

# **The Rate and Identification of Reading Difficulties in Secondary School Pupils in England**

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## ***Abstract***

This report summarises the findings of a research study investigating reading skills in secondary school pupils. A key finding is that a substantial proportion of secondary school pupils who experience reading difficulties are not identified on the school register of special educational needs. This suggests that there are problems with the current system of identifying pupils with reading difficulties within secondary schools.

## ***1. Background***

The Centre for Reading and Language, with funding from GL Assessment, has developed and standardised a new test of reading comprehension for secondary school pupils - the York Assessment of Reading for Comprehension Secondary Test; Stothard, Hulme, Clarke, Barmby & Snowling (2010). The standardisation of this test involved assessing the reading skills of a representative sample of 1230 11- to 16-year-old pupils from schools in the UK. The pupils were selected from 39 schools located in ten geographical regions representative of the UK. The regions covered were: North East England, North West England, Yorkshire and the Humber, Midlands, London, South East England, South West England, Scotland, Wales and Northern Ireland. State schools and independent schools were included in the standardisation sample.

This report focuses on the reading skills of pupils aged 11 to 16 years who were attending state-maintained schools in England.

## ***2. Pupils***

857 pupils (70% of the sample) were attending state-maintained schools in England (see Table 1). Within each school, pupils were randomly selected according to their date of birth. All the pupils who were selected took part in the reading assessments, provided they were being taught in English and informed consent had been given by the head teacher or parent and the pupil him- or herself. Thus, pupils who had a statement of special educational needs (SEN) and pupils with English as an additional language were included in the sample.

All reading assessments were conducted in the autumn term 2009 (September – November 2009).

**Table 1: Number of pupils in each year group**

Year group	Chronological Age		Males	Females	Total
	Mean	Range			
Year 7	11yrs 7mths	11yrs 0mths - 12yrs 7mths	90	88	178
Year 8	12yrs 7mths	11yrs 10mths – 13yrs 5mths	84	89	173
Year 9	13yrs 7mths	11yrs 7mths – 14yrs 1mth	86	91	177
Year 10	14yrs 7mths	14yrs 0mths – 15yrs 8mths	84	85	169
Year 11	15yrs 6mths	14yrs 4mths – 16 yrs 0mths	81	79	160
Total			425	432	857

### ***Special educational needs (SEN)***

Information about special educational needs (SEN) was reported by 25 of the 28 state-maintained schools in England (790 pupils, 92% of the sample). Overall, 141 pupils had SEN without statements (17.8% of the sample). An additional 15 pupils had SEN with statements (1.9% of the sample). The incidence of SEN in the standardisation sample is similar to national norms for England. National statistics released by the Department for Children, Schools and Families (2009) reported that 19.1% of pupils in state funded secondary schools in England have SEN without statements and 2% of pupils have statements of SEN.

### ***Languages spoken at home***

Information about the language(s) spoken at home was available for 856 pupils attending state-maintained schools in England (99.9% of the sample). Overall, 8.2% of the sample was known to have English as an additional language.

## ***3. Assessment of reading skills***

During the standardisation of the York Assessment of Reading for Comprehension Secondary Test (YARC Secondary), each pupil was administered an extended version of the Single Word Reading Test 6-16 (SWRT6-16, Foster, 2007) and Passage Reading and Reading Fluency from the YARC Secondary test (see Stothard et al, 2010 for further details). The results are presented below.

### ***3.1 Reading (Decoding)***

Decoding skills were assessed with the Single Word Reading Test (SWRT). The SWRT involves reading aloud a series of words that are graded in difficulty. The results are shown in Table 2. As can be seen, there is variability in reading skills within each year group; raw scores range from 18-24 (for the weakest readers) up to 66-70 for the most skilled. The corresponding range of reading age equivalent scores is from 6 or 7 years to above the 16 year level in each year group.

