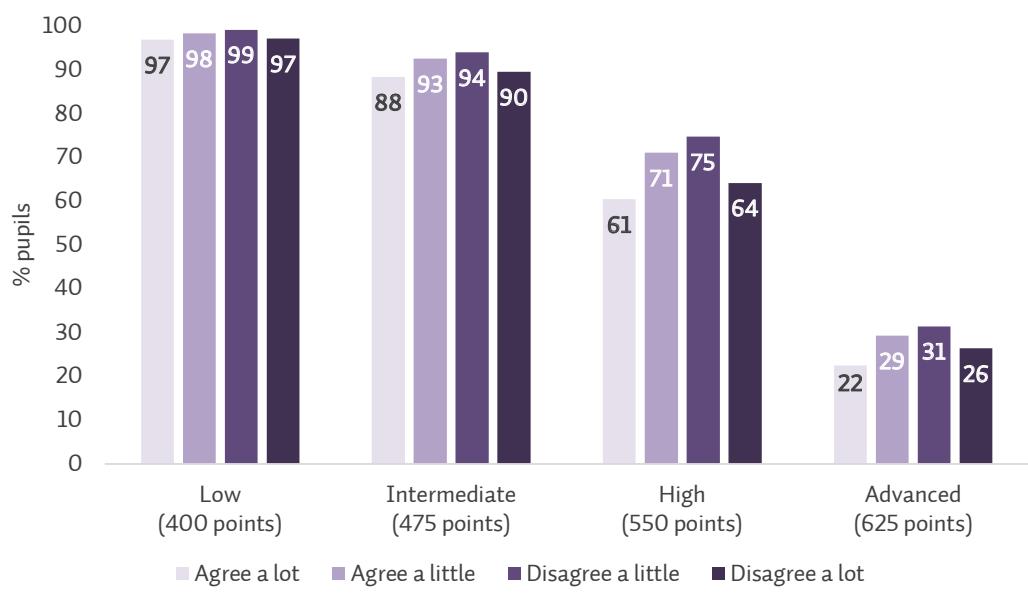
Figure 3.32: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they enjoyed reading on paper (2021)



Source: Appendix Table A3.108.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

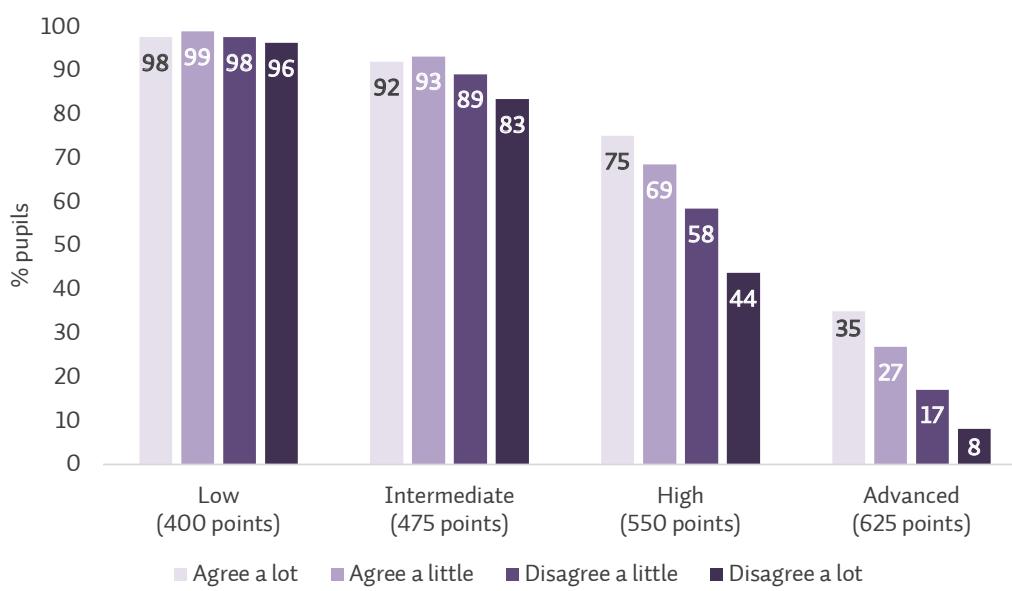
Figure 3.33: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they enjoyed reading on a screen (2021)



Source: Appendix Table A3.109.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

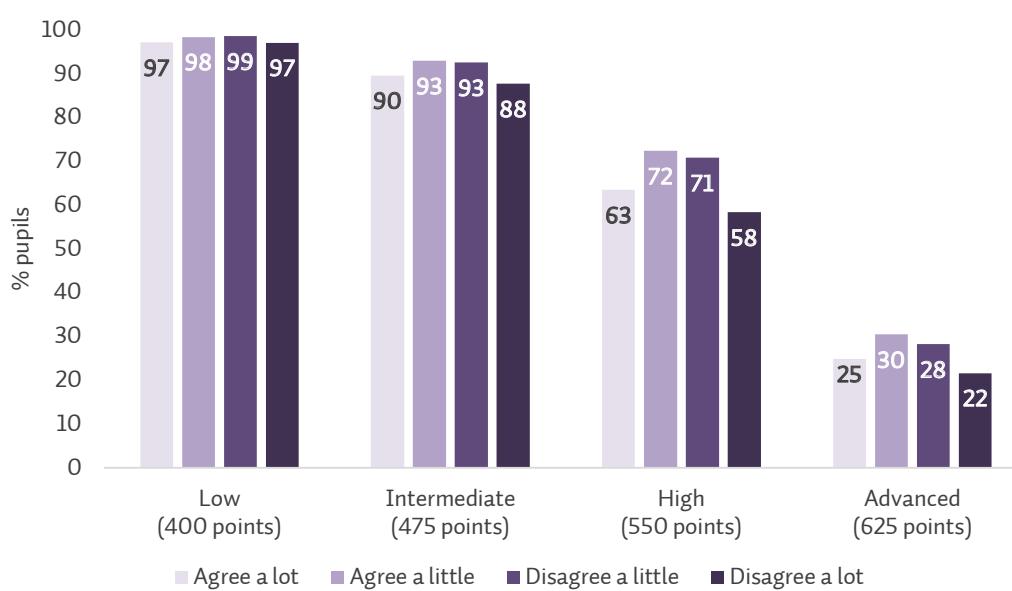
Figure 3.34: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they found it easy to remember things they read on paper (2021)



Source: Appendix Table A3.110.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Figure 3.35: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by the extent to which they found it easy to remember things they read on a screen (2021)



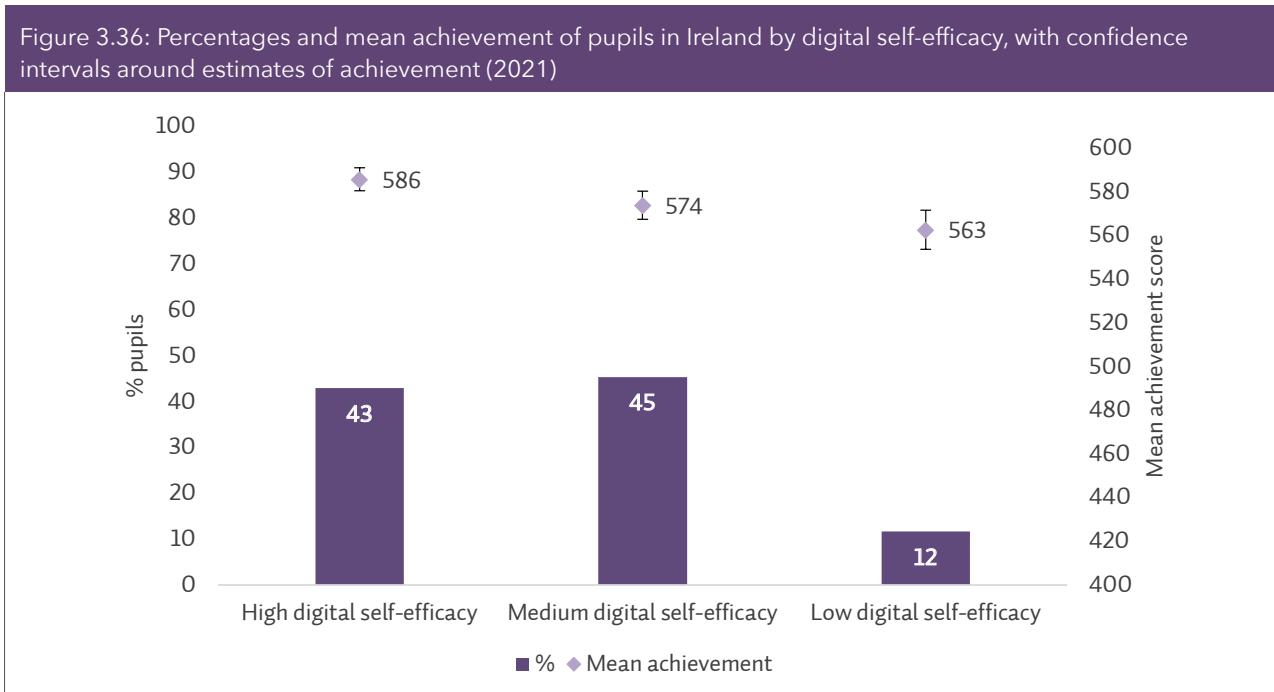
Source: Appendix Table A3.111.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Digital self-efficacy

Pupils' perceived self-efficacy in using digital devices was captured through eight items in the pupil questionnaire: *I am good at using a computer or tablet; I am good at typing; It is easy for me to find information on the internet; I know how to create written stories or reports; I know how to create presentations; I can recognise a website that is useful to me; I can tell if a website is trustworthy; I know how to make and share a video.* Pupils were asked how much they agreed or disagreed with each of these eight statements and their responses were used to create the PIRLS Digital Self-Efficacy scale, on the basis of which pupils were grouped into three categories: *high digital self-efficacy, medium digital self-efficacy, or low digital self-efficacy.*

Figure 3.36 shows the percentages and mean achievement of pupils in each category of the PIRLS *Digital Self-Efficacy* scale in Ireland in 2021. Approximately four out of 10 pupils (43%) indicated that they had *high digital self-efficacy*, 45% that they had *medium digital self-efficacy*, and 12% that they had *low digital self-efficacy*. Pupils with *high digital self-efficacy* achieved a mean score of 586 points, which was statistically significantly higher than those of their peers with *medium* (574) and *low digital self-efficacy* (563).



