

## Reading fluency in England

*Interpreting data from the FFT Reading Assessment Programme*

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## Introduction

Reading fluency is usually understood as the bridge between the decoding of words and reading for meaning. Fluency is complex and encompasses aspects of automaticity (rapid word reading without conscious decoding), accuracy, and prosody (expressive, phrased reading).

The development of reading fluency allows working memory resources to be deployed to the challenge of reading comprehension. Successful reading comprehension is impossible if pupils are needing to devote these resources to basic decoding.<sup>1</sup>

Fluency is usually measured in terms of the number of words within a passage of text that a child can accurately read aloud in one minute. We take 'words correct per minute' (WCPM) as a broad indicator of fluency.

Understanding fluency and how it develops is important for addressing the reading difficulties of struggling readers, in particular. However, the focus in England has typically been on decoding (measured by the Year 1 phonics check) and comprehension (measured in KS1 and KS2 National Curriculum tests). This paper provides some of the first evidence from England about fluency across the primary school years, how this is influenced by a range of demographic factors, and how it relates to reading comprehension.<sup>2</sup>

Data for **Part 1. Acquiring Reading Fluency in England** were collected through FFT's [Reading Assessment Programme](#) between September 2022 to July 2024 (2 academic years) in a total of 684 schools (375 in 22/23 and 612 in 23/24). They include more than 340,000 individual assessments in this period from more than 110,000 pupils from year 1 to year 6. We set out more detail about the data collected in Appendix 1.

Data for **Part 2. Reading Fluency and Reading Comprehension** include KS2 National Curriculum test scores for individual pupils provided to FFT as a part of the [FFT Early Results Service](#) for schools during July to September 2024. We have matched these data to oral reading fluency assessments undertaken during Year 6 in the Reading Assessment Programme (September 2023 – July 2024) for these same pupils. We've focused on 3,623 pupils at 157 schools where we have at least two fluency assessments (and taken an average of these) and their score in the KS2 National Curriculum test.

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<sup>1</sup> For the importance of reading fluency see DFE, *The Reading Framework* (2023), p.69 ff., and Education Endowment Foundation, *Improving Literacy in KS2: Guidance Report* (2021), pp. 18-21.

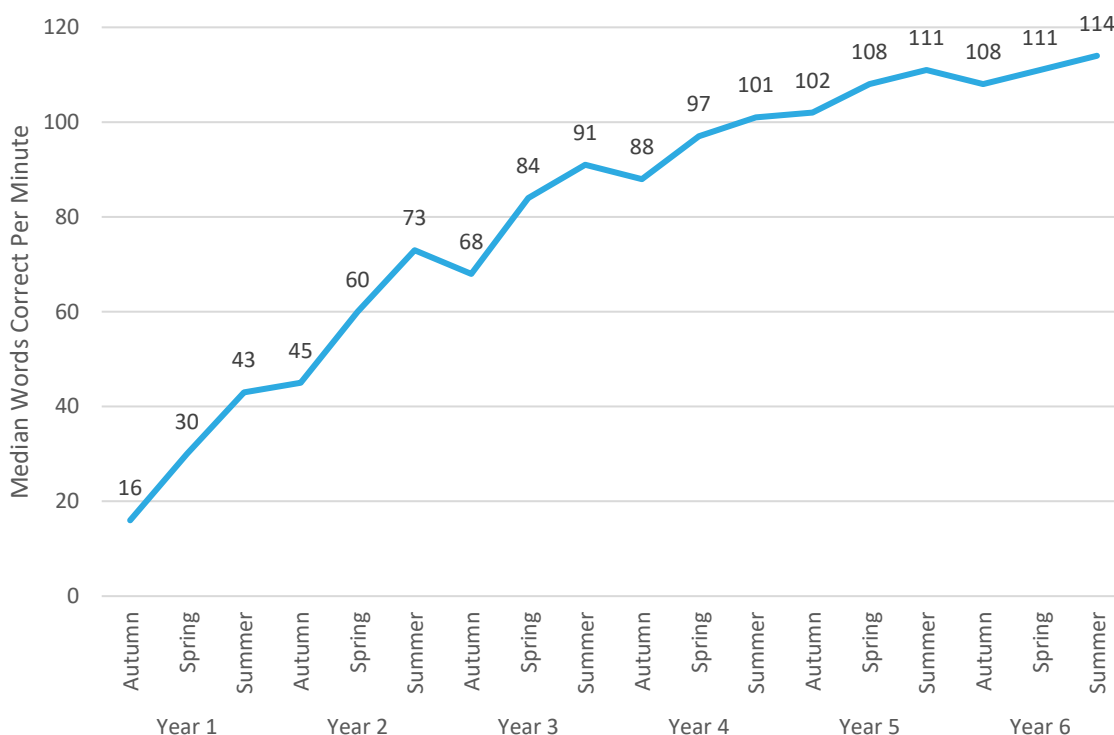
<sup>2</sup> Academics at the University of Oregon have led work on US pupils' fluency development and have analysed millions of test scores from their DIBELS assessments. These provide a useful comparison, although their starting grade year is a calendar year later than for UK pupils. Oral Reading Fluency grade-level benchmark goals for the DIBELS® 8th Edition are available here: <https://dibels.uoregon.edu/resources>.

