



Report on Data Collection

Autumn 2007

Susan Case
Dave Philpot
John Walker
www.sounds-write.co.uk

Executive Summary

The data collected so far is compelling. It shows that the linguistic phonic approach underpinning the Sounds~Write programme is highly effective in teaching pupils literacy skills. Furthermore it shows pupils improving year on year, with most of them moving rapidly towards true adult-level competency between Y2 and Y4.

Guidance packs for the collection of data were sent to each class teacher to ensure consistency across all the schools that are participating. Spelling data was chosen as our focus for measuring literacy development because we think there are concerns about the meaning of reading test results that make them unreliable. This is discussed in greater detail in the body of the report, but we think it obvious that if pupils can spell words they can also read them and that their reading ages must necessarily equal or surpass their spelling ages because reading is the easier task. All our data is drawn from state schools in three very different areas of the UK: Wigan MBC; Milton Keynes/Bedford; and Kent.

The average amounts by which the pupils' development of literacy skills and knowledge is ahead of chronological age in YR, Y1, Y2 and Y3 are: 14·3, 11·2, 13·2 and 20·1 months respectively. We see the variation between YR and Y1 as being due to the inaccuracies inherent in traditional testing, based as it is on populations of pupils taught by mixed methods. Beyond Y1 we note an increasing acceleration of acquisition of literacy abilities due to pupils' developing understanding of the complete nature of phonics.

Results for spelling at the end of Reception

Of the 2878 pupils taught by teachers using the Sounds~Write programme, 2259 or 78·5% of them were at or above their chronological age in spelling. Furthermore:

- Taking the whole sample of 2878 pupils, on average, they were 14·3 months ahead in spelling.
- Of the 78·5% who were ahead, there was no statistical difference in progress between boys and girls.

Results for spelling at the end of Year One

Of the 1499 pupils taught by teachers using the Sounds~Write programme throughout Reception and Year One, 89·2% of pupils reached or exceeded their chronological age in spelling. Furthermore:

- Taking the whole 1499, on average pupils were 11·2 months ahead of their chronological age in spelling. That is the average spelling age for the total number of pupils was 7 years 2·8 months.
- Taking the whole 1499, there was a difference of 2 months between boys and girls, but this was not of any statistical significance (*see main body of report*).

Results for spelling at the end of Year Two

At the end of Year 2, of the 602 pupils taught by teachers using the Sounds~Write programme since starting school in Reception, 79·6% of pupils reached or exceeded their chronological age in spelling. Furthermore:

- Taking the whole 602, on average, pupils were 13·2 months ahead of their chronological age in spelling. That is the average spelling age for the total number of pupils was 8 years 4·4 months.
- Taking the whole 602, there was a difference of 2½ months between boys and girls, but this was not of any statistical significance (*see main body of report*).

Results for spelling at the end of Year Three

Having only just started training teachers in how to deliver the Sounds~Write programme in March 2003, as yet we only have data from four schools where pupils have been taught with the programme for their first four years' schooling. We present the results below as being of interest, but realise that the numbers involved are too small to draw general conclusions. Nonetheless these results are encouraging and we look forward to reporting on much larger numbers over the next two academic years.

Of the 119 pupils taught by teachers using the Sounds~Write programme since entering Reception, 84.0% of them reached or exceeded their chronological age in spelling. Furthermore:

- The whole 119 pupils were, on average, 20.1 months ahead of their chronological age in spelling. That is the average spelling age for these pupils at the end of Y3 was 9 years 11.0 months.
- A difference of 2.9 months was found between boys and girls but this was not of any statistical significance (*see main body of report*).

The results of the pupils that we have posted so far have predominantly been achieved by teachers and support assistants with relatively limited experience in teaching the Sounds~Write programme. As they gain experience in delivering the programme we anticipate that their pupils will develop skills even faster in the future. The most common feedback we receive from teachers completing their first year of using the programme is that they have been underestimating the speed at which pupils can learn, and that they will be looking for even faster progress in the future. Not surprisingly, given the accuracy of their pupils' spelling, they also report that their pupils enjoy writing and produce far more written work of a better quality than their previous classes did.

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Sounds~Write: Autumn Report 2007

Introduction

It is now five years since we began to construct the Sounds~Write linguistic phonic literacy tuition programme. As linguist Peter Daniels put it: 'writing is defined as *a system of more or less permanent marks used to represent an utterance in such a way that it can be recovered [i.e. read] more or less exactly without the intervention of the utterer*'¹. Thus, we begin with what all children learn naturally, the sounds of their own speech, and we teach them in carefully graded steps how those sounds are represented in writing. As this implies, reading and writing are but two sides of the same coin.

The first Sounds~Write training courses were piloted in March 2003, with gradual expansion leading to the current situation of around eighty courses being run every year, each course being attended on average by eighteen teachers and/or teaching support assistants. We have currently trained nearly 5000 teachers and other educational practitioners.

From the outset we have been concerned to find out how successfully the Sounds~Write programme performs in practice. Everyone working in the field of literacy cannot fail to be aware that there are few examples of any English literacy tuition programmes that have been subjected to close scientific scrutiny in respect of their long term outcomes. Available advice on teaching therefore tends to be based on individual personal beliefs and opinions without the backing of good scientific evidence. From the outset of the introduction of Sounds~Write into schools we set ourselves the task of collecting data on the performance of the children being taught by educational practitioners trained in its usage. Furthermore, it is clear from reading previous research literature that most studies are short-term and look at the outcomes for pupils over only a three to six month period during one academic year without any follow-up. Given the over-reliance of both standardised reading tests and the UK national curriculum on small groups of key words that can be visually memorised (resulting in an illusion of literacy where none really exists), it is easy to set up teaching systems that appear to show progress in the short term without there being any genuine long term benefit.

We now have data on a large body of pupils who have been taught by Sounds~Write-trained teachers for one, two, three and four consecutive years (Reception through to the end of Year Three). The numbers of pupils that have been taught for three and four consecutive years are relatively small, but will expand rapidly over the next two years given the increasing number of schools whose head teachers and class teachers are willing to test their pupils and share their data with us. They, like us, want to see some real data on the progression of pupil literacy. Before presenting the data we have obtained to date, we would like to explain briefly our data collection methods.

Literacy Testing

Historically, three types of test have been constructed for looking at literacy: comprehension tests, reading tests, and spelling tests. These have generally been constructed independently of each other and their results engineered to conform to the normal distribution curve (often referred to as the Bell curve).

We rejected comprehension tests as a research tool because they are only of use when pupils are actually literate. In fact they should not be used with any pupil unless the pupil can actually read the words contained in the text. But even if the pupil can accurately decode and thereby read the text, s/he may not know the meanings of many of the words it contains². In this situation failure to answer questions about the text accurately are therefore highlighting problems with the understanding of words

¹ Daniels, P., 'The Study of Writing Systems', in Daniels, P., and Bright, W., (1996), *The World's Writing Systems*, OUP, London

² In fact, as Diane McGuinness makes clear in *Early Reading Instruction*, (2004, MIT Press), 'Comprehension means more than a good vocabulary. It involves a number of language skills, such as the ability to use syntax to anticipate words in a sentence and assign unknown words to the appropriate part of speech. It includes an aptitude for monitoring context, making inference on the basis of background knowledge, as well as familiarity with oral and literary forms (genres).' P. 211.

and language, not with literacy in terms of being able to convert marks on paper back into speech. We would like to note here that the policy of the National Literacy Strategy, inasmuch as it measures anything at all, is to test for comprehension in the English SATs tests. What they are not are discrete tests of reading and spelling ability. This, however, might explain why we have recently been inundated with headlines such as, **80% of Y6 pupils achieve level 4 English** at the same time as, **40% of pupils leave primary school with insufficient literacy skills to cope with their high school curriculum**. Additionally, institutions such as the CBI and the Armed Services continue to be faced with large numbers of illiterate 16 to 18-year-olds entering the work force every year despite many of these pupils having SATs and GCSE qualifications that, on the surface, would appear to imply a reasonable degree of basic literacy.

Secondly, we decided not to use reading tests in our study for several very important reasons. They are very time consuming to administer and therefore only single-word recognition tests would be a viable proposition for a large-scale study. Unfortunately, as the name implies, when looking at individual words they may be 'sight recognised' without any understanding of how they are constructed phonically. So when, for example, a pupil says, '**said**', whilst looking at the written word < **said** >, there is nothing in these tests to tell us whether the pupil knows that the two-letter spelling < **ai** > can represent the sound '**e**' in English, or whether the whole word has just been visually memorised. Evidence from clinical practice shows that many pupils with good visual memories can score '**reading ages**' on this type of test as high as 9.0 or 10.0 years whilst having phonic decoding skills below an 8.0 year level. It appears that good reading ages may therefore be completely illusory as measures of fluent reading ability.