**Table 2:** Raw scores, standard scores and age equivalent scores on SWRT

Year	N	Raw Score (Max=70)		Standard Score		Reading Age
		Mean (SD)	Range	Mean (SD)	Range	Range
Yr 7	178	47.88 (9.20)	18-67	100.62 (14.29)	69-131	6yrs 6mths – 16yrs+
Yr 8	173	50.09 (8.29)	18-66	99.65 (13.78)	69-131	6yrs 6mths – 16yrs+
Yr 9	177	52.82 (7.66)	24-67	99.78 (13.60)	69-129	7yrs 3mths – 16yrs+
Yr 10	169	53.12 (8.43)	20-69	96.45 (13.93)	69-131	6yrs 9mths – 16yrs+
Yr 11	160	56.34 (8.16)	21-70	99.09 (13.86)	69-131	6yrs 9mths – 16yrs+

N = Number of pupils

SD = Standard Deviation

### ***Rates of decoding difficulties in English state schools***

For all pupils, a reading difficulty was classified as a standard score below 85 on the SWRT. This is one standard deviation below the average for age norm. The prevalence of reading difficulties was examined by calculating the proportion of pupils, within each year group, who attained a SWRT standard score below 85. Given that reading skills are normally distributed, 16% of pupils are expected to have reading standard scores below 85. Within this sample, 15.6% of pupils obtained a standard score below 85 on the SWRT. To investigate if these poor readers were receiving additional support within school, we examined the SEN data that was supplied by participating schools.

For brevity, we report the data from pupils at the start (Year 7) and end (Years 10 and 11) of secondary school – arguably the two key points in secondary education. Data for pupils in Years 8 and 9 are also available if required.

#### **Year 7**

Thirty pupils in Year 7 attained a reading standard score below 85 (16.9% of the year group). Their mean reading age was 8 years 3 months (range: 6yrs 6mths – 9yrs 3mths). Within this group, 16 pupils were listed on the school's SEN Register (three with Statements) and 14 pupils were not on the SEN Register. In summary, 53% of the poor readers in Year 7 were identified on the school SEN Register.

#### **Year 10**

Thirty-four pupils in Year 10 attained a reading standard score below 85 (20% of the year group). Their mean reading age was 9 years 11 months (range: 6yrs 9mths – 11yrs 3mths). Within this group, 14 pupils were on the SEN Register (one with a Statement) and 17 pupils were not on the SEN Register. No SEN information was available for three pupils. In summary, 45% of the poor readers in Year 10 were identified on the school SEN Register.

#### **Year 11**

Twenty-six pupils in Year 11 attained a reading standard score below 85 (16% of the year group). Their mean reading age was 10 years 6 months (range: 6yrs 9mths – 12yrs 0mths). Nine of these pupils were on the SEN Register (one with a Statement) and 14 pupils were not on the SEN Register. No SEN information was available for three pupils. In summary, 39% of the poor readers in Year 11 were identified on the school SEN Register.

### ***Characteristics of pupils with decoding difficulties***

Table 3 presents data on languages spoken at home, SEN and social deprivation for pupils with reading difficulties. Social deprivation is based on the postcode of individual pupils. Postcodes are ranked from 1 to 10; the lowest rank 1 represents the highest level of deprivation and the highest rank 10 represents the lowest level of deprivation. As can be seen in each year group, the proportion of pupils with English as an additional language is higher in the groups of pupils with reading difficulties. The poor reader groups also obtain a lower postcode rank, indicating a higher level of deprivation.

**Table 3:** *Characteristics of pupils with decoding difficulties*

	N (Male/Female)	% pupils with English as additional language	% on SEN Register	Postcode Rank Mean (SD)
Year 7				
SWRT SS <85	30 (M=19, F=11)	10.0%	53.3%	3.63 (2.60)
SWRT SS 85+	148 (M=71, F=77)	6.1%	12.2%	5.28 (2.78)
Year 10				
SWRT SS <85	34 (M=18, F=16)	11.8%	45.2%	3.12 (1.99)
SWRT SS 85+	135 (M=66, F=69)	5.9%	15.3%	5.69 (2.64)
Year 11				
SWRT SS <85	26 (M=15, F=11)	11.5%	39.1%	3.82 (2.34)
SWRT SS 85+	134 (M=66, F=68)	6.0%	7.6%	5.56 (2.67)

### ***3.2 Reading Comprehension***

Each pupil was asked to complete five comprehension passages from the YARC Secondary Passage Reading Test. The passages were presented one at a time and the pupil was asked to read the passage and then immediately answer a series of comprehension questions about it. The comprehension questions assessed literal and inferential comprehension skills. A small number of pupils completed fewer passages because of time constraints or reading difficulties. The YARC Passages include fiction and non-fiction texts at three levels of difficulty: Supplementary (easiest), Level 1 and Level 2 (most difficult). The passages were allocated to ensure that the normative data for each passage was based on a representative sample of 11-16 year old pupils. For each pupil, the total number of comprehension questions answered correctly per passage was computed and converted into a standard score. The average comprehension standard score across Level 1 and Level 2 passages was then calculated for each pupil. The Supplementary passages were too easy for most pupils and are excluded from the analyses because of ceiling effects. On average, pupils completed four comprehension passages (range: 1 - 5). Two pupils did not complete any passages and are not included in the following analyses. The following results are based on average comprehension standard scores.