## Part 1. Acquiring Reading Fluency in the UK

### 1.1 Median Fluency Through Primary School (Words Correct Per Minute)

Figure 1 shows the median level of oral reading fluency development in England. A typical pupil may gain fluency rapidly in Years 1 and 2 and then more slowly in Years 3 to 6, reaching around 114 words correct per minute by the end of Year 6. In some (but not all) years, there is a slight dip between Summer and Autumn.

Figure 1. Median oral reading fluency at different assessment points in primary school



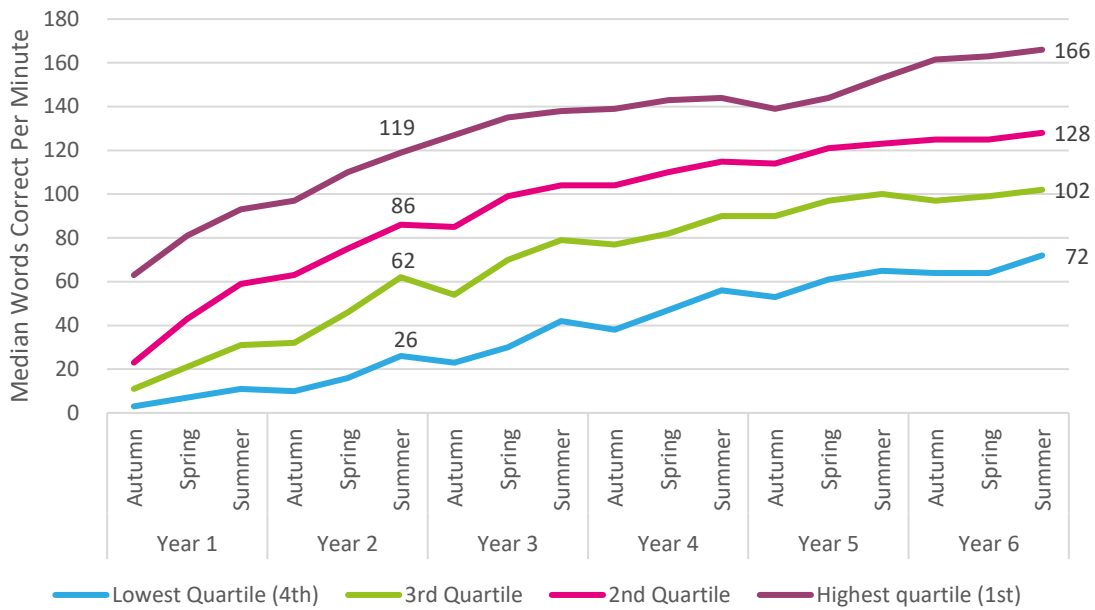
### 1.2 More and Less Fluent Readers: The Lowest Quartile

English classrooms have a wide range of reading fluency. Figure 2 shows that the gap between more fluent and less fluent readers is very large throughout primary school. The median of the lowest quartile of readers (25%) read aloud at 72 WCPM (range of 0 to 87) by the end of primary school, around 4 years behind the majority of their peers who attain 73 WCPM by the end of KS1 (as shown in Fig.1 above). This means a quarter of pupils in England are likely reading with insufficient fluency for reading for meaning and pleasure by the end of primary school.<sup>3</sup>

The implication of this for schools is that lower attaining readers need support, not just with phonics and decoding, but also with reading fluency. It is well established that reading for pleasure is vital in becoming a successful, confident reader and a key factor in building reading fluency. However, for a child who does not develop even an adequate reading fluency, reading for pleasure may be out of reach.

<sup>3</sup> 72 WCPM is below a benchmark of 90 WCPM previously given as a target for KS1 by the UK Standards and Testing Agency as sufficient fluency for reading for meaning, but was recently removed. This benchmark was suggested by the scholar Diana McGuiness in 2006 (cited by Such, 2021, *The Art and Science of Primary Reading*, p.39, footnote 4). Such suggests 110 WCPM as a better benchmark. (For further discussion of the link between fluency and comprehension see section 2).