We would like to take a step back and ask what is actually meant by literacy tuition. From the four years of data we have collected, we would like to assert the following.

True literacy development and understanding requires that a pupil can:

(a) **turn written text back into speech using a decoding process that has reached automaticity so that conscious thought is not normally involved - the whole of conscious awareness being available to try to comprehend the meaning of the text being decoded³;**

and (b) **write his or her thoughts down, accurately spelled, using the actual language employed during the thought processes involved, i.e., without having to modify their thinking so that it only encompasses a highly restricted vocabulary that they think they might be able to spell relatively well.**

Literacy involves both of the above, and these two processes are neither identical nor totally parallel. **Reading**, which is what we are describing in (a) above, is the simpler *receptive* side of the complex set of skills and knowledge that is true literacy, whilst (b), **writing** (involving spelling) is the more difficult *expressive* side. Particularly over the last couple of decades, the increasing awareness of the large number of partially or wholly illiterate pupils leaving the education systems of all English-speaking countries seems to have generated a panic-driven rush to attempt to teach pupils how to read at the expense of their writing and spelling. We are in no doubt that unless reading and spelling are properly taught systematically together as equally important aspects of one literacy system, then writing standards suffer a dramatic decline. There is little, if any, evidence that focusing on reading alone produces literate pupils. This is why Sounds~Write puts an emphasis on both reading and writing, and teaches that the code is reversible.

Returning to the question of measurement, writing accurately is the most difficult aspect of literacy. It is of course much easier to read the word 'duck' than it is to spell it, since young children have to remember which spelling of /k/ to use. Thus tests that require writing should be the most useful and accurate for measuring overall progress. Our contention, therefore, is that good spelling tests require

³ Keith Stanovich maintains that unless automaticity is achieved, '[s]low, capacity-draining word-recognition processes require cognitive resources that should be allocated to higher level processes of text integration and comprehension. Thus, reading for meaning is hindered, unrewarding experiences multiply, and practice is avoided or merely tolerated without real cognitive involvement.' Stanovich, K., 'Matthew Effects in Reading: Some Consequences of Individual Differences in the Acquisition of Literacy', in Stanovich, K., (2000), *Progress in Understanding Reading: Scientific Foundations and New Frontiers*, The Guildford Press, London.

children to write accurately words that they hear spoken by the test administrator. We think such tests are most appropriately constructed so that pupils not only hear each word of the test spoken in isolation, but also hear each word spoken within the context of a simple meaningful sentence. Unlike reading tests, where the pupil is looking at the words concerned with the possibility of visual memory being stimulated to recall whole words, spelling tests require pupils to segment each test word into its component sounds and then to write those sounds in the correct sequence, selecting the correct spelling (grapheme) for each one. Importantly, we think it self evident that pupils should not be able to spell accurately words on a spelling test that they could not actually read if they met them in text: i.e., if they achieve a spelling age of X on a well constructed spelling test, their reading age must also be at a similar level X, or higher. (Though this does not necessarily apply if reading age is measured on currently available reading tests that have been standardised on populations taught by mixed methods involving varying proportions of whole language and traditional phonic ideas.) Spelling results do tell us something useful about the potential ability of pupils to actively record information, to write imaginatively, and generally to succeed with the literacy tasks they face in the classroom. In addition, spelling tests can be carried out collectively, thereby minimising teacher time in administration and at the same time provide a written record of pupils' responses that can be kept to refer back to as the pupil progresses from class to class.

In order to ensure uniformity of data collection we send each teacher a pack consisting of test administration details, class record form, and individual answer sheets for each pupil. Testing is normally carried out in June each year, but depending on circumstances some classes are tested at the end of May and others at the beginning of July. The packs are returned and we check the individual pupil answer papers and scores before entering their results into our database.

The particular spelling test that we have chosen for our data collection procedure is Test A from the *Parallel Spelling Tests* by Dennis Young, second edition 1998, published by Hodder & Stoughton (ISBN 0-340-73093-5).

Results

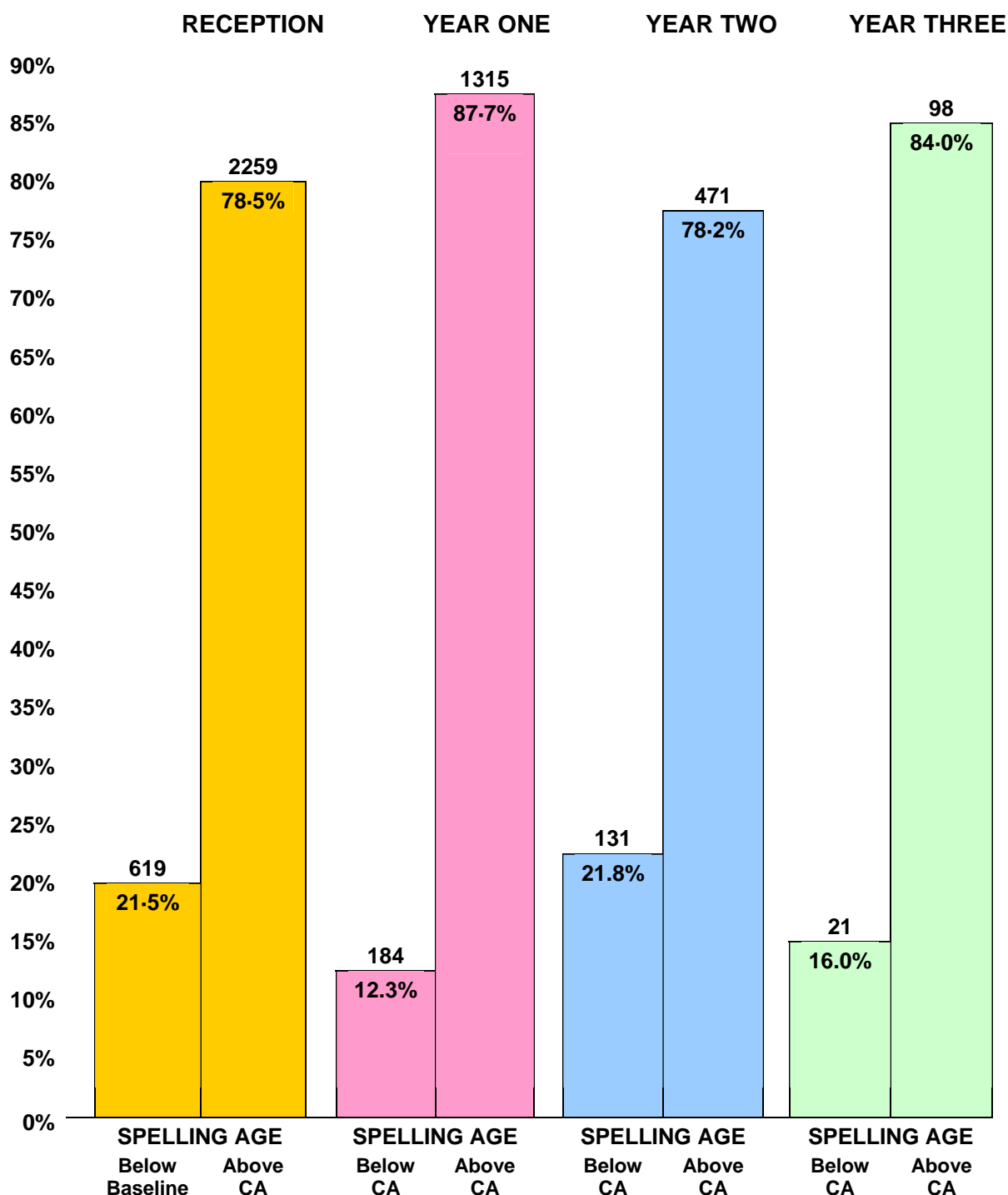
On page four are shown the simple overall results for each of the four-year groups from YR to Y3 as bar charts. The first bar in each case shows how many pupils either failed to achieve the baseline score⁴ on the test or scored at a level below their chronological age; the second bar shows how many achieved spelling ages above their chronological ages. Given that the *Parallel Spelling Test* is normally distributed, if the Sounds~Write taught pupils were performing only as well as those pupils taught by the National Literacy Strategy, on whose performance the test was originally standardised, then the two columns for each year group would both be the same at 50%.