#### ***Rates of reading comprehension difficulties in English state schools***

The prevalence of reading comprehension difficulties was examined by calculating the proportion of pupils, within each year group, who attained a reading comprehension standard score below 85.

#### **Year 7**

Nineteen pupils in Year 7 attained a reading comprehension standard score below 85 (10.7% of the year group). Within this group, eight pupils were listed on the school’s SEN Register (two with Statements) and 11 pupils were not on the SEN Register. Seven of the poor comprehenders (37%) had adequate decoding skills (SWRT standard score >89) (3.9% of the year group).

In summary, 42% of the poor comprehenders in Year 7 were identified on the school SEN Register.

### **Year 10**

Twenty-eight pupils in Year 10 attained a reading comprehension standard score below 85 (16.6% of the year group). Within this group, 11 pupils were listed on the school’s SEN Register (two with Statements) and 15 pupils were not on the SEN Register. No SEN information was available for two pupils. Seven of the poor comprehenders (25%) had adequate decoding skills (4.1% of the year group).

In summary, 42% of the poor comprehenders in Year 10 were identified on the school SEN Register.

### **Year 11**

Seventeen pupils in Year 11 attained a reading comprehension standard score below 85 (10.7% of the year group). Within this group, three pupils were listed on the school’s SEN Register (no pupils had Statements) and 13 pupils were not on the SEN Register. No SEN information was available for one pupil. Seven of the poor comprehenders (41%) had adequate decoding skills (4.4% of the year group).

In summary, 19% of the poor comprehenders in Year 11 were identified on the school SEN Register.

## ***Characteristics of pupils with reading comprehension difficulties***

Table 5 presents data on languages spoken at home, SEN and social deprivation for pupils with reading comprehension difficulties. As can be seen in each year group, the proportion of pupils with English as an additional language is considerably higher in the groups of pupils with reading comprehension difficulties. The poor comprehender groups also obtain a lower postcode rank, indicating a higher level of deprivation.

**Table 5:** *Characteristics of pupils with reading comprehension difficulties*

	N (Male/Female)	% pupils with English as additional language	% on SEN Register	Postcode Rank Mean (SD)
Year 7				
Comp SS <85	19 (M=12, F=7)	26.3%	42.1%	3.38 (2.87)
Comp SS 85+	159 (M=78, F=81)	4.4%	16.7%	5.17 (2.77)
Year 10				
Comp SS <85	28 (M=14, F=14)	17.9%	42.3%	3.75 (1.95)
Comp SS 85+	141 (M=70, F=71)	5.0%	17.1%	5.37 (2.76)
Year 11				
Comp SS <85	17 (M=9, F=8)	17.6%	18.8%	3.00 (2.45)
Comp SS 85+	142 (M=71, F=71)	5.6%	11.3%	5.50 (2.60)