Source: Appendix Table A3.112.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.56 shows the percentages and mean achievement of pupils in each category of the PIRLS *Digital Self-Efficacy* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident internationally, and was mostly more pronounced, with score differences between pupils with *high digital self-efficacy* and those with *low digital self-efficacy* ranging from 23 points in Ireland to 70 in Australia. Overall, Ireland's difference was the smallest in magnitude among the reference countries.

Table 3.56: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by digital self-efficacy (2021)

		<b>Overall mean</b>	<b>High digital self-efficacy</b>		<b>Medium digital self-efficacy</b>		<b>Low digital self-efficacy</b>		<b>Mean difference between high and low digital self-efficacy</b>
			<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	
	Ireland	577	43	586	45	574	12	563	<b>-23</b>
<b>Start G5</b>	Northern Ireland	566	51	580	40	558	8	529	<b>-51</b>
	Croatia	557	46	565	47	554	7	520	<b>-44</b>
	Lithuania	552	42	564	50	548	8	526	<b>-38</b>
	Australia ✎	540	41	562	47	536	12	492	<b>-70</b>
	England ✎	558	43	574	47	551	10	521	<b>-53</b>
	Hong Kong SAR	573	29	581	50	575	21	558	<b>-24</b>
<b>End G4</b>	Poland	549	66	553	32	548	2	~	~
	Finland	549	55	553	41	548	5	522	<b>-32</b>
	New Zealand	521	42	536	46	521	13	489	<b>-47</b>
	Singapore	587	36	603	48	585	15	557	<b>-46</b>
	PIRLS	503	38	515	45	503	17	480	<b>-35</b>

Source: Appendix Table A3.112.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

Tables 3.57 and 3.58 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Digital Self-Efficacy* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils with *high digital self-efficacy* tended to achieve statistically significantly higher scores across all four subscales compared to their peers with *low digital self-efficacy* in Ireland and all reference countries, with smaller differences noted for Ireland compared to most of the reference countries. In Ireland, smaller mean differences were noted on the Retrieve/Infer subscale – although this difference was still statistically significant.

Table 3.57: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by digital self-efficacy (2021)

	Literary			Mean difference between high and low digital self-efficacy	Informational			Mean difference between high and low digital self-efficacy	
	High digital self-efficacy	Medium digital self-efficacy	Low digital self-efficacy		High digital self-efficacy	Medium digital self-efficacy	Low digital self-efficacy		
Ireland	593	580	569	<b>-24</b>	581	571	562	<b>-19</b>	
<b>Start G5</b>	Northern Ireland	587	565	535	<b>-52</b>	576	552	530	<b>-46</b>
<i>Croatia</i>	575	567	524	<b>-50</b>	563	549	515	<b>-47</b>	
<i>Lithuania</i>	562	549	529	<b>-33</b>	565	549	523	<b>-42</b>	
<b>End G4</b>	Australia ↗	565	540	493	<b>-72</b>	561	534	492	<b>-69</b>
	England ↗	573	552	525	<b>-48</b>	577	552	520	<b>-57</b>
	Hong Kong SAR	570	567	550	<b>-20</b>	592	585	566	<b>-26</b>
	Poland	556	550	~	~	552	547	~	~
	<i>Finland</i>	551	546	514	<b>-37</b>	554	549	521	<b>-33</b>
	<i>New Zealand</i>	539	522	493	<b>-46</b>	536	520	488	<b>-48</b>
	<i>Singapore</i>	607	590	562	<b>-45</b>	603	584	555	<b>-48</b>
	PIRLS	516	504	480	<b>-36</b>	514	502	479	<b>-35</b>

Source: Appendix Tables A3.113 and A3.114.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

Table 3.58: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by digital self-efficacy (2021)

		Retrieve/Infer			Mean difference between high and low digital self-efficacy	Interpret/Evaluate			Mean difference between high and low digital self-efficacy
		High digital self-efficacy	Medium digital self-efficacy	Low digital self-efficacy		High digital self-efficacy	Medium digital self-efficacy	Low digital self-efficacy	
	Ireland	578	569	561	<b>-16</b>	591	578	567	<b>-24</b>
<b>Start G5</b>	Northern Ireland	571	549	523	<b>-48</b>	587	565	538	<b>-49</b>
	Croatia	559	551	517	<b>-43</b>	571	558	523	<b>-48</b>
	Lithuania	565	551	528	<b>-37</b>	564	547	520	<b>-44</b>
<b>End G4</b>	Australia ✖	554	530	487	<b>-68</b>	570	543	496	<b>-73</b>
	England ✖	571	548	518	<b>-52</b>	578	554	527	<b>-52</b>
	Hong Kong SAR	586	580	560	<b>-26</b>	580	575	558	<b>-22</b>
	Poland	548	545	~	~	556	550	~	~
	Finland	554	549	522	<b>-32</b>	554	547	519	<b>-35</b>
	New Zealand	534	521	492	<b>-42</b>	539	521	486	<b>-54</b>
	Singapore	598	582	555	<b>-43</b>	607	589	560	<b>-47</b>
	PIRLS	514	503	480	<b>-34</b>	516	503	478	<b>-37</b>

Source: Appendix Tables A3.115 and A3.116.

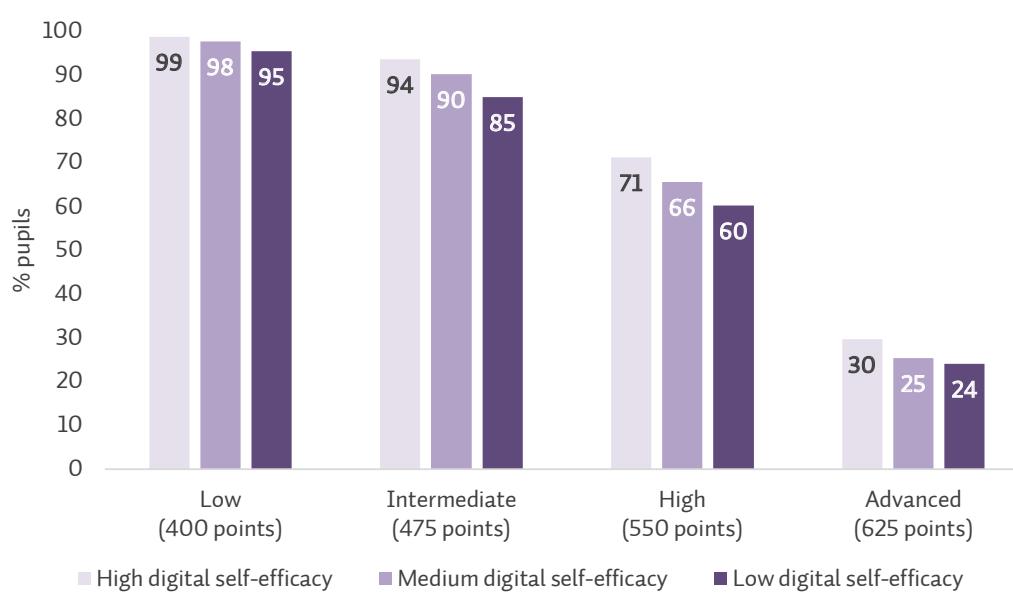
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

~ Mean achievement is not reported due to insufficient data.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by their digital self-efficacy are shown in Figure 3.37. Percentage differences between the *high digital self-efficacy* and the *low digital self-efficacy* categories were statistically significant across all benchmarks except for the Advanced Benchmark, with the former group of pupils tending to have an advantage compared to the latter. However, these differences were not too substantial, ranging from four to 11 percentage points.