These results show a clear and unequivocal difference between the Sounds~Write taught pupils and those on whom the test was originally standardised. For those interested in this difference being expressed statistically, application of the chi-squared test (using Yates correction for one degree of freedom) shows that these results for each year group could only occur by chance with a frequency far less than 1 in 10000 (i.e. $p < 0.01\%$ in all four cases).

On pages five to eight we show the overall results for each individual year group, the report then continuing with further discussion and analysis of all the data.

⁴ The **baseline score** is the lowest possible score that can be achieved on the test. For the *Parallel Spelling Test A* this is 5 years 11 months. Please note that the *Parallel Spelling Test* norms are given in the manual in years and tenths of years, but for ease of comparison with chronological ages we have adjusted them to years and months.

Bar Chart 1: Numbers of pupils taught by Sounds~Write trained teachers/learning support assistants scoring above and below chronological age level



The figures at the head of each column are the number of pupils in the sample. Thus, for example, in Reception there were 2259 pupils who achieved spelling ages above their chronological ages and 619 who did not (the whole Reception sample therefore being 619 + 2259 = 2878 pupils). We cannot say much about those pupils who did not score above their age level in this year group because the test baseline score (*lowest possible score*) is 5.11 years and all those Reception pupils were therefore younger than the lowest possible score on the test.

RECEPTION PUPILS (End of year spelling data collected 2004-2007)

Bar Chart 2: Reception pupils placed into six-monthly intervals of Spelling Age above Chronological Age

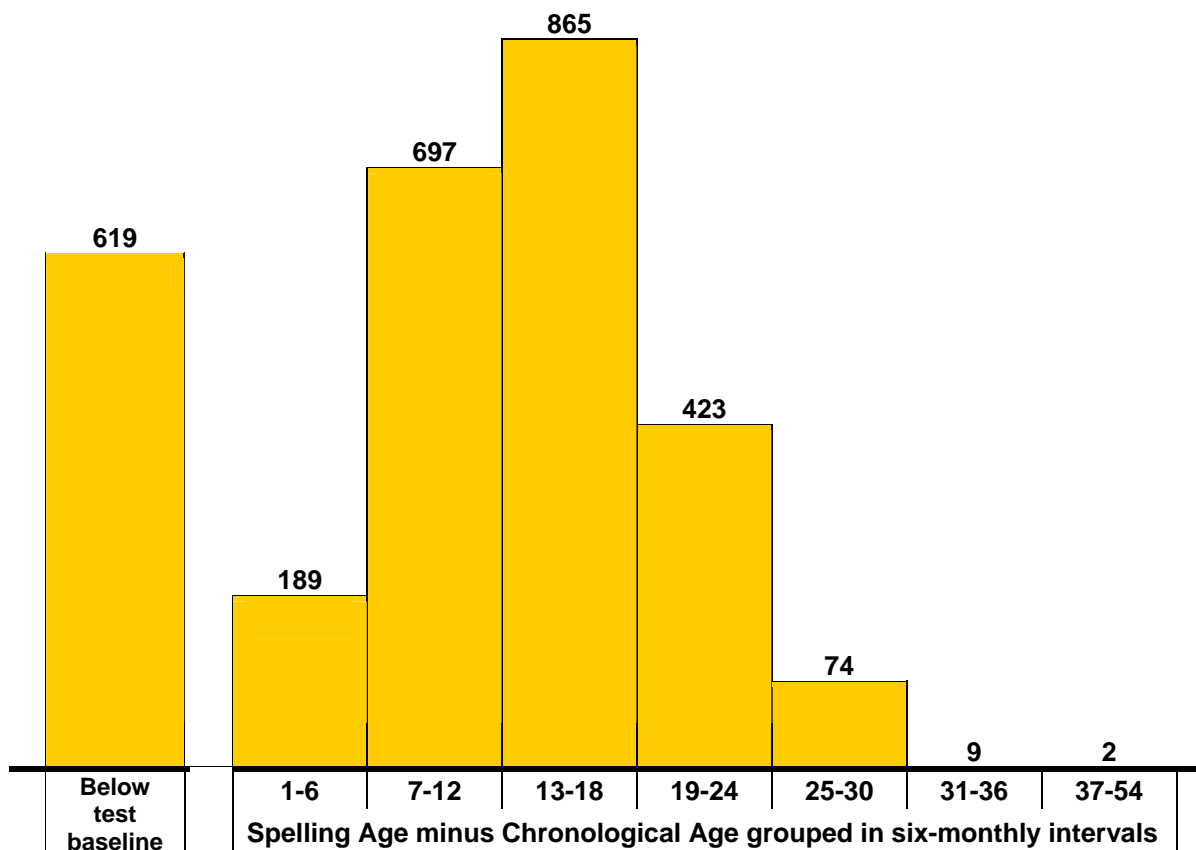


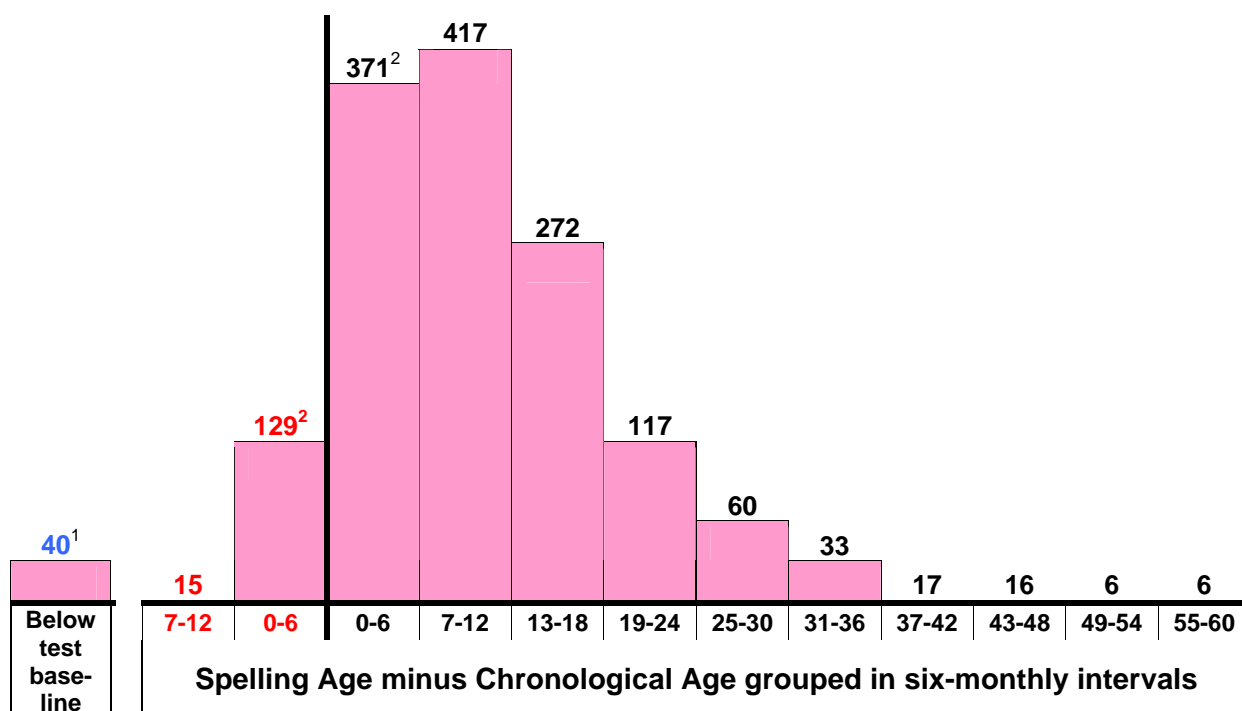
Table 1: Reception Year spelling data

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months ahead in spelling (SA – CA)
Girls	1442	217 (15.0%)	1225 (85.0%)	5 years 4-0 months	6 years 6-4 months	14-4 months
Boys	1436	402 (28.0%)	1034 (72.0%)	5 years 3-8 months	6 years 5-9 months	14-1 months
Total	2878	619 (21.5%)	2259 (78.5%)	5 years 3-9 months	6 years 6-2 months	14-3 months

Data in the above table has been provided for us by thirty-six primary schools ranging from small one-form entry schools with less than 10 pupils in each year group to three-form entry schools with over 80 pupils in each year group. All those involved are local authority schools, seven being Roman Catholic, five Church of England and 24 non-denominational. Three geographical areas of the UK were involved: Kent in the south-east; Milton Keynes/Bedfordshire; and the Metropolitan Borough of Wigan in the north-west. Altogether 121 individual classes of children were tested.

YEAR ONE PUPILS (End of year spelling data collected 2005-2007)

Bar Chart 3: Year One pupils placed in six-monthly intervals of Spelling Age above/below Chronological Age



¹ 9 of these 40 pupils still had chronological ages below the test baseline score of 5.11 years.