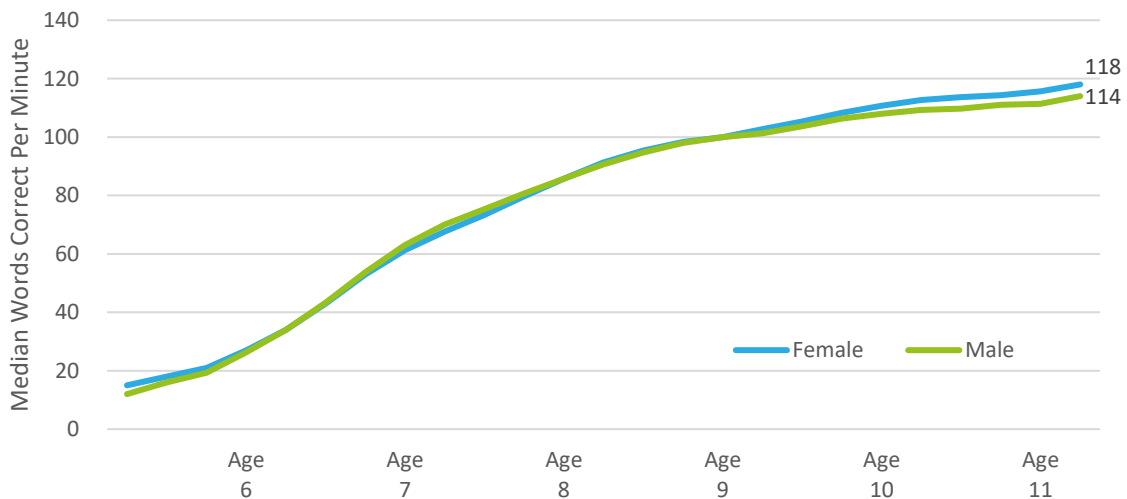
Figure 2. Lower and higher attaining readers (quartiles) median reading fluency at different assessment points in primary school



### 1.3 Pupil Characteristics: Boys and Girls and Reading Fluency

Figure 3 plots oral reading fluency against age (as opposed to school year) and gender. It is apparent from this figure that gender does not have a strong effect on fluency, although it seems that girls start and finish primary school with fractionally higher reading fluency than boys. This is interesting as girls do better than boys in the KS2 National Curriculum reading tests. For instance, in the KS2 reading paper in 2024, 78% of girls were judged to be reading at age-related expectations (ARE), as opposed to 71% of boys.<sup>4</sup> However, these data show that this difference is unlikely to be caused by differences in reading fluency.

Figure 3. Median reading fluency for boys and girls by age

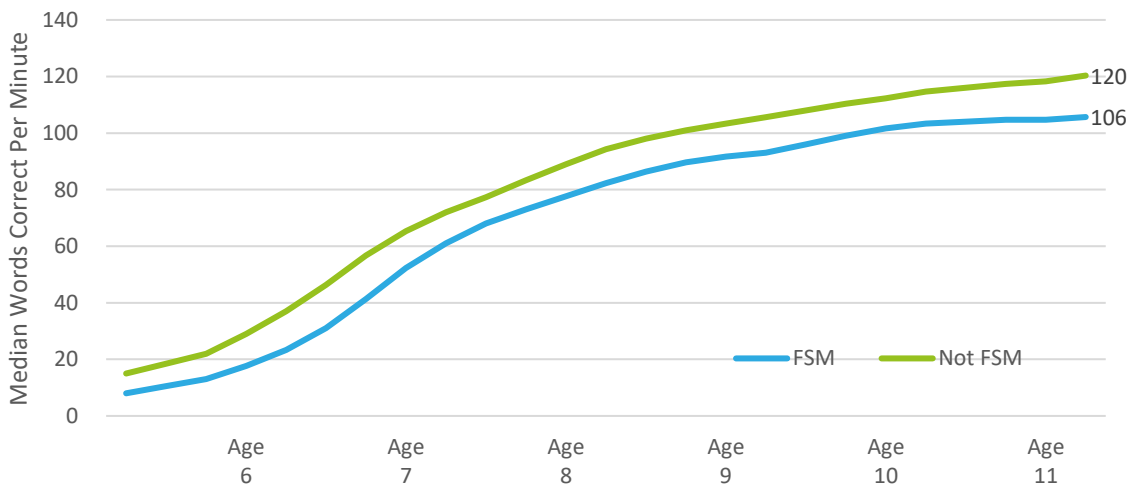


<sup>4</sup> Department for Education. (2024). Academic year 2023/24: Key stage 2 attainment. *DFE Website*. <https://explore-education-statistics.service.gov.uk/find-statistics/key-stage-2-attainment>

### 1.4 Pupil Characteristics: Free School Meals and Reading Fluency

Figure 4 plots the median reading fluency by age for pupils who have been eligible for free school meals at any point in their school career, against those who haven't. This figure shows the strong and sustained impact that deprivation has on the development of reading fluency. Pupils eligible for free school meals start and finish primary school with much lower reading fluency. By the end of primary school, the median fluency for a pupil who has never been eligible for free school meals is 120 WCPM, whereas the median for a pupil eligible for free school meals is just 106.