Figure 3.37: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by digital self-efficacy (2021)



Source: Appendix Table A3.117.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Parents' reading attitudes and behaviours

### Liking reading

The extent to which pupils' parents liked reading was captured through eight items in the home questionnaire: *I read only if I have to* (reverse coded); *I like talking about what I read with other people*; *I like to spend my spare time reading*; *I read only if I need information* (reverse coded); *Reading is an important activity in my home*; *I would like to have more time for reading*; *I enjoy reading*; *Reading is one of my favourite hobbies*. Pupils' parents were asked how much they agreed or disagreed with each statement. Responses to these eight statements along with those to one more item asking about the frequency with which parents read for their own enjoyment at home (with response options ranging from *every day* or *almost every day* to *never* or *almost never*)<sup>24</sup> were used to create the PIRLS *Parents Like Reading* scale, on the basis of which pupils were grouped into three categories: those whose parents *very much like reading*, *somewhat like reading*, or *do not like reading*.

Figure 3.38 shows the percentages and mean achievement of pupils in each category of the PIRLS *Parents Like Reading* scale in Ireland in 2021. Approximately four out of 10 pupils (42%) had parents who indicated that they *very much like reading* and *somewhat like reading*, respectively, and the remaining 16% had parents who indicated that they *do not like reading*. Pupils whose parents *very much like reading* achieved a mean score of 599 points, which was statistically significantly higher than those of their peers whose parents *somewhat like* (574) or *do not like reading* (555).

Figure 3.38: Percentages and mean achievement of pupils in Ireland by parents' liking of reading, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.118.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.59 shows the percentages and mean achievement of pupils in each category of the PIRLS *Parents Like Reading* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident in all reference countries, with mean achievement differences between pupils whose parents *very much like reading* and those whose parents *do not like reading*, favouring the former, ranging from 26 points in Hong Kong to 55 points in New Zealand.

Table 3.59: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by parents' liking of reading (2021)

	Overall mean	Very much like reading		Somewhat like reading		Do not like reading		Mean difference between very much like reading and do not like reading	
		%	Mean	%	Mean	%	Mean		
<b>Start G5</b>	Ireland	577	42	599	42	574	16	555	<b>-44</b>
	Northern Ireland	566	39	595	42	569	19	556	<b>-39</b>
	Croatia	557	26	575	56	557	18	535	<b>-41</b>
	Lithuania	552	37	589	47	564	16	545	<b>-44</b>
<b>End G4</b>	Australia ✕	540	-	-	-	-	-	-	
	England ✕	558	-	-	-	-	-	-	
	Hong Kong SAR	573	14	592	63	573	24	567	<b>-26</b>
	Poland	549	36	566	47	546	17	529	<b>-37</b>
	Finland	549	38	573	44	547	18	522	<b>-51</b>
	New Zealand	521	44	563	40	532	17	508	<b>-55</b>
	Singapore	587	21	622	57	589	23	571	<b>-51</b>
	PIRLS	503	31	527	52	500	17	480	<b>-47</b>

Source: Appendix Table A3.118.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on parents' liking of reading were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in *italics* took it on paper.

✖ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Tables 3.60 and 3.61 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils in each category of the PIRLS *Parents Like Reading* scale in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils whose parents indicated that they *very much like reading* tended to achieve statistically significantly higher scores across all four subscales compared to their peers whose parents indicated that they *do not like reading*, in Ireland and all reference countries. In Ireland, a slightly smaller mean difference was noted on the Retrieve/Infer subscale compared to the rest of the subscales – however, all differences were substantial and statistically significant.

Table 3.60: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by parents' liking of reading (2021)

		Literary			Mean difference between very much like reading and do not like reading	Informational			Mean difference between very much like reading and do not like reading
		Very much like reading	Somewhat like reading	Do not like reading		Very much like reading	Somewhat like reading	Do not like reading	
Start G5	Ireland	607	580	561	<b>-45</b>	596	571	553	<b>-43</b>
	Northern Ireland	601	575	566	<b>-35</b>	592	563	552	<b>-40</b>
	Croatia	588	567	547	<b>-41</b>	572	553	530	<b>-42</b>
	Lithuania	588	561	542	<b>-46</b>	590	567	548	<b>-42</b>
End G4	Australia ✎	-	-	-	-	-	-	-	-
	England ✎	-	-	-	-	-	-	-	-
	Hong Kong SAR	585	565	558	<b>-27</b>	601	583	576	<b>-25</b>
	Poland	568	550	530	<b>-38</b>	565	544	528	<b>-38</b>
	Finland	570	547	518	<b>-52</b>	574	548	522	<b>-53</b>
	New Zealand	567	533	505	<b>-62</b>	561	533	508	<b>-53</b>
	Singapore	627	593	574	<b>-53</b>	623	588	570	<b>-53</b>
	PIRLS	528	500	480	<b>-48</b>	526	499	480	<b>-46</b>

Source: Appendix Tables A3.119 and A3.120.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on parents' liking of reading were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✎ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Table 3.61: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by parents' liking of reading (2021)

		Retrieve/Infer				Interpret/Evaluate			
		Very much like reading	Somewhat like reading	Do not like reading	Mean difference between very much like reading and do not like reading	Very much like reading	Somewhat like reading	Do not like reading	Mean difference between very much like reading and do not like reading
Start G5	Ireland	592	569	551	<b>-40</b>	604	578	560	<b>-43</b>
	Northern Ireland	587	561	547	<b>-40</b>	602	576	565	<b>-37</b>
	Croatia	570	553	531	<b>-38</b>	582	562	537	<b>-45</b>
	Lithuania	590	568	546	<b>-44</b>	589	562	543	<b>-46</b>
Australia ↗		-	-	-	-	-	-	-	-
England ↗		-	-	-	-	-	-	-	-
End G4	Hong Kong SAR	599	578	569	<b>-29</b>	592	572	566	<b>-26</b>
	Poland	562	541	524	<b>-38</b>	568	550	533	<b>-35</b>
	Finland	574	549	522	<b>-52</b>	572	547	522	<b>-51</b>
	New Zealand	559	531	504	<b>-55</b>	567	532	510	<b>-56</b>
Singapore		618	586	568	<b>-51</b>	625	592	576	<b>-50</b>
PIRLS		527	500	481	<b>-46</b>	527	499	480	<b>-47</b>

Source: Appendix Tables A3.121 and A3.122.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on parents' liking of reading were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

↗ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by their parents' liking of reading are shown in Figure 3.39. Although percentage differences between the *very much like reading* and *do not like reading* categories were statistically significant across all benchmarks, with the former group tending to have an advantage compared to the latter, these differences were larger at the High and Advanced Benchmarks. For example, while 99% of pupils whose parents *very much like reading* reached the Low Benchmark as opposed to 97% of pupils whose parents *do not like reading*, a difference of two percentage points, the equivalent differences at the High and Advanced Benchmarks were 22 and 19 percentage points, respectively (77% vs 55% and 37% vs 18%).



Source: Appendix Table A3.123.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 included a *Parents Like Reading* scale; however, the 2011 scale was slightly different to the corresponding 2016 and 2021 scales.<sup>25</sup> This means that comparisons are only possible between the 2016 and 2021 data (additional information about the scale components across cycles can be found in Appendix Table A3.125). Mean achievement differences between pupils whose parents *very much like reading* and those whose parents *do not like reading* did not change substantially between 2016 and 2021 across both overall reading achievement and all subscales (Table 3.62).

<sup>25</sup> In 2016 and 2021, the scale included one item that was not included in the 2011 scale: *Reading is one of my favourite hobbies*. Also, the highest category of the scale was titled *like reading* in 2011 (Martin et al., 2017; Martin & Mullis, 2012).

Table 3.62: Percentages and mean reading achievement of pupils in Ireland, by parents' liking of reading (2016, 2021)

		Very much like reading		Somewhat like reading		Do not like reading		Mean difference between very much like reading and do not like reading
		%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2016</b>	47	588	40	560	13	544	<b>-43</b>
	<b>2021</b>	42	599	42	574	16	555	<b>-44</b>
<b>Literary</b>	<b>2016</b>	47	591	40	565	13	549	<b>-42</b>
	<b>2021</b>	42	607	42	580	16	561	<b>-45</b>
<b>Informational</b>	<b>2016</b>	47	587	40	558	13	542	<b>-45</b>
	<b>2021</b>	42	596	42	571	16	553	<b>-43</b>
<b>Retrieve/Infer</b>	<b>2016</b>	47	586	40	560	13	544	<b>-42</b>
	<b>2021</b>	42	592	42	569	16	551	<b>-40</b>
<b>Interpret/Evaluate</b>	<b>2016</b>	47	591	40	562	13	545	<b>-46</b>
	<b>2021</b>	42	604	42	578	16	560	<b>-43</b>