## ***Summary of decoding and comprehension difficulties***

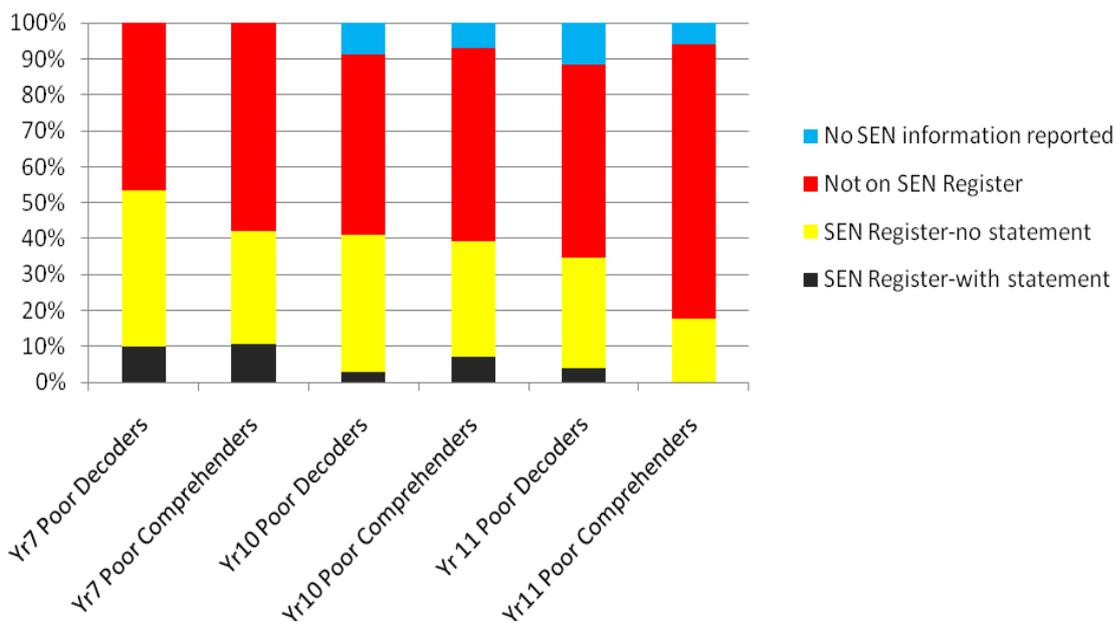
Overall, these findings suggest that only 53% or fewer of children with significant reading problems are known to their schools, as indicated by the SEN Register. This suggests that there is considerable unmet need with regard to literacy problems in secondary schools.

#### 4. Summary and Conclusions

The results from this study indicate that there is great variability in reading skills within secondary school pupils. Within each year group, pupils were identified with reading ages below the 8 year level. Although many of these pupils were identified on the school SEN register, a substantial proportion of pupils have reading difficulties that appear to be unidentified and not supported within school. Typically, at least half of the poor readers identified in this study were not on the school SEN register (see Figure 1). For example, pupil A, aged 15 years 4 months, displayed substantial reading difficulties yet was not on the school SEN register. Pupil A attained standard scores of 69 for Single Word Reading (Reading Age equivalent: 8 years 9 months) and 79 for reading comprehension. Pupil A’s reading difficulties will impact across the curriculum. It is essential that reading difficulties are identified accurately and promptly to enable the provision of appropriate support within school.

It is important to note that the school reported if a pupil was on the SEN register, but did not supply details about the pupil’s difficulties. It is possible that some of the poor readers on the SEN register were receiving support for difficulties other than reading problems (e.g., attention difficulties, behavioural problems etc). These findings represent a conservative estimate of the discrepancy.

**Figure 1: Percentage of poor readers identified within school**



Within this sample, reading difficulties were more prevalent amongst pupils with English as an additional language and pupils with a moderate to high level of social deprivation. The percentage of pupils with English as an additional language was almost twice as high in the group of pupils with decoding difficulties compared with pupils with adequate decoding skills. This effect was more marked for reading comprehension difficulties. Here the percentage of pupils with English as an additional language was approximately three times higher in the group of pupils with reading comprehension difficulties compared with pupils with adequate reading comprehension skills. Reading difficulties were also associated with social deprivation. On average students with reading difficulties had lower postcode ranks, indicating a higher level of deprivation, compared with typically developing readers. Thirty-three percent of the pupils with the highest level of social deprivation (postcode ranks 1 or 2) exhibited a reading difficulty (decoding and/or comprehension) compared with only 5% of pupils with the lowest level of social deprivation (postcode ranks 9 and 10). It is important to note that having English as an additional language and social deprivation are unlikely to be independent factors.

**References:**

Foster, H. (2007) Single Word Reading Test 6-16. GL Assessment Limited

Snowling, M.J., Stothard, S.E., Clarke, P., Bowyer-Crane, C., Harrington, A., Truelove, E., Nation, K. and Hulme, C. (2009). York Assessment of Reading for Comprehension: Passage Reading Primary. GL Assessment.

Stothard, S.E., Hulme, C., Clarke, P., Barmby, P. & Snowling, M.J., (2010, in press). York Assessment of Reading for Comprehension: Passage Reading Secondary. GL Assessment.

**Notes:**

SEN percentages are based on pupils for whom SEN data was available.

Postcode ranks are based on pupils for whom a postcode was available.