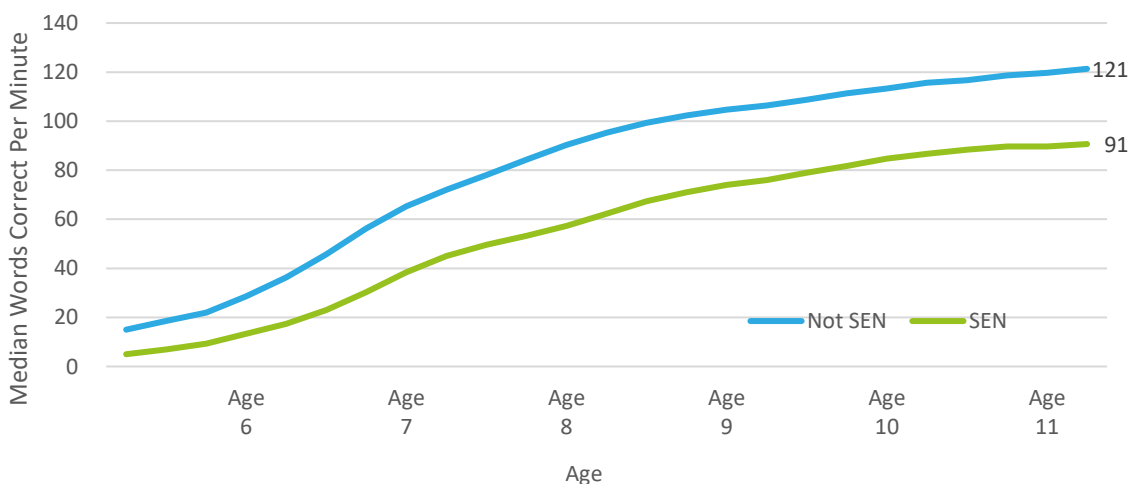
Figure 4. Median Reading Fluency for pupils ever eligible for Free School Meals and those never eligible for Free School Meals by age



### 1.5 Pupil Characteristics: SEND and Reading Fluency

The data in Figure 5 show that pupils with special educational needs also have lower reading fluency than pupils without special educational needs, and that the gap tends to widen as they get older. However, this association is likely to be tautological, at least in part, as low early attainment is often used to determine who has SEND. At age 11 the non-SEND median fluency is 121 words correct per minute, whereas the SEND median is just 91 words correct per minute.

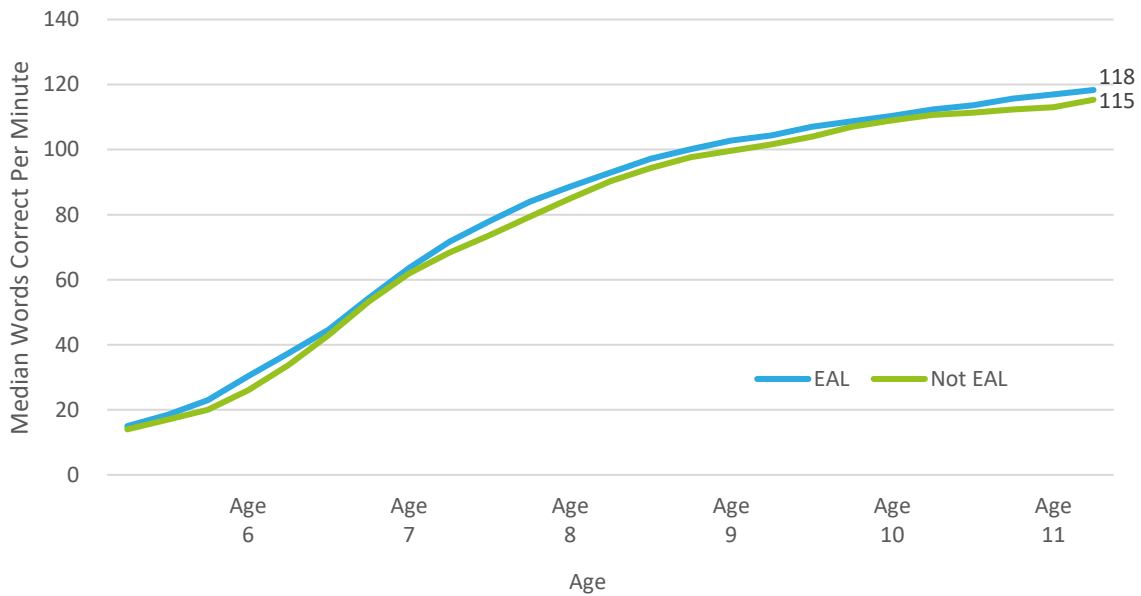
Figure 5. Median Reading Fluency for pupils with SEND and pupils without SEND by age



## 1.6 Pupil Characteristics: EAL and Reading Fluency

Finally, as shown in Figure 6, the characteristic of English as an Additional Language (EAL) does not appear to influence reading fluency, as the median for both EAL pupils and non-EAL pupils are extremely similar throughout primary school. However, we may imagine that new arrivals to the UK with limited English may not have been given the Reading Assessment Programme.