² 44 pupils had spelling ages that equalled their chronological ages. 22 were allocated to each of these columns.

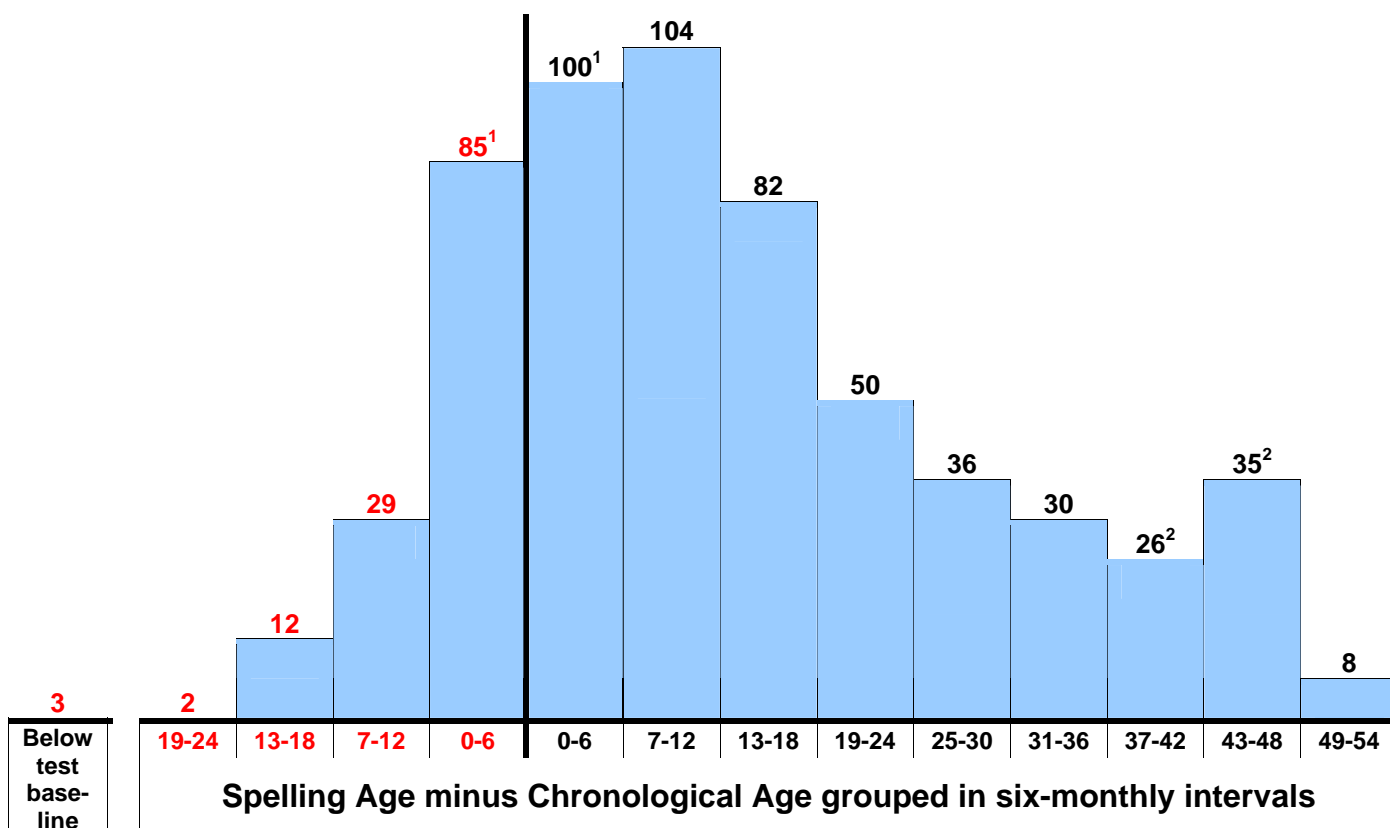
Table 2: Year One spelling data

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months ahead in spelling (SA – CA)
Girls	764	12 (1.6%)	752 (98.4%)	6 years 3-7 months	7 years 3-6 months	11-9 months
Boys	735	28 (3.8%)	707 (96.2%)	6 years 3-4 months	7 years 1-7 months	10-3 months
Total	1499	40 (2.7%)	1459 (97.3%)	6 years 3-6 months	7 years 2-8 months	11-2 months

Data in the above table has been provided for us by twenty-one primary schools ranging from small one-form entry schools with less than 10 pupils in each year group to three-form entry schools. All those involved are local authority schools, six being Roman Catholic, five Church of England and fourteen non-denominational. Three geographical areas of the UK were involved: Kent in the south-east; Milton Keynes/Bedfordshire; and the Metropolitan Borough of Wigan in the north-west. Altogether 67 individual classes of children were tested.

YEAR TWO PUPILS (End of year spelling data collected 2006-2007)

Bar Chart 4: Year Two pupils placed in six-monthly intervals of Spelling Age above/below Chronological Age



¹ 16 pupils had spelling ages that equalled their chronological ages. 8 were allocated to each of these columns.

² These two columns appear to have more pupils in them than would fit the smooth tail to be anticipated from predicting the likely curve from the columns to the left. The reason for this is that the Parallel Spelling Test A has a ceiling (maximum) score of 11.0 years. To our surprise (and delight) 59 pupils actually went through this artificial ceiling, thereby scoring above 11.0 years, but statistically we could only score them as having spelling ages of 11 years 1 month, resulting in the right hand tail of the distribution being cut off.

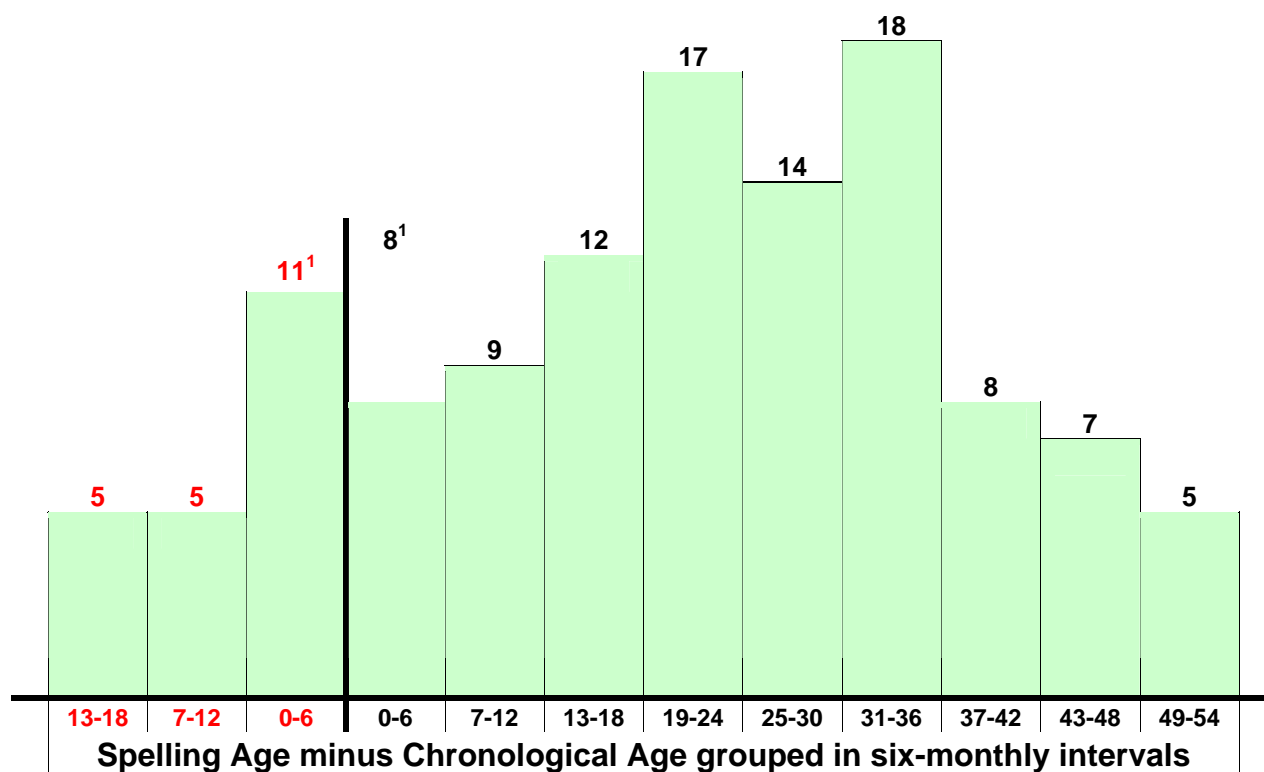
Table 3: Year Two spelling data

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months ahead in spelling (SA – CA)
Girls	298	0 (0.0%)	298 (100.0%)	7 years 3-8 months	8 years 6-3 months	14-5 months
Boys	304	3 (1.0%)	301 (99.0%)	7 years 2-6 months	8 years 3-6 months	12-0 months
Total	602	3 (0.5%)	599 (99.5%)	7 years 3-2 months	8 years 4-4 months	13-2 months

Data in the above table has been provided for us by fourteen primary schools: ten one-form entry, three two-form entry and one three-form entry. All those involved are local authority schools, four being Roman Catholic, five Church of England and five non-denominational. Three geographical areas of the UK were involved: Kent in the south-east; Milton Keynes/Bedfordshire; and the Metropolitan Borough of Wigan in the north-west. Altogether 25 individual classes of children were tested.