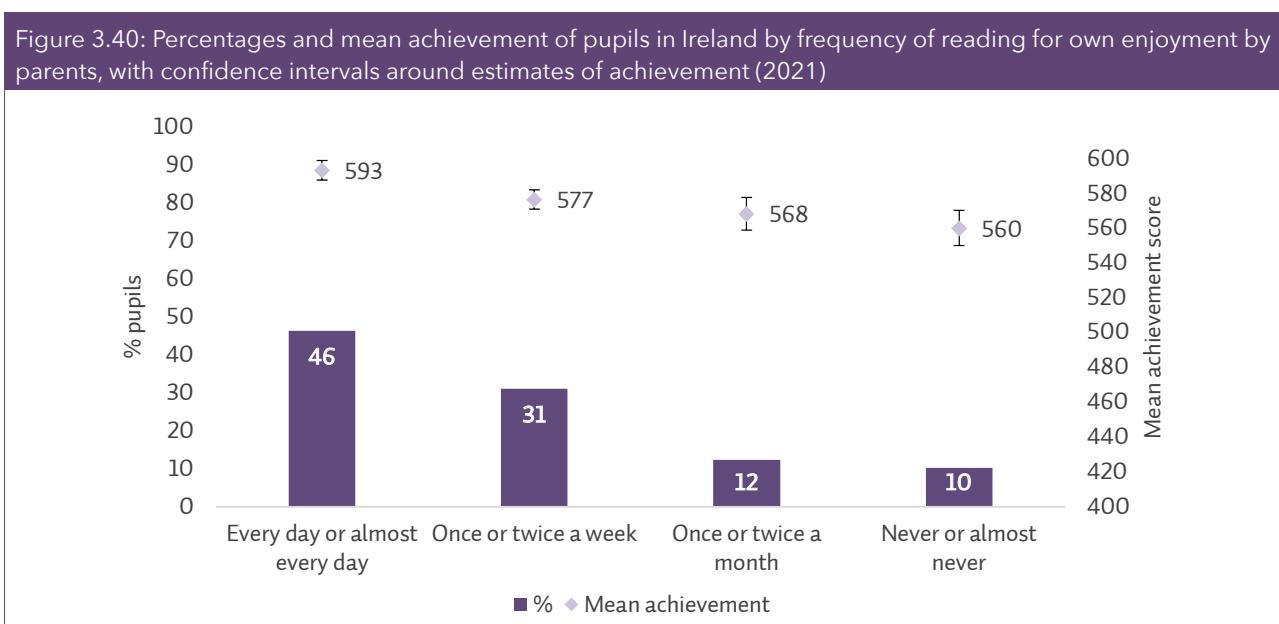
Source: Appendix Table A3.124.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. In 2011, the scale components and index category labels differed slightly from those used in 2016 and 2021.

## Reading for enjoyment

Parents of PIRLS pupils were asked about the frequency with which they read for their own enjoyment, with response options ranging from *every day or almost every day* to *never or almost never*. Figure 3.40 shows the percentages and mean achievement of pupils whose parents read for their own enjoyment *every day or almost every day*, *once or twice a week*, *once or twice a month*, and *never or almost never* in Ireland in 2021. Approximately half of pupils (46%) had parents who read for their own enjoyment *every day or almost every day*, 31% had parents who read for their own enjoyment *once or twice a week*, 12% had parents who read for their own enjoyment *once or twice a month*, and the remaining 10% had parents who *never or almost never* read for their own enjoyment. Pupils whose parents read for their own enjoyment *every day or almost every day* achieved a mean score of 593 points, which was statistically significantly higher than the scores of the rest of their peers.

Figure 3.40: Percentages and mean achievement of pupils in Ireland by frequency of reading for own enjoyment by parents, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.126.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.63 shows the percentages and mean achievement of pupils by the frequency with which their parents read for their own enjoyment in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The pattern observed in Ireland was also evident internationally, with pupils whose parents read for their own enjoyment *every day or almost every day* achieving the highest mean scores, and mean differences between this group and those whose parents *never or almost never* read for enjoyment ranging between 17 points in Hong Kong and 37 points in Lithuania.

Table 3.63: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of reading for own enjoyment by parents (2021)

		<b>Overall mean</b>	<b>Every day or almost every day</b>		<b>Once or twice a week</b>		<b>Once or twice a month</b>		<b>Never or almost never</b>		<b>Mean difference between every day or almost every day and never or almost never</b>
			%	Mean	%	Mean	%	Mean	%	Mean	
	Ireland	577	46	593	31	577	12	568	10	560	<b>-33</b>
<b>Start G5</b>	Northern Ireland	566	40	589	32	571	14	571	14	562	<b>-27</b>
	Croatia	557	37	564	33	557	22	552	8	544	<b>-20</b>
	Lithuania	552	36	580	35	570	21	564	9	543	<b>-37</b>
<b>End G4</b>	Australia <i>✉</i>	540	-	-	-	-	-	-	-	-	-
	England <i>✉</i>	558	-	-	-	-	-	-	-	-	-
	Hong Kong SAR	573	28	582	42	571	21	573	8	565	<b>-17</b>
	Poland	549	36	559	36	550	19	541	8	534	<b>-26</b>
	Finland	549	54	563	26	544	14	538	6	530	<b>-33</b>
	New Zealand	521	47	555	28	533	14	531	11	521	<b>-34</b>
	Singapore	587	43	605	33	584	16	578	8	577	<b>-28</b>
	PIRLS	503	37	515	37	502	16	499	10	484	<b>-31</b>

Source: Appendix Table A3.126.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on frequency of reading for own enjoyment by parents were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

*✉* Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Tables 3.64 and 3.65 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the frequency with which their parents read for their own enjoyment in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils whose parents read for their own enjoyment *every day or almost every day* tended to achieve statistically significantly higher PIRLS scores across all four subscales compared to their peers whose parents *never or almost never* read for their own enjoyment, in Ireland and all reference countries. In Ireland, mean differences were roughly similar in magnitude across the four subscales.

Table 3.64: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of reading for own enjoyment by parents (2021)

		Literary					Informational					Mean difference between every day or almost every day and never or almost never
		Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never	Mean difference between every day or almost every day and never or almost never	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never	Mean difference between every day or almost every day and never or almost never	
	Ireland	600	582	574	567	<b>-34</b>	590	573	566	559	<b>-31</b>	
<b>Start G5</b>	Northern Ireland	596	576	580	570	<b>-26</b>	585	568	563	556	<b>-28</b>	
	Croatia	575	569	562	556	<b>-19</b>	561	552	548	539	<b>-21</b>	
	Lithuania	579	568	557	544	<b>-35</b>	581	573	567	547	<b>-33</b>	
<b>End G4</b>	Australia <i>✉</i>	-	-	-	-	-	-	-	-	-	-	
	England <i>✉</i>	-	-	-	-	-	-	-	-	-	-	
	Hong Kong SAR	574	563	563	558	<b>-17</b>	592	581	583	573	<b>-19</b>	
	Poland	561	552	546	536	<b>-25</b>	558	549	539	533	<b>-25</b>	
	Finland	560	544	535	528	<b>-31</b>	565	543	540	530	<b>-35</b>	
	New Zealand	558	534	529	521	<b>-37</b>	553	532	534	520	<b>-33</b>	
	Singapore	608	590	585	575	<b>-33</b>	605	583	576	578	<b>-28</b>	
	PIRLS	517	503	499	484	<b>-32</b>	515	502	498	483	<b>-31</b>	

Source: Appendix Tables A3.127 and A3.128.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on frequency of reading for own enjoyment by parents were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✉ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Table 3.65: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by frequency of reading for own enjoyment by parents (2021)

	Retrieve/Infer					Interpret/Evaluate					Mean difference between every day or almost every day and never or almost never
	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never	Mean difference between every day or almost every day and never or almost never	Every day or almost every day	Once or twice a week	Once or twice a month	Never or almost never		
Ireland	586	571	565	556	<b>-31</b>	598	581	572	565		<b>-33</b>
<b>Start G5</b>	Northern Ireland	580	564	563	552	<b>-28</b>	596	577	581	570	<b>-27</b>
	<i>Croatia</i>	559	553	549	540	<b>-20</b>	569	562	556	548	<b>-21</b>
	<i>Lithuania</i>	581	574	568	545	<b>-36</b>	581	568	562	538	<b>-43</b>
<b>End G4</b>	Australia <i>✉</i>	-	-	-	-	-	-	-	-	-	-
	England <i>✉</i>	-	-	-	-	-	-	-	-	-	-
	Hong Kong SAR	587	576	578	564	<b>-23</b>	583	570	572	563	<b>-20</b>
	Poland	554	546	538	528	<b>-26</b>	562	554	546	539	<b>-24</b>
	<i>Finland</i>	564	545	538	530	<b>-33</b>	563	543	538	529	<b>-34</b>
	<i>New Zealand</i>	551	531	531	516	<b>-35</b>	557	535	536	520	<b>-36</b>
	<i>Singapore</i>	601	582	573	576	<b>-25</b>	608	588	583	580	<b>-28</b>
	PIRLS	515	503	499	484	<b>-31</b>	515	501	498	483	<b>-32</b>

Source: Appendix Tables A3.129 and A3.130.