Figure 6. Median Reading Fluency for EAL pupils and non-EAL pupils



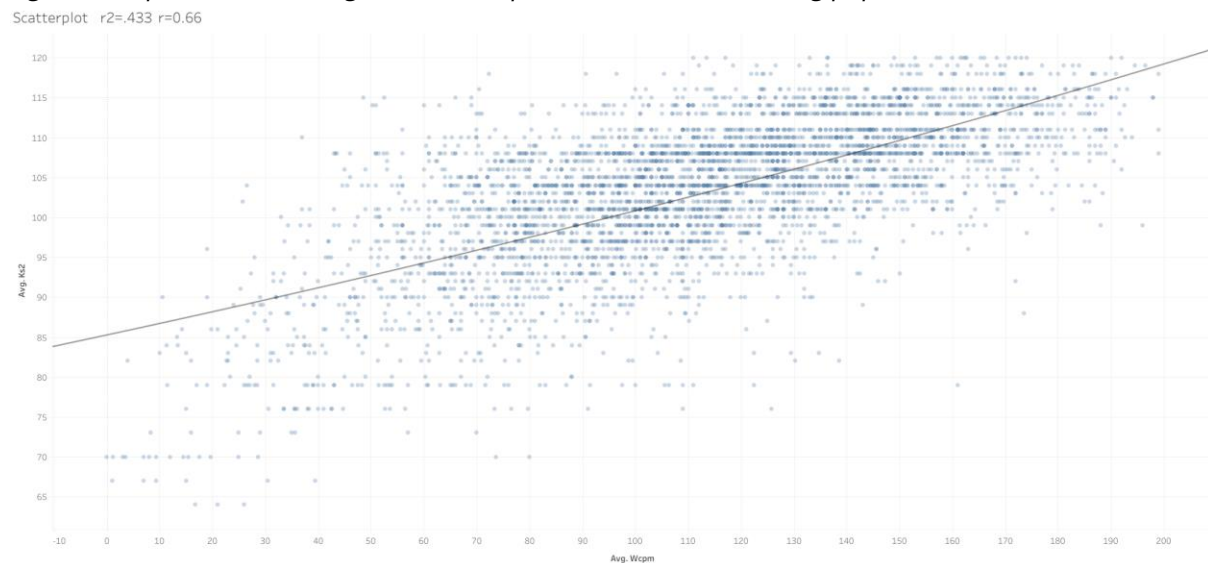
## Part 2. Reading Fluency and Reading Comprehension

### 2.1 The association between fluency and Key Stage 2 Reading outcomes

In order to better understand the relationship between fluency and comprehension, we compared KS2 National Curriculum test scores to oral reading fluency (WCPM) for 3,623 pupils where we have data for both outcomes.<sup>5</sup> This relationship is presumably partly influenced by a reduced cognitive load on decoding, thus allowing resources to be devoted to engagement and understanding, and partly influenced purely by reading speed in a long assessment. In 2024, the KS2 reading paper contained around 2,000 words in the unseen text booklet and 1,000 words in the answer booklet, to be covered in an hour's assessment.<sup>6</sup> Even though pupils read silently, and silent reading is generally faster than oral reading, it is clear that pace of reading will be an important factor for many pupils.<sup>7</sup>

The scatter plot below (Figure 7) shows how fluency compares to the reading score in our group. This shows a strong correlation (linear correlation coefficient of 0.68) between the curriculum reading test comprehension score and oral reading fluency.<sup>8</sup> Similar correlations ranging from 0.65 – 0.7 have been found in US research on the link between oral reading fluency (reading aloud) and other comprehension test outcomes.<sup>9</sup> It is also consistent with psychological research on reading suggesting that reading fluency is a necessary foundation for reading comprehension.<sup>10</sup>

Figure 7. Pupils' Year 6 average WCPM compared to their KS2 Reading paper result



<sup>5</sup> We note that this group are slightly lower attaining than the national average, with 70% attaining ARE in reading at KS2 in 2024 (national average was 74%) and 24% at Greater Depth (national average was 28%).