YEAR THREE PUPILS (End of year spelling data collected 2007)

Bar Chart 5: Year 3 pupils placed in six-monthly intervals of Spelling Age above/below Chronological Age.



¹ 4 pupils had spelling ages that equalled their chronological ages. 2 were allocated to each of these columns.

Table 4: Year Three spelling data

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months ahead in spelling (SA – CA)
Girls	65	0 (0.0%)	65 (100.0%)	8 years 3-4 months	10 years 0-8 months	21-4 months
Boys	54	0 (0.0%)	54 (100.0%)	8 years 2-3 months	9 years 8-8 months	18-5 months
Total	119	0 (0.0%)	119 (100.0%)	8 years 2-9 months	9 years 11-0 months	20-1 months

Data in the above table has been provided for us by four primary schools: three one-form entry and one three-form entry. All those involved are local authority schools, one being Roman Catholic, two Church of England and one non-denominational. Two geographical areas of the UK were involved: Milton Keynes/Bedfordshire; and the Metropolitan Borough of Wigan. Five individual classes of children were tested.

Discussion of results

The results obtained by Sounds~Write tuition in Reception classes show the following:

1. 78.5% of the 2878 Reception pupils under test scored a spelling age above their chronological age. On average this is just over 14 months ahead on the test used.
2. 21.5% didn't achieve a score on the test, but all of these were younger than the lowest score that can be achieved on this test - and on average they were eight months younger than the lowest score they could have obtained.

The results obtained by pupils taught by Sounds~Write trained teachers in both Reception and Year One show the following:

1. 99½% of the 1499 pupils in the sample tested were able to achieve a score on the spelling test.
2. Of these 1499 pupils: 1337 have spelling ages **equal to or above** their chronological ages = 89.2%
153 have spelling ages below their chronological ages = 10.2%
9 are so young in the year group that we cannot yet be certain
whether their spelling is above or below their actual ages = 0.6%

These results are very encouraging. They suggest that almost nine in ten pupils taught for two consecutive school years by the Sounds~Write linguistic phonic approach achieve spelling ages at or above previous expectations - with the whole of the sample tested averaging just over 11 months ahead of chronological age. Furthermore, at this stage in their schooling, none of the 122 pupils who scored below chronological age did so by more than 10 months, with 107 of them scoring no more than six months below their chronological ages. We therefore think we can say with some confidence that the Sounds~Write programme is working successfully for at least 96% of pupils. We would also like to remind our readers that spelling, which relies on recall memory, is a much more difficult task than reading, which has a considerable recognition memory component.

The results obtained by pupils taught by Sounds~Write trained teachers in Reception, Year One and Year Two show the following:

1. Of these 602 pupils: 479 have spelling ages **equal to or above** their chronological ages = 79.6%
123 have spelling ages below their chronological ages = 20.4%
Of the 123 pupils whose spelling ages fall below their chronological ages, 77 do so by only six months or less, leaving only 46 (7.6% of the sample) whose relatively slower progress *may* be giving rise to some concern.
2. There is general agreement within academic circles that pupils who achieve phonic skills at a 9½ year level will retain them for the rest of their life. We note that 125 pupils out of the 602 in this sample (25% of them) have already achieved this 'target' prior to their completion of Key Stage One, and at an average age of only 7 years 3 months.
3. Written GCSE examinations are said to require a reading age of 10½ years (much easier to achieve than a spelling age of 10½ years!). 77 pupils in this sample (13%, or just over 1 in 8) have already achieved this 'target' and presumably already have the basic literacy skills in place a full **nine years** before they will need to use them in their Y11, end of compulsory education, examinations.

We advise schools and teachers that, by the age of six, most pupils should be spending about half an hour a day on their Sounds~Write programme to optimise their development of reading and spelling. But we are also aware that teachers are usually under pressure with Y2 pupils to maximise their overall performance in their end of year SATs. Unfortunately, teaching towards the English SAT test is not something that necessarily has any benefit at all in respect of literacy development. We know that some Y2 teachers divert time away from literacy tuition during this academic year to activities that they feel might result in more pupils achieving levels 2 and 3 in the end of Key Stage One SATs. Unfortunately, this often results in literacy tuition time being diverted away from the poorest performing pupils who need their literacy instruction the most, but are thought the least likely to improve their SAT scores. Not surprisingly, we believe the most important academic outcome for primary schools is to retain a central focus on making every pupil literate, so that for the rest of those pupils' lives they are able to **read to learn**. In this context we note the recent address given by Sir Cyril Taylor, chief executive of the Specialist Schools and Academies Trust, 4th October 2007, in which he called for all secondary schools to make their pupils sit reading tests at the start of Y7 because their SATs results '**cannot be trusted**'. (*We would naturally suggest that spelling tests, rather than reading tests, would provide much better information about the level at which each pupil can be expected to function academically.*)

The results obtained by pupils taught by Sounds~Write trained teachers in Reception, Year One, Year Two and Year Three show the following:

[*Although we are showing a few figures below, the sample of pupils that we have is too small for generalisation, but it does show what a small group of schools have achieved with their pupils by following the Sounds~Write programme over the first four years of their pupils' schooling.]*

1. Of these 119 pupils: 100 have spelling ages **equal to or above** their chronological ages = 84.0%
19 have spelling ages below their chronological ages = 16.0%
Of the 19 pupils whose spelling ages fall below their chronological ages, nine do so by only six months or less, leaving only 8.4% of the sample whose relatively slow progress *may* be giving rise to some concern.
2. 84 pupils out of the 119 in this sample (64%, *almost two-thirds of them*) have already achieved the 9½ year level thought to represent literacy skills that will be retained for life; and at an average age of only eight years three months.
3. 45 pupils in this sample (38%, *or just over 1 in 3*) have already achieved literacy skills of 10½ years or above, having the basic literacy skills in place to access written GCSE papers a full **eight years** before they will need to use them in their Y11, end of compulsory education, written examinations.

Gender difference and slower starting learners

We would now like to present a more detailed look at some of the figures in order to comment upon two particular issues of interest to all primary teachers: (i) gender differences; and (ii) the rate of learning of those who make a relatively slow start to literacy skills acquisition. Before doing so, in order to avoid any confusion about the figures, it is important to bear in mind some of the difficulties of long-term studies. Firstly, there is a dropout rate in respect of parents moving house and their children having to change school. It is quite common for 10% to move each academic year, resulting in a reception class with an intake of 30 having only about 20 of them still in the class by the end of Y3. Sometimes teachers become pregnant, or have long illnesses, during which their classes are likely to be taught by supply teachers who have not had any Sounds~Write training - we then lose the whole class from the study. We have also lost whole classes who have moved from infant schools teaching Sounds~Write to junior schools that do not. Also within our sample we have some pupils whom we know were taught by the Sounds~Write approach very well in their Reception Year, but their school did not start collecting data for us until the end of their Y1 year. This means that we might have perfectly good data on them at the end of their Y1 and Y2 years, but have no test results from the end of their Reception Year.

Over the next few years we hope to collect data on at least 1500 pupils for whom we have test results for each of their four consecutive school years YR, Y1, Y2 and Y3. However, we already have enough data for a preliminary look at the two issues mentioned above. In order to do this we are now going to present the data for all the pupils who have received Sounds~Write teaching throughout the three years of Key Stage One for whom we have spelling test scores at the ends of both their Reception and Y2 years. The number of pupils for which we can currently do this is 437.