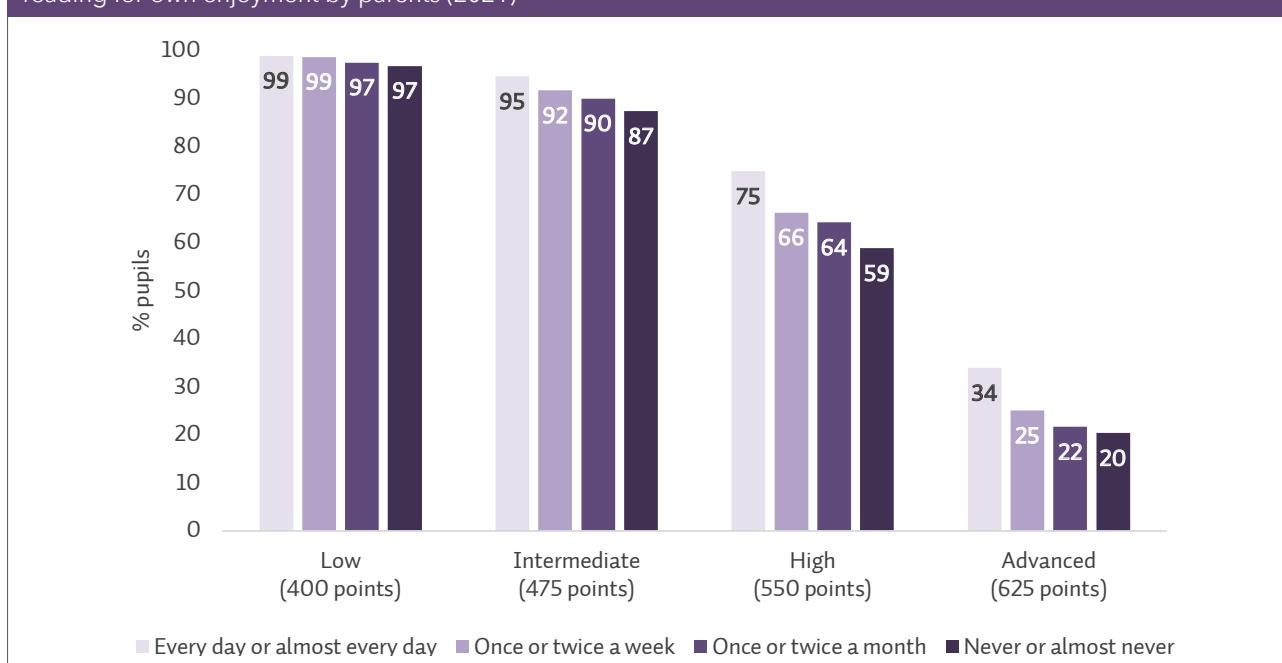
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on frequency of reading for own enjoyment by parents were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✉ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the frequency with which their parents read for their own enjoyment are shown in Figure 3.41. Percentage differences between the *every day or almost every day* and *never or almost never* categories were statistically significant across all benchmarks except for the Low Benchmark, with the former group of pupils tending to have an advantage compared to the latter.

Figure 3.41: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by frequency of reading for own enjoyment by parents (2021)



Source: Appendix Table A3.131.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils' parents about the frequency with which they read for their own enjoyment. Proportions of pupils whose parents read for their own enjoyment *every day or almost every day* gradually decreased over time, going from 55% in 2011 to 46% in 2021. Proportions of pupils whose parents *never or almost never* read for their own enjoyment gradually, although only slightly, increased over time, going from 6% in 2011 to 10% in 2021. Mean achievement differences between the two groups of pupils on overall reading achievement have been substantial and statistically significant across all three cycles of PIRLS, and have widened over time, with a larger increase between 2011 and 2016 and a smaller one between 2016 and 2021. Differences on subscales have also widened between 2011 and 2021, although the specific patterns of change observed varied. On the Literary subscale, the score gap remained stable between 2011 and 2016 and widened slightly between 2016 and 2021, while on the Informational subscale, the gap widened between 2011 and 2016 but narrowed somewhat in 2021. On both process subscales, score gaps widened between 2011 and 2016 and remained stable between 2016 and 2021 (Table 3.66).

Table 3.66: Percentages and mean reading achievement of pupils in Ireland, by frequency of reading for own enjoyment by parents (2011, 2016, 2021)

		Every day or almost every day		Once or twice a week		Once or twice a month		Never or almost never		Mean difference between every day or almost every day and never or almost never
		%	Mean	%	Mean	%	Mean	%	Mean	
<b>Overall</b>	<b>2011</b>	55	565	30	545	8	540	6	540	<b>-25</b>
	<b>2016</b>	48	581	33	564	12	563	8	550	<b>-31</b>
	<b>2021</b>	46	593	31	577	12	568	10	560	<b>-33</b>
<b>Literary</b>	<b>2011</b>	55	571	30	551	8	547	6	541	<b>-30</b>
	<b>2016</b>	48	584	33	570	12	569	8	554	<b>-30</b>
	<b>2021</b>	46	600	31	582	12	574	10	567	<b>-34</b>
<b>Informational</b>	<b>2011</b>	55	563	30	543	8	538	6	536	<b>-26</b>
	<b>2016</b>	48	581	33	560	12	562	8	544	<b>-37</b>
	<b>2021</b>	46	590	31	573	12	566	10	559	<b>-31</b>
<b>Retrieve/Infer</b>	<b>2011</b>	55	565	30	545	8	540	6	542	<b>-24</b>
	<b>2016</b>	48	581	33	562	12	568	8	548	<b>-32</b>
	<b>2021</b>	46	586	31	571	12	565	10	556	<b>-31</b>
<b>Interpret/Evaluate</b>	<b>2011</b>	55	566	30	547	8	543	6	547	<b>-19</b>
	<b>2016</b>	48	583	33	568	12	562	8	550	<b>-33</b>
	<b>2021</b>	46	598	31	581	12	572	10	565	<b>-33</b>

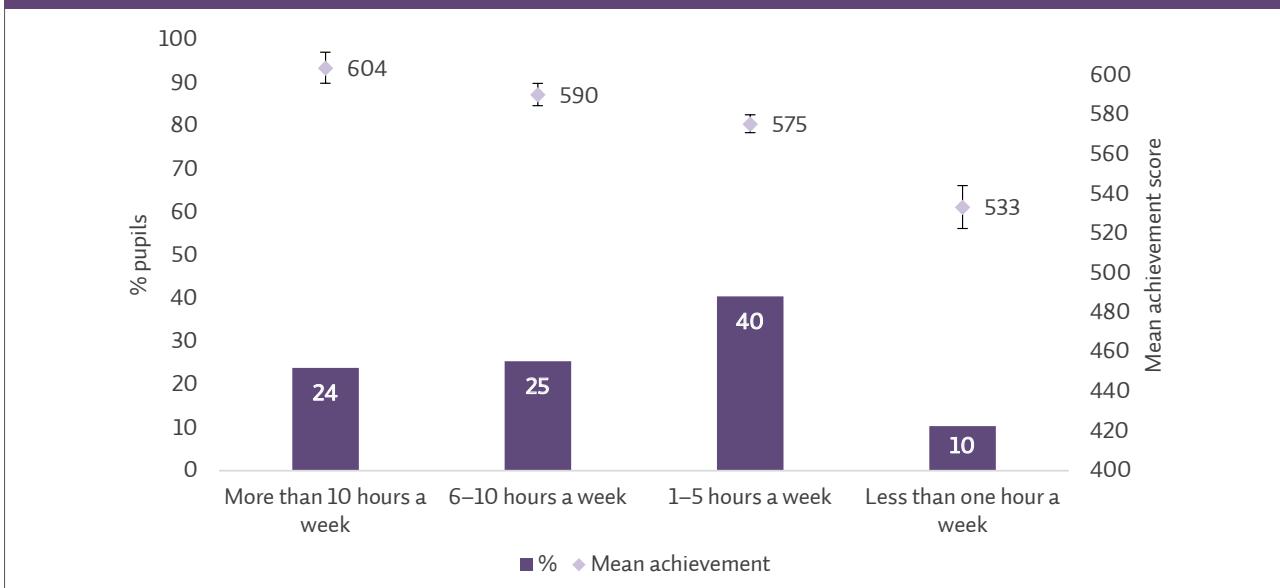
Source: Appendix Table A3.132.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Time spent on reading

Parents of PIRLS pupils were asked about the time they spent reading for themselves at home in a typical week, including books, magazines, newspapers, and materials for work (in print or digital media), with response options ranging from *more than 10 hours a week* to *less than one hour a week*. Figure 3.42 shows the percentages and mean achievement of pupils by the time their parents spent reading for themselves at home in a typical week in Ireland in 2021. Four out of 10 pupils (40%) had parents who spent *1-5 hours a week* reading for themselves at home, one quarter of pupils had parents who spent *more than 10 hours* and *6-10 hours a week*, respectively, reading for themselves at home, and the remaining 10% had parents who spent *less than one hour a week* reading for themselves at home. Pupils whose parents spent *more than 10 hours a week* reading for themselves achieved a mean score of 604 points, which was statistically significantly higher than the scores of the rest of their peers.