<sup>6</sup> For an analysis of the 2024 KS2 English National Curriculum Reading Test paper see the blog by Sophie Bartlett on the Learning by Questions website, 2024: <https://www.lbq.org/primary/hub/post?posttitle=2024-english-sats-paper-analysis>

<sup>7</sup> The reading booklet (containing unseen texts) in the test is between 1,400 and 2,300 words. There has been ongoing controversy about increases in length of the booklet – see, for example, this Schools Week article from 2019: <https://schoolsweek.co.uk/dfe-urged-to-give-more-time-for-ks2-reading-test-after-word-count-soars/>

<sup>8</sup> Although we note the relationship isn't necessarily linear

<sup>9</sup> See Wayman, M. M., Wallace, T., Wiley, H. I., Ticha, R., & Espin, C. A. (2007). Literature synthesis on curriculum-based measurement in reading. *Journal of Special Education, 41*(2), 85-120.

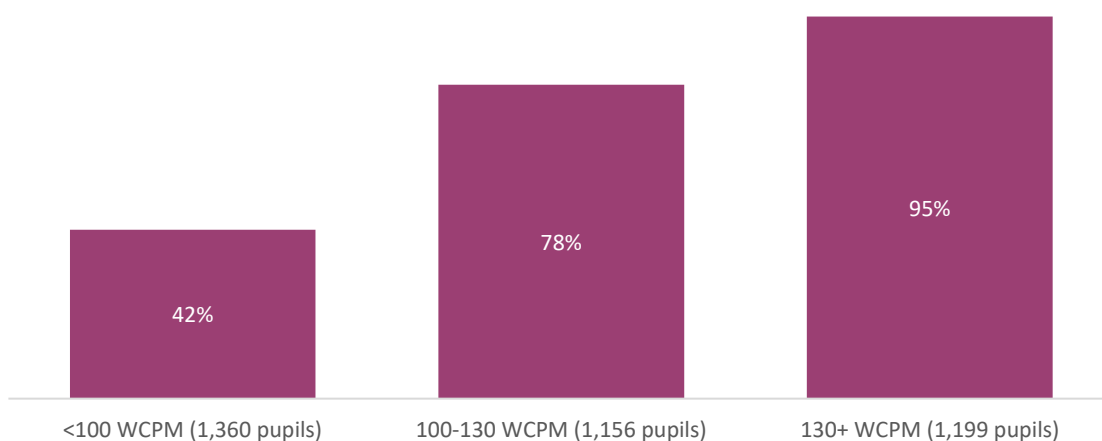
<sup>10</sup> See, for example, Castles, A., Rastle, K., & Nation, K. (2018). Ending the Reading Wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest, 19*, 5–51. <https://doi.org/10.1177/1529100618772271>



We wanted to show more clearly how oral reading fluency is associated with reading comprehension outcomes. We therefore placed each of the 3,623 pupils into three broad 'bands' or 'buckets' for oral reading fluency, doing this in such a way as to give a similar number of pupils in each band: <100 WCPM (1,360 pupils), 100-130 WCPM (1,156 pupils) and 130+ WCPM (1,199 pupils).

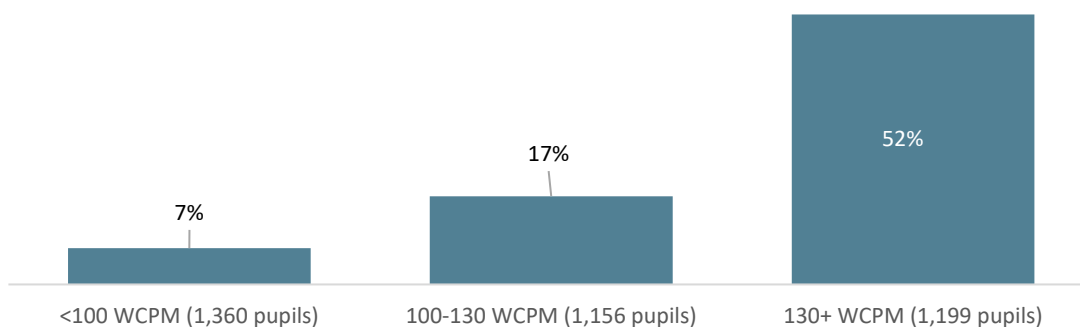
In Figure 8 below, we show the percentage of pupils who achieved age-related expectations (ARE) in the KS2 Reading paper for each fluency band. 42% of the pupils with an oral reading fluency below 100 WCPM achieved ARE. 78% of the pupils with an oral reading fluency of 100–130 WCPM achieved ARE, while 95% of the pupils with an oral reading fluency of above 130 WCPM achieved ARE.

*Figure 8. Percentage of 3,623 pupils achieving Age-Related Expectations in KS2 Reading paper by WCPM band*



The association between reading fluency and pupils achieving 'greater depth' in their reading paper is also strong. The data in Figure 9 show that over half (52%) of pupils with an oral reading fluency of 130 WCPM or above achieved 'Greater Depth' in their Year 6 reading paper. A much smaller percentage of pupils with an oral reading fluency in the other two bands achieved 'Greater Depth'. As noted above, these data represent simple associations and thus do not imply causality.