Table 5: Spelling data for 437 pupils at the end of Y2 whose spelling ages we also know at the end of their Reception Year

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months ahead in spelling (SA – CA)
Girls	223	0 (0.0%)	223 (100.0%)	7 years 3-8 months	8 years 4-8 months	12.9 months
Boys	214	1 (0.5%)	213 (99.5%)	7 years 2-8 months	8 years 2-7 months	12.3 months
Total	437	1 (0.2%)	436 (99.8%)	7 years 3-3 months	8 years 3-8 months	12.6 months

Out of these 437 pupils, 376 (86.0%) scored Spelling Ages above Chronological Age at the end of their Reception Year, whilst the other 61 (14.0%) were unable to do so. (Although of course they were all still younger than the minimum possible score on the test.). In Tables 6 and 7 overleaf we show the end of Y2 data for each of these groups separately.

Table 6: Spelling data for 61 pupils at the end of Y2 who did not score at the end of their Reception Year

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months <u>below</u> in spelling (CA – SA)
Girls	19	0 (0.0%)	19 (100.0%)	7 years 2.4 months	6 years 9.5 months	4.9 months
Boys	42	1 (2.4%)	41 (97.6%)	7 years 1.6 months	7 years 0.5 months	1.0 month
Total	61	1 (1.6%)	60 (98.4%)	7 years 1.8 months	6 years 11.6 months	2.3 months

Table 7: Spelling data for the 376 Y2 pupils who did score at the end of Reception

Gender	No: of pupils tested	Number not reaching test baseline of 5.11 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Spelling Age (SA)	Months <u>ahead</u> in spelling (SA – CA)
Girls	204	0	204	7 years 3.9 months	8 years 6.5 months	14.6 months
Boys	172	0	172	7 years 3.2 months	8 years 6.7 months	15.4 months
Total	376	0	376	7 years 3.6 months	8 years 6.6 months	15.0 months

Looking back at the figures for Reception pupils shown in Table 1 on page 5 we can see that out of our sample of 2878 pupils the really significant difference between boys and girls is that nearly twice as many boys (402) as girls (217) did not achieve the baseline score of the test. This clearly suggests that more boys than girls are not ready for an academic introduction to literacy when they enter school at 4+.

We can also see from the figures for all four year groups that, once pupils can achieve the baseline test score, the girls, on average, **appear** to be ahead of the boys by the following amounts in each year group:

Reception:	Girls spelling ahead of boys by 0.3 months
Year One:	Girls spelling ahead of boys by 1.6 months
Year Two:	Girls spelling ahead of boys by 2.5 months
Year Three:	Girls spelling ahead of boys by 2.9 months

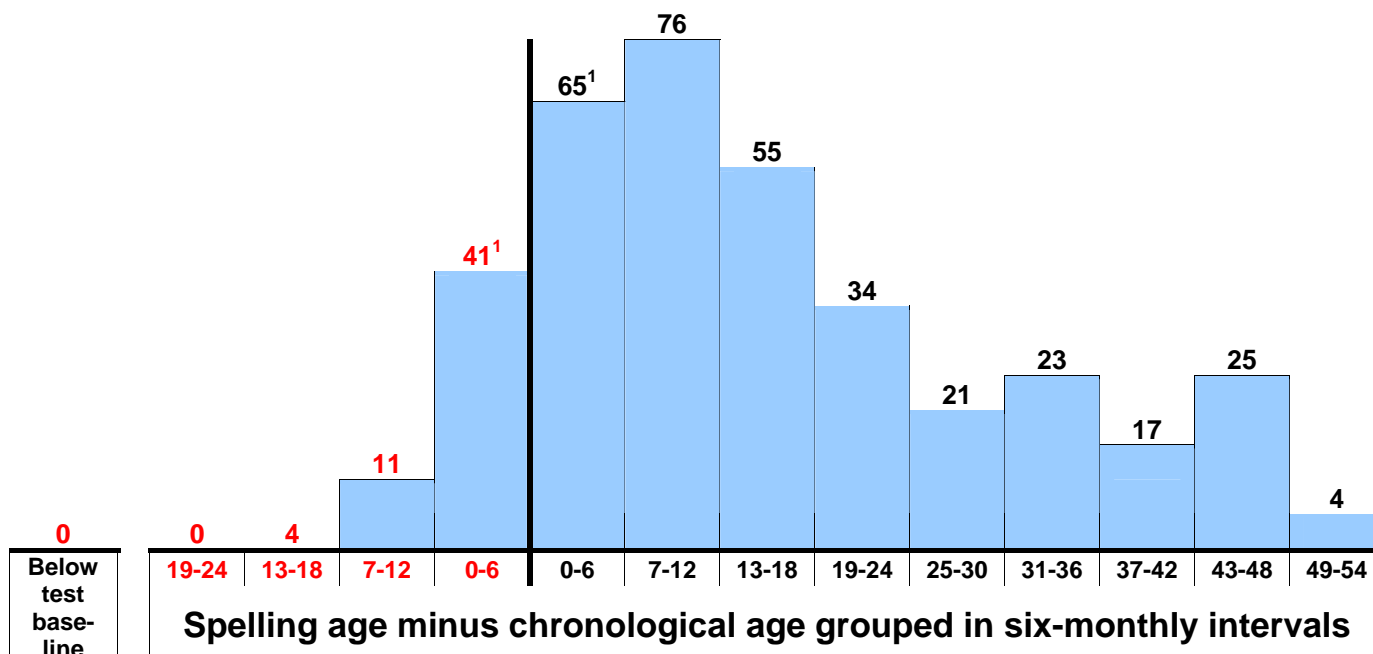
On the surface this would suggest that the girls are acquiring literacy skills and knowledge at a slightly faster rate than the boys. However, when we separate the pupils into those who did not score on the test at the end of Reception and those who did score, and then look at their progress two years later at the end of Y2 the picture changes. We can now see (Table 7) that, for those pupils who made a start in Reception, two years later the boys are actually ahead of the girls by 0.8 months on average. Even more interestingly, for those 60 who did not score at the end of Reception, but did score at the end of Y2 (Table 6), the boys are 3.9 months ahead of the girls (i.e., they are averaging only 1.0 month behind chronological age compared to the girls averaging 4.9 months behind.) What this shows us is that we

shouldn't be measuring progress by taking a simple global average of all pupils within each year group. Doing this simplistically suggests that girls are learning more quickly than boys. The reality, though, is that for most boys taught by a linguistic phonic programme such as Sounds~Write, their progress in literacy is very similar to, or identical to, that of the girls. We cannot of course comment precisely on what happens with pupils following the National Literacy Strategy, but judging by all the Department of Education pronouncements on the subject, boys' relative failure is a major issue when following National Literacy Strategy advice.

Before commenting further on those pupils that are probably not developmentally ready for formal literacy tuition during their Reception Year, we would like to present the data shown on Page 12 in Tables 6 and 7 in the visual bar chart form used previously. We think this is much easier to grasp for most readers than just looking at blocks of numbers.

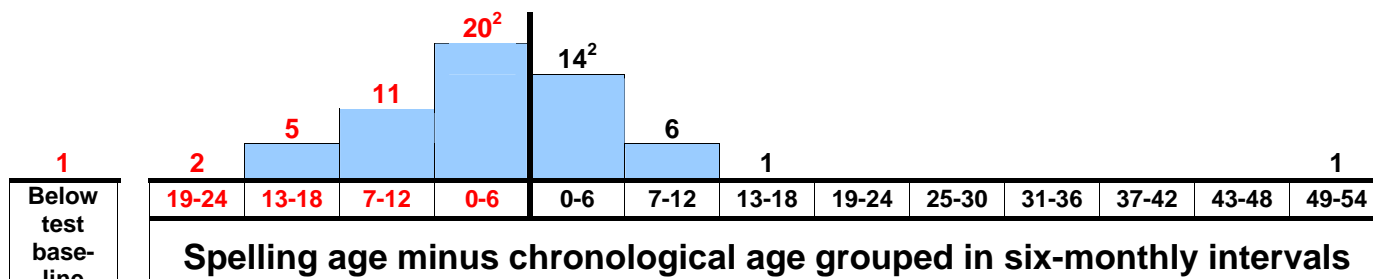
Bar Chart 6: The 437 Y2 pupils for whom we have data at both YR and Y1 (see page 12) placed in six-monthly intervals of spelling age above/below chronological age

(ii) The spread of Spelling Ages at end of Y2 for the 376 pupils who did score a Spelling Age above Chronological Age at the end of their Reception Year.



¹ 12 pupils had spelling ages that equalled their chronological ages. 6 were allocated to each of these columns.

(i) The spread of Spelling Ages at end of Y2 for the 61 pupils who didn't achieve the test baseline score at the end of their Reception Year.