Figure 3.42: Percentages and mean achievement of pupils in Ireland by time spent on reading by parents, with confidence intervals around estimates of achievement (2021)



Source: Appendix Table A3.133.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Table 3.67 shows the percentages and mean achievement of pupils by the time their parents spent reading for themselves at home in a typical week in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. The time parents spent reading for themselves did not greatly vary across countries. The pattern noted for Ireland, whereby pupils whose parents spent *more than 10 hours a week* reading for themselves at home had a statistically significantly higher score compared to their peers whose parents spent *less than one hour a week* reading for themselves at home, was noted for all reference countries, albeit to less pronounced degrees, with differences ranging from 31 points in Hong Kong to 70 points in Ireland.

Table 3.67: Percentages and mean reading achievement of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent on reading by parents (2021)

		<b>Overall mean</b>	<b>More than 10 hours a week</b>		<b>6-10 hours a week</b>		<b>1-5 hours a week</b>		<b>Less than one hour a week</b>		<b>Mean difference between more than 10 hours a week and less than one hour a week</b>
			<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	<b>%</b>	<b>Mean</b>	
	Ireland	577	24	604	25	590	40	575	10	533	<b>-70</b>
<b>Start G5</b>	Northern Ireland	566	18	592	23	586	48	573	12	550	<b>-42</b>
	<i>Croatia</i>	557	20	577	26	567	43	550	10	527	<b>-50</b>
	Lithuania	552	24	581	24	579	41	566	10	538	<b>-43</b>
	Australia ✪	540	-	-	-	-	-	-	-	-	-
	England ✪	558	-	-	-	-	-	-	-	-	-
<b>End G4</b>	Hong Kong SAR	573	15	587	21	581	48	573	16	557	<b>-31</b>
	Poland	549	18	569	27	561	45	543	10	522	<b>-47</b>
	<i>Finland</i>	549	24	569	30	560	41	542	5	514	<b>-56</b>
	<i>New Zealand</i>	521	22	561	28	552	41	531	9	507	<b>-54</b>
	<i>Singapore</i>	587	22	618	23	606	42	583	13	553	<b>-65</b>
	PIRLS	503	15	528	21	520	44	503	20	474	<b>-54</b>

Source: Appendix Table A3.133.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on time spent on reading by parents were not available for Australia, England, and the United States.

Countries in *italics* took the test on computer, while those not in italics took it on paper.

✪ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Tables 3.68 and 3.69 show the mean achievement on each of the reading purpose and comprehension process subscales for pupils by the time their parents spent on reading for themselves at home in a typical week, in Ireland, selected reference countries, and on average across all PIRLS countries in 2021. Reflecting the patterns noted for overall reading achievement, pupils whose parents read for themselves at home for *more than 10 hours a week* tended to achieve statistically significantly higher scores across all four subscales compared to their peers whose parents spent *less than one hour a week* on this activity, in Ireland and all reference countries. In Ireland, the largest mean difference (77 points) between these two categories was on the Literary subscale, while the smallest mean difference (65 points) was on the Retrieve/Infer subscale.

Table 3.68: Mean achievement on reading **purpose** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent on reading by parents (2021)

		Literary				Informational					
		More than 10 hours a week	6-10 hours a week	1-5 hours a week	Less than one hour a week	Mean difference between more than 10 hours a week and less than one hour a week	More than 10 hours a week	6-10 hours a week	1-5 hours a week	Less than one hour a week	Mean difference between more than 10 hours a week and less than one hour a week
	Ireland	613	596	582	536	<b>-77</b>	600	586	572	531	<b>-69</b>
<b>Start G5</b>	Northern Ireland	597	593	581	558	<b>-39</b>	591	579	568	549	<b>-42</b>
	Croatia	589	578	561	535	<b>-54</b>	572	564	546	522	<b>-51</b>
	Lithuania	583	579	562	528	<b>-54</b>	582	581	569	544	<b>-38</b>
<b>End G4</b>	Australia ☈	-	-	-	-	-	-	-	-	-	-
	England ☈	-	-	-	-	-	-	-	-	-	-
	Hong Kong SAR	580	572	564	547	<b>-33</b>	596	592	582	565	<b>-31</b>
	Poland	573	563	545	527	<b>-46</b>	570	561	540	519	<b>-51</b>
	Finland	567	558	539	516	<b>-51</b>	571	561	543	512	<b>-59</b>
	New Zealand	559	559	530	511	<b>-47</b>	562	549	532	503	<b>-58</b>
	Singapore	621	612	587	555	<b>-67</b>	618	606	581	553	<b>-65</b>
	PIRLS	530	522	504	474	<b>-55</b>	527	520	503	474	<b>-54</b>

Source: Appendix Tables A3.134 and A3.135.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on time spent on reading by parents were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

☞ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

Table 3.69: Mean achievement on reading **process** subscales of pupils in Ireland, selected reference countries, and on average across all PIRLS countries, by time spent on reading by parents (2021)

		Retrieve/Infer				Mean difference between more than 10 hours a week and less than one hour a week	Interpret/Evaluate			Mean difference between more than 10 hours a week and less than one hour a week	
		More than 10 hours a week	6-10 hours a week	1-5 hours a week	Less than one hour a week		More than 10 hours a week	6-10 hours a week	1-5 hours a week		
	Ireland	595	585	571	529	<b>-65</b>	610	593	581	536	<b>-74</b>
<b>Start G5</b>	Northern Ireland	582	579	565	542	<b>-39</b>	599	593	581	560	<b>-40</b>
	Croatia	571	562	547	521	<b>-51</b>	583	574	553	532	<b>-50</b>
	Lithuania	581	582	571	538	<b>-43</b>	582	579	563	537	<b>-46</b>
<b>End G4</b>	Australia <i>✉</i>	-	-	-	-	-	-	-	-	-	
	England <i>✉</i>	-	-	-	-	-	-	-	-	-	
	Hong Kong SAR	590	588	578	556	<b>-34</b>	589	579	571	556	<b>-33</b>
	Poland	563	559	537	521	<b>-43</b>	573	564	547	527	<b>-45</b>
	Finland	570	559	544	514	<b>-56</b>	570	560	540	514	<b>-56</b>
	New Zealand	557	549	529	506	<b>-51</b>	562	556	533	506	<b>-56</b>
	Singapore	612	603	580	551	<b>-61</b>	621	610	586	559	<b>-63</b>
	PIRLS	527	521	504	475	<b>-52</b>	529	520	503	474	<b>-55</b>

Source: Appendix Tables A3.136 and A3.137.

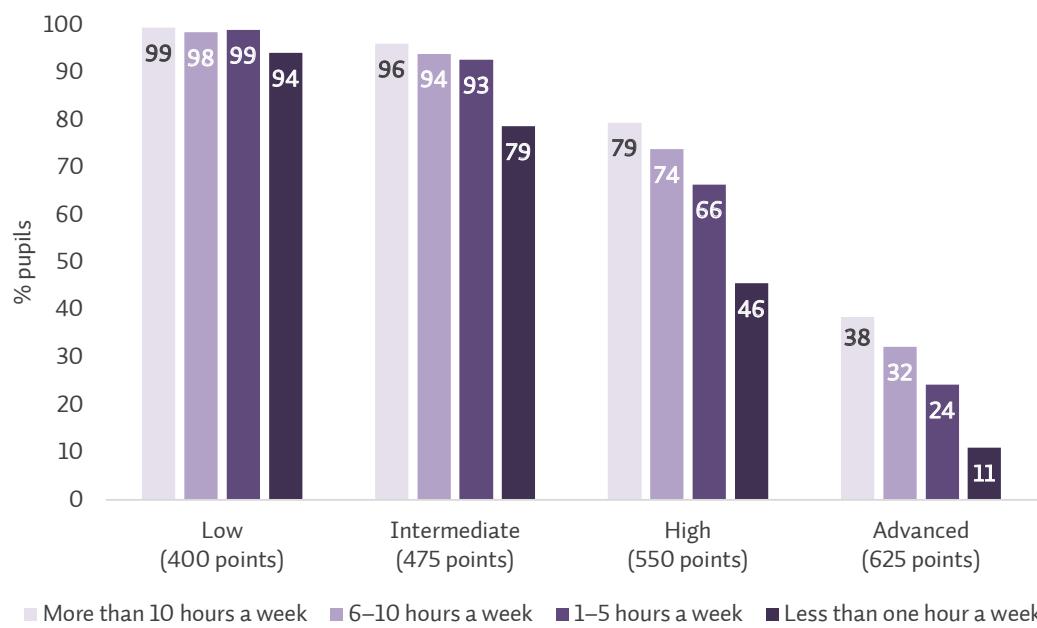
Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix. PIRLS average is based on 54 rather than 57 countries as data on time spent on reading by parents were not available for Australia, England, and the United States.Countries in *italics* took the test on computer, while those not in italics took it on paper.

✉ Country tested one year later than planned (autumn 2021 for southern hemisphere countries; spring 2022 for northern hemisphere countries).

- Data are not available.

The cumulative percentages of pupils in Ireland reaching each of the four International Benchmarks by the time their parents spent reading for themselves at home in a typical week are shown in Figure 3.43. Percentage differences between the *more than 10 hours a week* and *less than one hour a week* categories were statistically significant across all benchmarks (with differences as large as 34 percentage points observed), with the former group of pupils tending to have an advantage compared to the latter.