*Figure 9. Percentage of pupils achieving Greater Depth in KS2 Reading paper by WCPM band*



## 2.2 Pupil characteristics and the association between fluency and comprehension

One question is to what extent differences in reading fluency account for the well-established relationships between particular pupil characteristics and KS2 reading comprehension outcomes. To investigate, we split the bands described above by different pupil characteristics. This exercise suggested that the association between reading fluency and reading comprehension outcomes *may* be modulated by gender, FSM, and SEND status. As the numbers in certain groups are small, we intend to investigate this more deeply as our dataset grows.

Data in Figure 10 show a simple analysis of which pupils with which characteristics are in each fluency band. There are some notable differences: for instance, 47% of girls with an oral reading fluency of <100 WCPM achieved ARE, whereas only 38% of boys in this band did. At all levels of oral reading fluency, fewer pupils who have been eligible for Free School Meals at any point in their school career (FSM) achieved ARE. The numbers of pupils with SEND and EAL are quite low, and the SEND group clearly have more varied outcomes, with a lower association with oral reading fluency.

Figure 10. Percentage and (number) of pupils achieving Age-Related Expectations in KS2 Reading paper by WCPM band and different pupil characteristics

Band	Gender	FSM	SEND	EAL
<100	Girls: 47% (627) Boys: 38% (733)	Not FSM: 47% (807) FSM: 35% (553)	Not SEND: 48% (879) SEND: 30% (481)	Not EAL: 44% (1062) EAL: 35% (298)
100-130	Girls: 79% (572) Boys: 77% (584)	Not FSM: 82% (795) FSM: 68% (361)	Not SEND: 81% (978) SEND: 58% (178)	Not EAL: 78% (914) EAL: 76% (242)
130+	Girls: 96% (648) Boys: 95% (551)	Not FSM: 97% (932) FSM: 91% (267)	Not SEND: 97% (1,116) SEND: 78% (83)	Not EAL: 95% (913) EAL: 95% (286)

With this same dataset we conducted a decomposition analysis which is shown in Figure 11 below.<sup>11</sup> This starts off with the gap in average reading scores between two groups (for example, girls and boys) then calculates how much of it is due to differences in WCPM (the “explained” part) and how much is “unexplained” (this includes differences in the rate of progress). This analysis shows that around half the difference between FSM and Gender can be “explained” by different levels of fluency. Among pupils with SEND, around two-thirds of the gap in reading scores is explained by lower levels of reading fluency. For EAL pupils the relationship is different, as they have slightly higher fluency than non-EAL pupils but tend to achieve slightly lower outcomes in their KS2 reading papers. Fluency is not clearly correlating with comprehension outcomes for these pupils, which is intuitively understandable if it includes pupil who have a more limited English language knowledge.

Figure 11. Decomposition Analysis for gender, FSM, SEND and EAL

	Girls - Boys	Not FSM - FSM	Not SEND - SEND	Not EAL - EAL
KS2 mean reading score, group 1	104.0 (girls)	104.6 (not FSM)	104.6 (not SEND)	103.3 (not EAL)
KS2 mean reading score, group 2	102.3 (boys)	100.0 (FSM)	97.2 (SEND)	102.7 (EAL)
Gap in mean KS2 reading score	1.71	4.66	7.42	0.55
Gap explained by WCPM	0.82	2.29	4.88	-0.13
Gap unexplained by WCPM	0.89	2.38	2.54	0.68
<b>% gap explained</b>	<b>48%</b>	<b>49%</b>	<b>66%</b>	<b>-24%</b>

<sup>11</sup> For details of the analysis see Jann, Ben (2008). The Blinder-Oaxaca decomposition for linear regression models.

## Conclusion

These data constitute the first large scale data on oral reading fluency in England, and therefore are significant and supportive for schools and policy-makers.

### Part 1

The data show that there is substantial and sustained variation in oral reading fluency throughout primary school. In particular, the low level of reading fluency of the lowest quartile of readers is likely to indicate a reading difficulty that will impact this group across the curriculum. Monitoring the oral reading fluency of the lowest quartile of readers, and addressing this deficit as early as possible, should be a core concern of government and schools.

Unsurprisingly, oral reading fluency is strongly associated with SEND status and deprivation (measured by eligibility for free school meals). Interestingly, it is not associated with EAL status or gender at primary school.

### Part 2

The core deliverable of oral reading fluency is that it is supportive of reading comprehension. The associations revealed in Part 2 of this report suggest that oral reading fluency tracks KS2 outcomes. Given that oral reading fluency is quick and easy to measure, it's likely to be an extremely useful indicator for schools. Moreover, fluency teaching and fluency practice throughout the school years, including a focus on oral reading fluency through repeated reading, choral reading, partner reading, and all other fluency strategies are likely to be very supportive of a pupils' overall reading development, and certainly not detrimental.