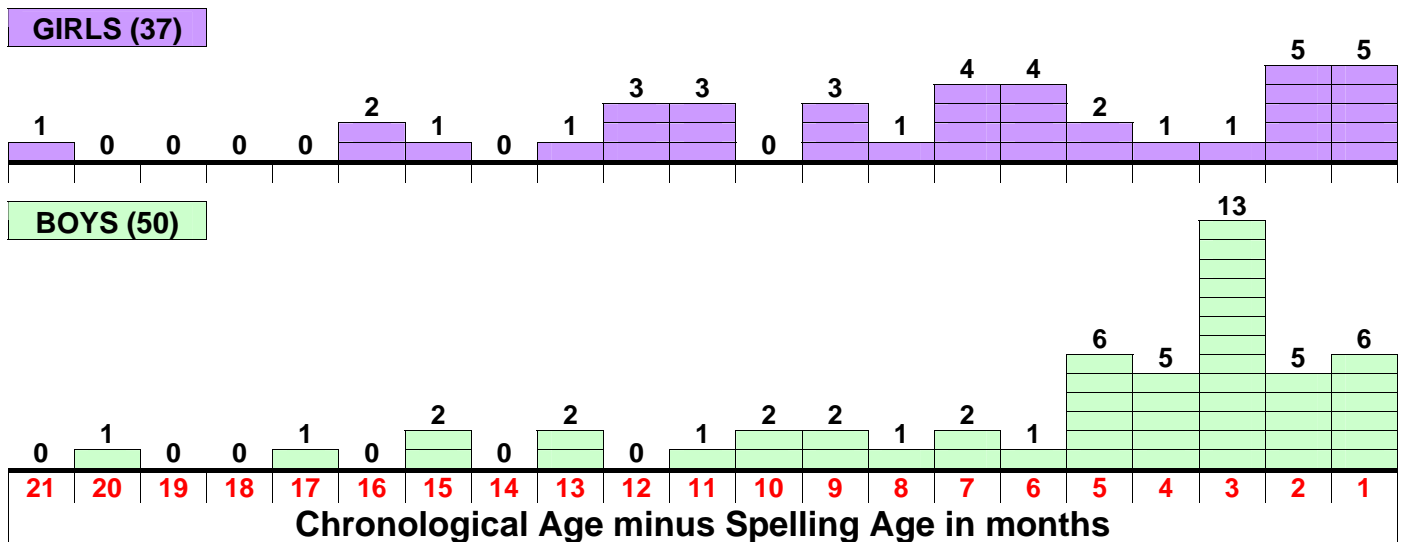
² 2 pupils had spelling ages that equalled their chronological ages. 1 was allocated to each of these columns.

Inspection of the above chart for those pupils who did not reach the baseline score at the end of their Reception Year shows, with the exception of one pupil who is now over 4 years ahead of his chronological age, there is a much narrower spread of achievement than for their peers – most of them falling within 12 months of the group average of Spelling Age being 2-3 months below Chronological Age (Table 6, page 12). This would clearly seem to suggest that, although most of these pupils appear to be

making acceptable progress, their slow start in Reception is probably an indicator that they may continue to make relatively slow progress in future years. Bearing in mind that on average these pupils are only a couple of months below their Chronological Age in spelling at the end of Key Stage One (after three years teaching) there seems to be no reason why the majority of them should not eventually achieve future literacy skills of at least 9½ to 10½, *providing sufficient time and attention is given to their literacy skills development throughout Y3 and Y4*, and for a very small number throughout Y5 and Y6 as well. We fully support the idea that **every child matters** and it matters very much that every child should become literate if their future lives and learning are not to be blighted.

The figures in the two bar charts on the previous page show that out of this sample of 437 pupils there are only 88 in total (20%) whose Spelling Ages are below their Chronological Ages with the other 80% scoring at or above Chronological Age. One of these 88 did not score on the spelling test, but the others all did and their results are shown, boys and girls separately, on the following bar chart.

Bar Chart 7: The 87 pupils whose known spelling ages are below their chronological ages



This chart is particularly interesting for two reasons. Firstly it shows that over half of these pupils have Spelling Ages no more than six months below their Chronological Ages and should therefore be able to cope with age-appropriate academic work within their classes. Only 33 pupils (7½% of the sample) scored more than six months below Chronological Age, *and just over half of these were girls*. Again this does not suggest that there is any real gender issue affecting learning to read and spell, providing pupils are taught by teachers who have good understanding of linguistic phonics and how to teach it.

Only 12 (2¾%) pupils in this sample of 437 reached the end of Year Two with Spelling Ages more than twelve months below their Chronological Ages. We suspect that these might all benefit from further investigation to try to establish whether or not their progress in literacy is being adversely affected by factors such as: speech and language problems; hearing difficulties; specific or general learning difficulties; environmental/ home support problems; or whether their schools are allocated the resources to offer them sufficient high quality individualised teaching support.

Appendix A: Reading Ages

Although we have explained why we did not choose to use reading tests to measure the progress of pupils being taught by Sounds~Write, we always knew that there would be those who needed to see such data. We are therefore particularly grateful to all those Y1 and Y2 teachers who have taken the trouble to also test their pupils on the Burt (Word recognition) Reading Test for us. All of their results are shown in the two tables below.

Table 8: Y1 Pupils, Burt Word Recognition Test Reading Ages

Gender	No: of pupils tested	Number not reaching test baseline of 5.03 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Reading Age (RA)	Months ahead in reading (RA – CA)
Girls	692	5 (0.7%)	687 (99.3%)	6 years 3-6 months	7 years 0-4 months	8-8 months
Boys	683	18 (2.6%)	665 (97.4%)	6 years 3-4 months	6 years 10-9 months	7-5 months
Total	1375	23 (1.7%)	1352 (98.3%)	6 years 3-5 months	6 years 11-7 months	8-2 months

Table 9: Y2 Pupils, Burt Word Recognition Test Reading Ages

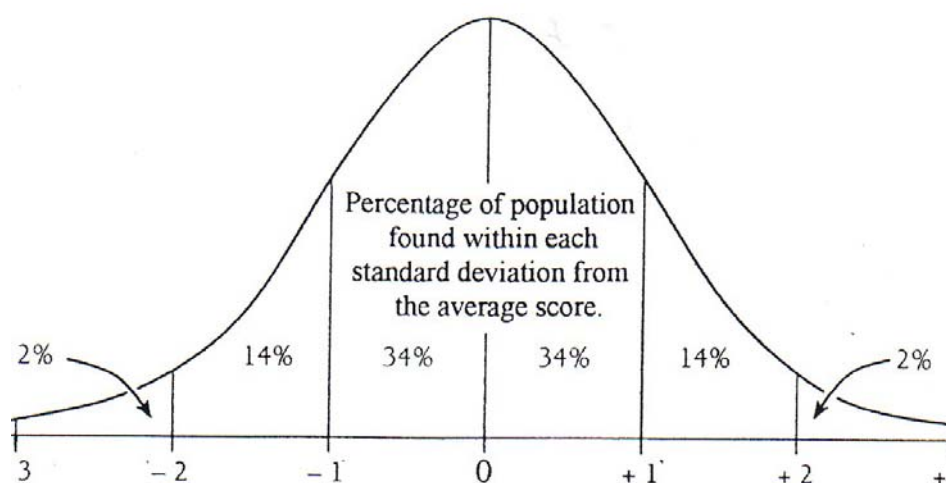
Gender	No: of pupils tested	Number not reaching test baseline of 5.03 years	Pupils who did score on the test			
			Number	Average Age (CA) in years and months	Average Reading Age (RA)	Months ahead in reading (RA – CA)
Girls	295	0 (0.0%)	295 (100.0%)	7 years 3-8 months	8 years 1-3 months	9-5 months
Boys	304	1 (0.3%)	303 (99.7%)	7 years 2-7 months	7 years 11-3 months	8-7 months
Total	599	1 (0.2%)	598 (99.8%)	7 years 3-2 months	8 years 0-8 months	9-1 months

Continued overleaf on Page 16.

When we started collecting data we said that we thought that the effect of the Sounds~Write programme on the expected Bell curve would be to push it to the right (*i.e. increase average attainment levels*) and skew it so that the left-hand slope became steeper and the right-side tail became elongated (*i.e. that many more pupils would come to understand the phonic principles underlying the English alphabet code and make much more progress than traditionally expected*). We were very pleased to see that this was indeed the case.

We have included a picture of the theoretical Bell curve below so that readers can compare it with the bar charts shown on pages 6 and 7 for the Y1 and Y2 spelling data. The curve would be obtained by joining up the centres of the tops of each bar in the charts, but obviously to get a really good curve you would need more data and to draw many more bars of much smaller groupings than the six-monthly intervals that we have presented.