Figure 3.43: Cumulative percentages of pupils in Ireland reaching each International Benchmark, by time spent on reading by parents (2021)



Source: Appendix Table A3.138.

Note. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

Both PIRLS 2011 and 2016 asked pupils' parents about the time they spent reading for themselves at home in a typical week. The amount of time spent by parents in Ireland reading for themselves at home did not vary greatly over the years. Mean achievement differences between pupils whose parents spent *more than 10 hours a week* and those whose parents spent *less than one hour a week* have been substantial and statistically significant across all three cycles of PIRLS, but they widened considerably between 2011 and 2021 by more than 30 points, on average (Table 3.70).

Table 3.70: Percentages and mean reading achievement of pupils in Ireland, by time spent on reading by parents (2011, 2016, 2021)

	More than 10 hours a week		6-10 hours a week		1-5 hours a week		Less than one hour a week		Mean difference between more than 10 hours a week and less than one hour a week	
	%	Mean	%	Mean	%	Mean	%	Mean		
<b>Overall</b>	<b>2011</b>	20	570	25	566	43	549	12	531	<b>-39</b>
	<b>2016</b>	20	581	27	582	42	567	11	537	<b>-44</b>
	<b>2021</b>	24	604	25	590	40	575	10	533	<b>-70</b>
<b>Literary</b>	<b>2011</b>	20	578	25	570	43	555	12	536	<b>-43</b>
	<b>2016</b>	20	585	27	584	42	573	11	543	<b>-42</b>
	<b>2021</b>	24	613	25	596	40	582	10	536	<b>-77</b>
<b>Informational</b>	<b>2011</b>	20	565	25	564	43	547	12	530	<b>-35</b>
	<b>2016</b>	20	583	27	580	42	565	11	532	<b>-51</b>
	<b>2021</b>	24	600	25	586	40	572	10	531	<b>-69</b>
<b>Retrieve/Infer</b>	<b>2011</b>	20	571	25	564	43	549	12	532	<b>-38</b>
	<b>2016</b>	20	581	27	581	42	567	11	536	<b>-45</b>
	<b>2021</b>	24	595	25	585	40	571	10	529	<b>-65</b>
<b>Interpret/Evaluate</b>	<b>2011</b>	20	571	25	569	43	550	12	536	<b>-35</b>
	<b>2016</b>	20	583	27	584	42	571	11	537	<b>-46</b>
	<b>2021</b>	24	610	25	593	40	581	10	536	<b>-74</b>

Source: Appendix Table A3.139.

Notes. Statistically significant mean differences in **bold**. Due to rounding, some differences may appear inconsistent with those reported in text or the Appendix.

## Chapter summary

This chapter focused on the relationships of selected pupil and home characteristics with the reading achievement, overall and across the four PIRLS subscales, of pupils in Ireland in PIRLS 2021. Ireland's data were compared to those of selected reference countries and the corresponding averages across all PIRLS countries, while data from PIRLS 2011 and 2016 were also compared to those from 2021, where appropriate. As noted in Chapter 1, PIRLS 2021 data must be interpreted in the context of important caveats, which are particularly relevant for countries that tested at Start G5 (including Ireland).

## Demographic background and home environment

Pupils born in Ireland (92%) achieved a slightly higher mean score than their peers who were not born in Ireland. Although this mean difference was not statistically significant for overall reading achievement, mean differences on the Literary and Retrieve/Infer subscales were larger than those on the other two subscales and were statistically significant, favouring pupils born in Ireland. Percentages of pupils reaching each International Benchmark were broadly similar between these two groups, while mean achievement differences seemed to narrow between 2016 and 2021 across both overall reading achievement and all subscales. Across reference countries, there was variation in the magnitude and direction of mean achievement differences between pupils born in the country of the PIRLS test and those born outside the country.

Pupils who almost always spoke the language of the PIRLS test at home in Ireland (11%) achieved the highest mean score (597) among their peers (i.e., those who always, sometimes,

or never spoke the language of the PIRLS test at home) – a pattern also evident internationally in 2021 and across PIRLS cycles within Ireland. Higher percentages reaching each of the four International Benchmarks were also noted for these pupils, with this advantage being more apparent with every subsequent benchmark.

While the vast majority of pupils (95% and 98%, respectively) who took part in PIRLS 2021 in Ireland attended a formal educational programme for children aged 3 or older and Junior Infants/Senior Infants, approximately 60% attended a formal educational programme for children under 3. Although pupils who attended such a programme performed similarly to their peers who did not, pupils who attended a formal educational programme for children aged 3 or older achieved a statistically significantly higher mean score (586) than their peers who did not (535). Patterns noted for overall reading achievement for the two types of programmes were also evident across all subscales and in the percentages of pupils reaching each of the International Benchmarks. Given that only 2% of pupils were reported not to have attended Junior Infants/Senior Infants, the comparison of their reading achievement with the rest of their peers would be statistically inappropriate and, thus, has not been reported.

Almost no pupils in Ireland (1%) were reported by their parents to *never* be involved in early literacy activities (e.g., read books, play with alphabet toys, etc.) before starting First Class, while more than half (56%) were reported to be *often* involved in such activities. The latter group achieved the highest mean score (592) among their peers, a pattern also evident internationally. Mean differences were similar in magnitude across the four subscales in Ireland. Higher percentages reaching each of the four International Benchmarks were noted among those pupils who were *often* involved in early literacy activities compared to the rest of their peers. The proportion of pupils *often* involved in early literacy activities remained stable across years and mean differences have consistently favoured this group.

More than half of pupils in Ireland (60%) were reported by their parents to be able to do a range of literacy tasks (e.g., read some words, write letters of the alphabet, etc.) *very well* before they started First Class, which was the highest percentage across PIRLS countries (although, due to some variation across countries in the stage of schooling referenced, international comparisons on this variable must be made cautiously). These pupils achieved the highest mean score (602) among their peers, a pattern also evident internationally. Notably, among the reference countries, Ireland had the second largest mean achievement difference between pupils reported to be able to do these literacy tasks *very well* and those reported to be able to do them *not well* (82 points), following Singapore (105 points). Percentage differences between the *very well* and *not well* categories were statistically significant across all International Benchmarks, with the former group tending to have an advantage compared to the latter. Although percentages of pupils within each of the categories were almost identical between 2016 and 2021, mean achievement differences widened between the two cycles across both overall reading achievement and all subscales.

Based on the PIRLS 2021 data, approximately 40% of pupils in Ireland were expected by their parents to complete an undergraduate degree (e.g., Bachelor's), while 35% were expected to complete a postgraduate degree. Only 5% of pupils were expected to complete up to the Leaving Certificate (only) and a PLC course or apprenticeship, respectively, and 17% were expected to complete a third-level certificate or diploma (not to degree level). Pupils' mean scores in 2021 gradually increased with each increase in their expected education level (a pattern also evident across PIRLS cycles), going from 509 at the lowest level to 599 at the highest level, as did the percentages of pupils reaching each of the International Benchmarks. Pupils

expected to complete up to the Leaving Certificate (only) achieved a statistically significantly lower mean score (509) than the rest of their peers except for those expected to complete a PLC course or apprenticeship (525). A slightly larger mean difference was noted on the Informational subscale compared to the other three subscales. Although percentages of pupils expected to complete lower levels of education remained relatively stable across years, percentages of pupils expected to complete a third-level certificate or diploma (not to degree level) and complete an undergraduate degree (e.g., Bachelor's) slightly decreased, and percentages of pupils expected to complete a postgraduate degree (e.g., Master's or Doctorate) increased (mostly between 2011 and 2016).

In Ireland, approximately three out of four pupils (74%) and more than half of pupils (54%) had their own computer or tablet and their own smartphone, respectively. While these pupils achieved statistically significantly lower mean scores than their peers who did not have their own digital devices, the magnitude and direction of such mean achievement differences varied across countries. In Ireland, mean achievement differences between pupils with and without their own computer or tablet were larger on the Informational and Retrieve/Infer subscales compared to the other two subscales, where mean differences were not statistically significant, while mean differences were broadly similar in magnitude across all subscales based on pupils' access to their own smartphone. More substantial percentage differences across the International Benchmarks were noted based on pupils' access to their own smartphone compared to their access to their own computer or tablet, but all differences favoured pupils who did not own these digital devices.

## Wellbeing

Approximately half of pupils in Ireland in 2021 reported that they *sometimes* felt tired and hungry, respectively, when they arrived at school. Although only 6% of pupils reported *never* feeling tired upon school arrival, 32% of pupils reported *never* feeling hungry upon school arrival. Pupils who reported feeling tired or hungry when they arrived at school *every day* achieved the lowest mean scores (549 and 555, respectively), which were statistically significantly lower than the scores of the rest of their peers (with only one exception: the relative advantage of the pupils who reported feeling hungry upon school arrival *almost every day* was not statistically significant). Also, pupils who reported *sometimes* feeling tired and those who reported *never* feeling hungry achieved the highest mean scores. All these patterns were also evident in most of the selected reference countries. Percentages of pupils in Ireland reaching each International Benchmark reflected the patterns noted for continuous achievement. While mean achievement differences seemed to narrow between pupils in the *every day* and *never* categories for both tiredness and hunger between 2016 and 2021 across both overall reading achievement and all subscales, percentages of pupils reporting to feel tired or hungry *every day* or *almost every day* increased between 2016 and 2021.