These data are also relevant to thinking about the structure of the KS2 Reading paper. Specifically, it is important to consider the length of the paper against the wide variation in reading fluency that we report. Papers that are too long risk becoming assessments largely of reading speed.

The modulations for pupil characteristics in the final part of the paper are speculative but show that there are other aspects to comprehension beyond being able to read the words on the page. The data highlight the need to provide high-quality teaching of reading comprehension. These aspects of the instruction environment may be especially important for pupils with SEND as well as those who have experienced deprivation.

## Appendix 1: RAP Assessments Taken By Each Year Group

RAP assessments are entirely optional, and have fluency passages that progress in reading difficulty. A school can do any assessment with any child at any time, as is most suitable. Therefore, not all assessments reflect the reading of age-appropriate texts but may reflect the reading of texts that are easier or more difficult than expected for a pupil's age. Some pupils were not assessed, or assessed more than once, as schools have used the tool at different times and in different ways. This is particularly the case in Year 1, where schools are advised to use the assessment most appropriate for where the pupil is in the phonics curriculum.

From Year 2 to Year 6 the majority of assessment results are on assessments designed for the mainstream of readers in the age group. However, we took an agnostic approach to assessment in order to include less able readers who may have been given a lower assessment and very able readers who may have been given a higher one.

Figure 12 below shows which assessments we have analysed by year group. This illustration shows that it is only in Year 1 that a substantial number of children are doing Reception level assessments (Assessments 1 – 7). By Year 3 a large majority of children in the sample are doing 'age-appropriate' assessments.

Figure 12: Number of RAP assessments by Year Group, 2023/24 (shaded areas indicate the year groups for which assessments are designed).

Year for which assessment is designed	Assessment Number	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Reception	1	1217	437	381	231	113	45
	2	1369	440	283	125	87	53
	3	1605	580	377	158	82	52
	4	1935	656	365	180	79	58
	5	2214	769	424	191	119	79
	6	2263	670	437	192	104	59
	7	7668	1788	922	489	356	205
Year 1	8	8991	1325	487	321	157	92
	9	6104	1259	428	211	164	49
	10	5879	1339	547	232	127	51
	11	4607	1023	351	150	97	44
	12	3112	839	363	161	83	67
	13	2003	735	281	134	71	43
	14	3156	3730	1534	819	615	283
Year 2	15	82	10444	934	344	230	155
	16	56	7707	1455	253	149	76
	17	46	6959	2078	324	189	127
Year 3	18	25	546	12809	590	269	155
	19	18	193	9035	1072	222	106
	20	12	118	7418	1789	321	181
Year 4	21	10	45	745	11951	565	182
	22	6	51	231	8772	1143	169
	23	9	29	101	6728	1658	195

<b>Year for which assessment is designed</b>	<b>Assessment Number</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
Year 5	24	9	16	49	683	12069	394
	25	8	13	27	194	7766	1039
	26	4	13	31	128	6128	1421
Year 6	27	6	6	18	50	611	11627
	28	4	4	21	39	291	6779
	29	3	8	48	113	196	3341

We have decided to include 'lower' and 'higher' assessments in the analysis so as not to exclude children who are still working at a reading level below their age group. We may see slightly different results with a more structured approach to data collection and analysis, however we believe that as the dataset we now have is very large, it is unlikely to make a big impact on the overall fluency figures.

## Appendix 2: Summary Data Tables

Data summary table

Year Group	Schools	Pupils	Assessments	Schools		Pupils		Assessments	
	Total	Total	Total	2023	2024	2023	2024	2023	2024
Year 1	484	24,353	90,419	301	412	10,742	13,611	40,448	49,971
Year 2	525	23,736	63,353	298	454	9,229	14,507	24,381	38,972
Year 3	558	23,699	58,015	272	492	7,336	16,363	17,585	40,430
Year 4	514	21,258	50,543	240	459	6,325	14,933	14,786	35,757
Year 5	510	21,225	47,430	220	457	6,434	14,791	13,790	33,640
Year 6	502	19,898	37,408	219	446	6,202	13,696	10,780	26,628
Grand Total	684	109,929	347,168	375	612	46,268	87,901	121,770	225,398

Number of Assessments and Median Fluency by Term

Year Group	Term of Assessment	Assessments	Fluency WCPM (median)
Year 1	Autumn	33,474	16
	Spring	32,332	30
	Summer	24,613	43
Year 2	Autumn	22,835	45
	Spring	22,047	60
	Summer	18,471	73
Year 3	Autumn	19,742	68
	Spring	21,067	84
	Summer	17,206	91
Year 4	Autumn	16,543	88
	Spring	18,315	97
	Summer	15,685	101
Year 5	Autumn	16,063	102
	Spring	16,594	108
	Summer	14,773	111
Year 6	Autumn	15,938	108
	Spring	16,415	111
	Summer	5,055	114
Grand Total		347,168	

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