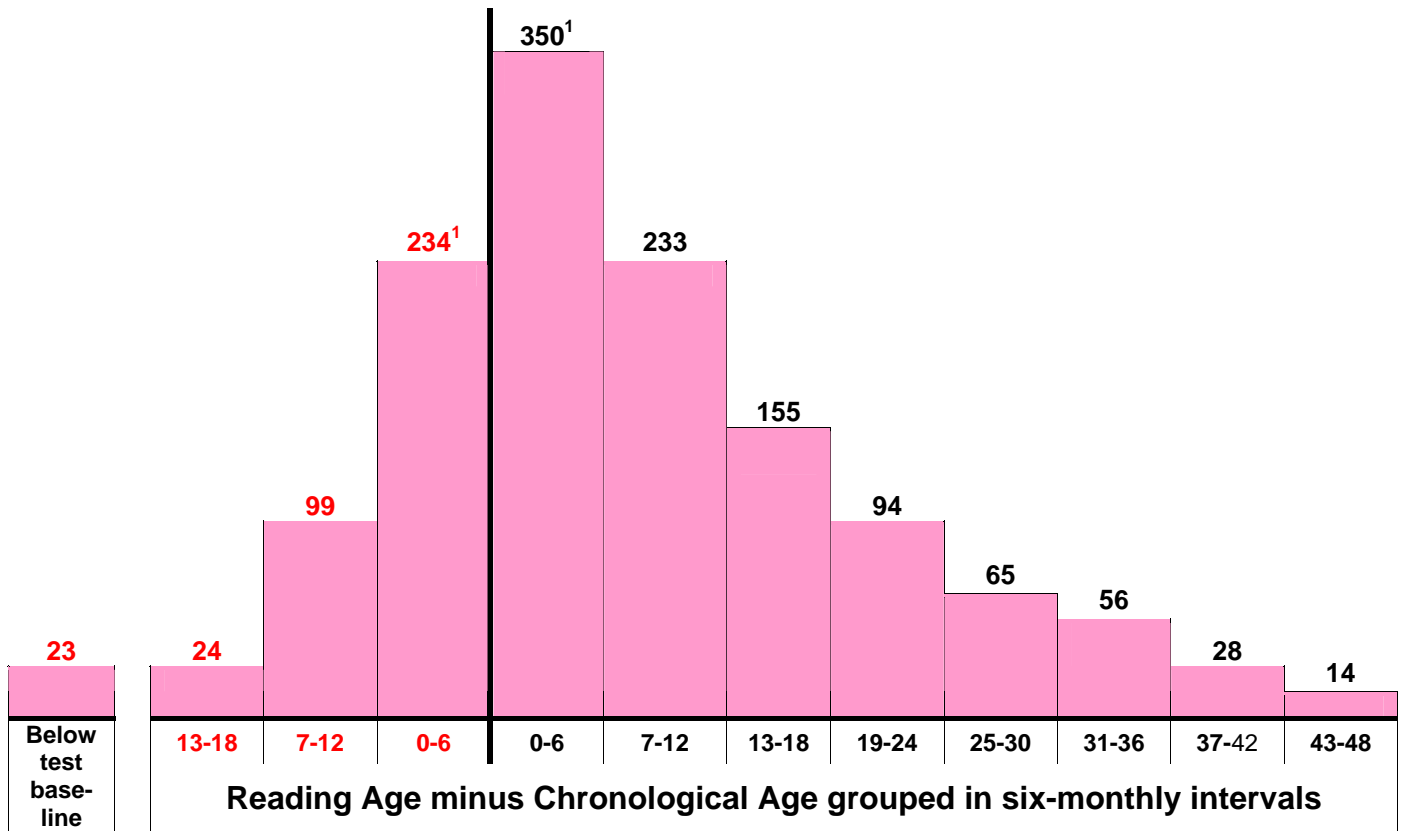
Figure 1: The Normal Distribution Curve (Bell curve)



We have previously commented that the results of traditional reading tests that have been made to conform to the Bell curve can only do so artificially, because those tests are measuring two variables that are only minimally correlated: (i) sight-memory for high frequency words, and; (ii) accurate phonic decoding skills. We therefore predicted that pupils taught by Sounds~Write would demonstrate results on traditional reading tests that would differ from the Bell curve because they would be consistently dissuaded from sight-memorising any words at all. The Y1 and Y2 bar charts of reading test results are both shown overleaf so that readers can compare their distributions. It is quite obvious that the Y2 results have ceased to bear any resemblance at all to the normal distribution Bell curve.

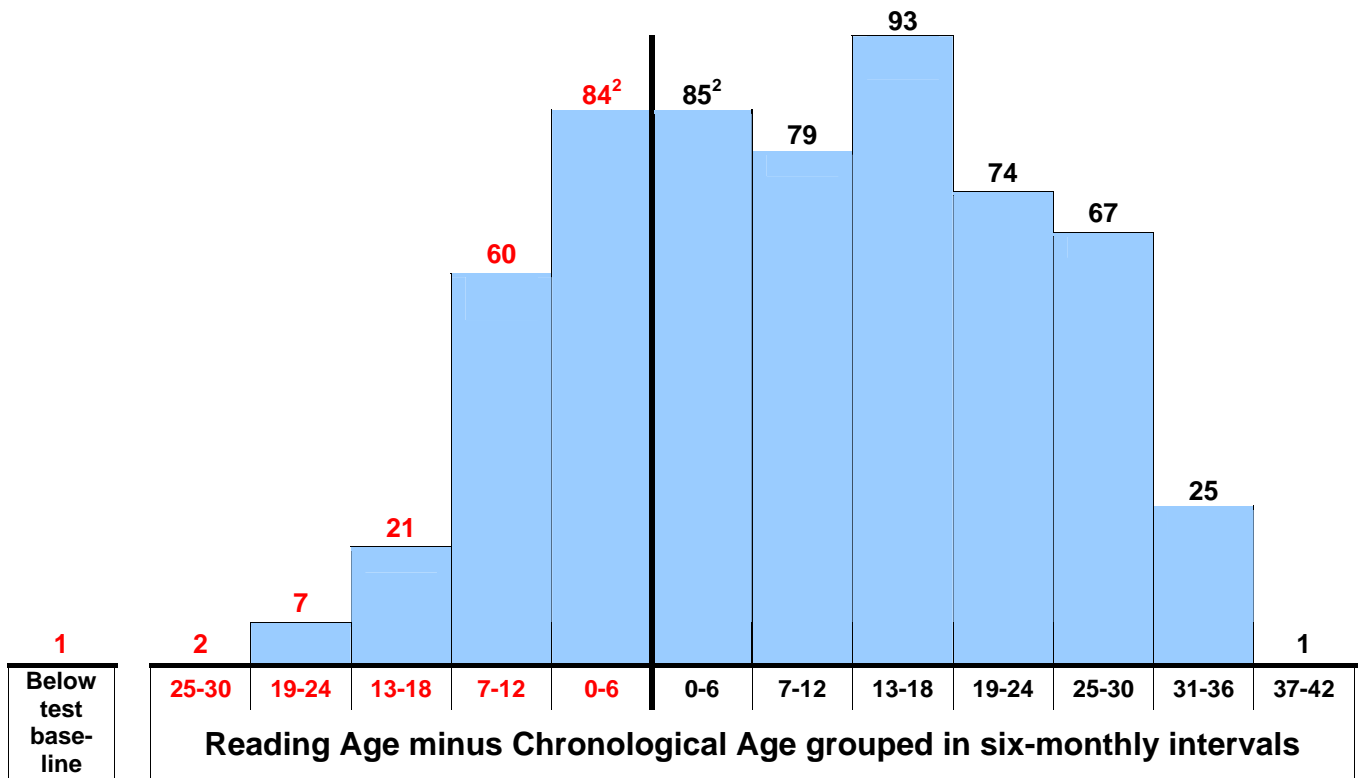
We would be rather surprised if our pupils' progress in literacy was not normally distributed. We think that it is. Unfortunately, currently available reading tests have been artificially standardised in a statistical manner that makes them inappropriate and inaccurate for use with pupils who have been taught by genuine phonic principles.

Bar Chart 8: Year 1 pupils placed in six-monthly intervals of Reading Age above/below Chronological age.



¹ 48 pupils had reading ages that equalled their chronological ages. 24 were allocated to each of these columns.

Bar Chart 9: Year 2 pupils placed in six-monthly intervals of Reading Age above/below Chronological Age.



² 4 pupils had reading ages that equalled their chronological ages. 2 were allocated to each of these columns.