## Reading behaviours

Approximately three out of 10 of pupils in Ireland in 2021, respectively, reported that they borrowed books or e-books from their school or local library *at least once a week* or *once or twice a month*, 20% that they did so *a few times a year*, and 23% that they *never* or *almost never* did so. Pupils who borrowed books or e-books from a library *once or twice a month* achieved the highest mean score (587) and were most likely to reach each of the four International Benchmarks. Notably, the mean achievement difference between pupils who borrowed books or e-books from a library *at least once a week* and those who *never* or *almost never* did so was not statistically significant. The magnitude and direction of mean achievement differences

between these two groups varied across countries, while, in Ireland, these mean differences were broadly similar in magnitude across all subscales. Fewer pupils reported borrowing books or e-books *at least once a week* in 2021 than in previous PIRLS cycles and more pupils reported *never or almost never* doing so. Also, while in 2021 pupils in Ireland who reported borrowing books or e-books *at least once a week* achieved a slightly (though not statistically significantly) *lower* mean score than their peers who reported *never or almost never* doing so, in 2011 and 2016 the former group of pupils achieved a statistically significantly higher mean score than the latter group. These data, though, need to be interpreted with caution given that the administration of PIRLS 2021 took place in the midst of the COVID-19 pandemic and pupils may not have had the opportunity to use their school or local library in the same way they would in previous years.

More than half of pupils in Ireland in 2021 reported that they spent *30 minutes or less* on a normal school day using digital devices to find and read information, 27% reported that they spent *no time*, and 16% that they spent *more than 30 minutes* on this activity. The latter group achieved the lowest mean score, while pupils who reported spending *no time* using digital devices to find and read information on a normal school day achieved the highest mean score. In Ireland, the largest mean difference (20 points) between these two categories was on the Literary subscale, favouring the *no time* category. Percentage differences between the *more than 30 minutes* and *no time* categories, favouring the latter, widened with every subsequent benchmark and were statistically significant at the High and Advanced Benchmarks. The time spent using digital devices to find and read information varied across countries as did the magnitude and direction of mean achievement differences between the *more than 30 minutes* and *no time* categories. While this mean difference was in favour of the *no time* category in Ireland, differences across countries mostly favoured the *more than 30 minutes* category. The percentage of pupils spending *more than 30 minutes* on a normal school day using digital devices to find and read information increased by five percentage points between 2016 and 2021, and the percentage of pupils spending *no time* on this activity decreased by 10 percentage points, while mean achievement differences between these categories narrowed between 2016 and 2021 across both overall reading achievement and all subscales.

## Reading attitudes

Based on the PIRLS 2021 data, approximately half of pupils (49%) in Ireland indicated that they were *very confident* in reading, 31% that they *very much like reading*, and 53% that they were *very engaged* in reading lessons. On the other hand, 17% of pupils indicated that they were *not confident* in reading, 23% that they *do not like reading*, and 5% that they were *less than engaged* in reading lessons. *Very confident* pupils, those who *very much like reading*, and those who are *very engaged* in reading lessons achieved the highest mean scores compared to their peers, with the largest differences relating to the extent to which pupils felt confident in reading. These patterns observed in Ireland were also evident internationally. In Ireland, the smallest mean difference between *very confident* and *not confident* pupils was on the Retrieve/Infer subscale; mean differences between pupils who *very much like reading* and those who *do not like reading* were slightly smaller on the process subscales (Retrieve/Infer and Interpret/Evaluate) than the purpose subscales (Literary and Informational); and slightly smaller mean differences between *very engaged* and *less than engaged* pupils were noted on the Informational and Interpret/Evaluate subscales than the other two subscales – however, all these differences were still statistically significant and most were substantial.

Across the four International Benchmarks, percentage differences between *very confident*

and *not confident* pupils, and pupils who *very much like reading* and those who *do not like reading*, favouring the pupils with more positive reading attitudes in each case, were mostly statistically significant and widened with every subsequent benchmark. Percentage differences between *very engaged* and *less than engaged* pupils were statistically significant at the higher benchmarks (High and Advanced) only.

Overall, pupils in Ireland seemed to have less positive attitudes to reading in 2021 compared to 2016. Proportions of *very confident* pupils, pupils who *very much like reading*, and those who are *very engaged* in reading lessons decreased between the two PIRLS cycles, while proportions of *not confident* pupils and pupils who *do not like reading* increased. Mean achievement differences between *very confident* and *not confident* pupils also widened between 2016 and 2021 across both overall reading achievement and most of the subscales, while mean achievement differences between pupils who *very much like reading* and those who *do not like reading* narrowed between the two PIRLS cycles. Mean achievement differences between *very engaged* and *less than engaged* pupils increased between cycles, but only marginally.

## Digital attitudes

Based on the PIRLS 2021 data, pupils in Ireland enjoyed reading on paper more than reading on a screen, and they found it easier to remember things they read on paper than on a screen. Higher levels of enjoyment of reading on paper and finding it easy to remember things read on paper were associated with statistically significantly higher mean scores, while patterns were less clear-cut when it came to enjoying reading on a screen or finding it easy to remember things read on a screen, with these patterns also being consistent across all subscales.

Percentage differences between the *agree a lot* and *disagree a lot* categories in the *I enjoy reading on paper* and *I find it easy to remember things I read on paper* questions were statistically significant across all benchmarks except for the Low Benchmark, and widened with every subsequent benchmark, with pupils who agreed a lot tending to have an advantage compared to those who disagreed a lot. Regarding pupils' levels of enjoyment of reading on a screen and the extent to which they found it easy to remember things they read on a screen, clear-cut patterns across the benchmarks were not detected.

Approximately four out of 10 pupils (43%) indicated that they have *high digital self-efficacy*, 45% that they have *medium digital self-efficacy*, and 12% that they have *low digital self-efficacy*. Pupils with *high digital self-efficacy* achieved the highest mean score among their peers. A smaller mean difference was noted between pupils with *high digital self-efficacy* and those with *low digital self-efficacy* on the Retrieve/Infer subscale compared to the other subscales – though this difference was still statistically significant. Although percentage differences between the *high* and *low* categories of digital self-efficacy were statistically significant across all benchmarks except for the Advanced Benchmark, with the former group of pupils tending to have an advantage compared to the latter, these differences were not very substantial.

## Parents' reading attitudes and behaviours

Approximately four out of 10 pupils (42%) who took part in PIRLS 2021 in Ireland had parents who *very much like reading*, 46% had parents who read for their own enjoyment *every day or almost every day*, and 24% had parents who spent *more than 10 hours a week* reading for themselves at home. On the other hand, 16% of pupils had parents who *do not like reading*, and 10% had parents who *never or almost never* read for their own enjoyment and spent *less than one hour a week* reading for themselves at home, respectively. Pupils whose parents *very much like reading*, those whose parents read for their own enjoyment *every day or almost every*

day, and those whose parents spent *more than 10 hours a week* reading for themselves at home achieved the highest mean scores compared to their peers. These patterns observed in Ireland were also evident internationally, but, across the selected reference countries, Ireland had the largest mean difference (70 points) between pupils whose parents indicated that they read for themselves at home for *more than 10 hours a week* and those whose parents spent *less than one hour a week* on this activity.

A slightly smaller mean achievement difference was noted between pupils whose parents *very much like* reading and those whose parents *do not like reading* on the Retrieve/Infer subscale compared to the rest of the subscales. Between pupils whose parents read for themselves at home for *more than 10 hours a week* and those whose parents did this for *less than one hour a week*, the largest mean difference (77 points) was on the Literary subscale and the smallest (65 points) was on the Retrieve/Infer subscale. Mean differences were similar in magnitude across the four subscales based on the frequency with which pupils' parents read for their own enjoyment.

Percentage differences between pupils whose parents *very much like reading* and those whose parents *do not like reading*, as well as between pupils whose parents read for themselves at home for *more than 10 hours a week* versus for *less than one hour a week*, favouring the former group in each case, were statistically significant across all International Benchmarks and larger at the higher benchmarks (High and Advanced). Percentage differences between pupils whose parents read for their own enjoyment *every day or almost every day* and those whose parents *never or almost never* did so were statistically significant across all benchmarks except for the Low Benchmark, with the former group of pupils tending to have an advantage compared to the latter.

Overall, and in line with the patterns noted for pupils' reported reading attitudes, proportions of pupils whose parents indicated that they *very much like reading* and read for their own enjoyment *every day or almost every day* decreased across PIRLS cycles, while proportions of pupils whose parents indicated that they *do not like reading* and *never or almost never* read for their own enjoyment increased. Mean achievement differences between pupils whose parents *very much like reading* and those whose parents *do not like reading* remained stable across years, while mean achievement differences between pupils whose parents read for their own enjoyment *every day or almost every day* and those whose parents *never or almost never* did so, and between pupils whose parents spent *more than 10 hours a week* versus *less than one hour a week* reading for themselves at home, widened across PIRLS cycles.