

# What is it to know a word? A Lincolnshire Story

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The recent EEF guidance report for Literacy in Key Stages 1 and 2 highlights an issue that teachers are acutely aware of: the need to improve children's word knowledge – particularly the gap between the most disadvantaged and their peers.



The first recommendation in the Key Stage 2 guidance states:



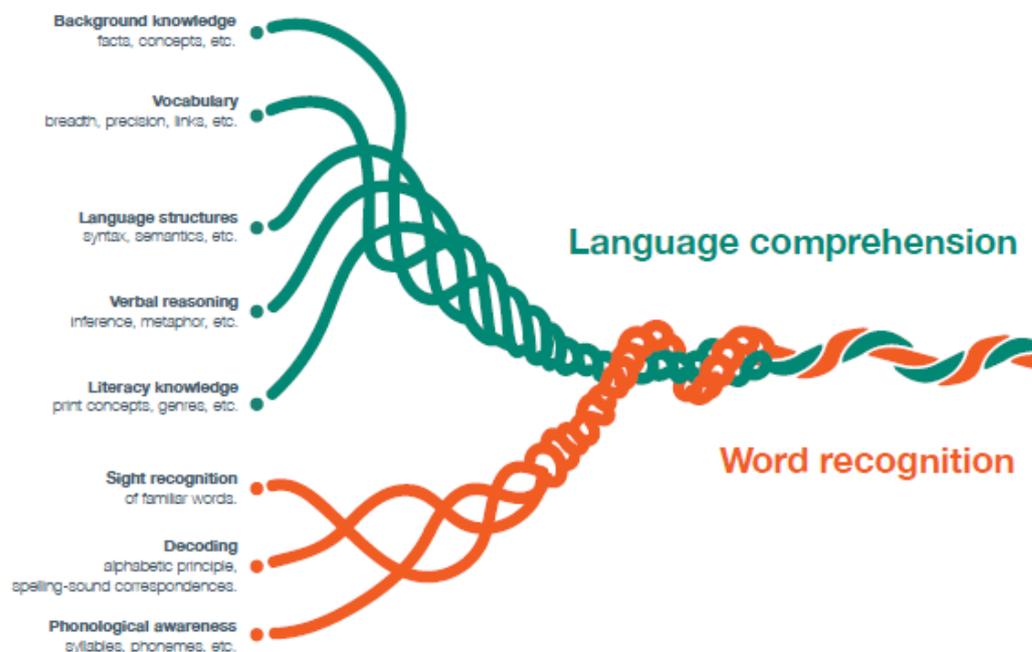
‘Speaking and listening are critical to extending pupils’ receptive and expressive vocabulary. While pupils may have the decoding skills required to say a word out loud, they will only be able to understand what it means if it is already in their vocabulary. Approaches to develop

vocabulary can be split into two groups: (1) explicit teaching of new vocabulary and (2) exposure to a rich language environment with opportunities to hear and confidently experiment with new words. Both approaches should be used and the following points should be considered:

- **repeated exposure to new vocabulary is necessary across spoken language, reading and writing;**
- **pre-teaching and discussing new words can support reading comprehension;**
- **pupils should learn both new words and how to use familiar words in new contexts;**
- **vocabulary learning should entail active engagement in learning tasks; and**
- **digital technology can be used to help develop and teach vocabulary.**

Developing pupils' vocabulary knowledge is a key instrument in closing the language gap – nicely illustrated by Scarborough's Reading Rope (figure 1) which illustrates the key strands of the reading process.

**FIGURE 1: THE MANY STRANDS THAT ARE WOVEN INTO SKILLED READING<sup>7</sup>**

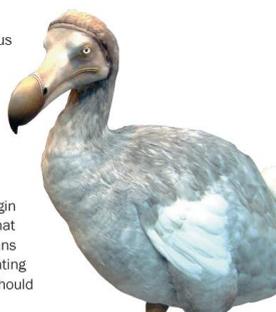


A good example of the challenges primary school pupils face – and the challenges are just as evident in the secondary curriculum – came in the 2016 Key Stage 2 SATs.

Then, in 2005, a team of scientists unearthed thousands of dodo bones in some mud flats in Mauritius. The remains date back to over 4,000 years ago, when the island was suffering from a lengthy drought. The mud flats would have formed a freshwater oasis in an otherwise parched environment. It is thought that most of the animals, while trying to reach the slowly receding waters of the lake, became stuck and died of thirst or suffocation. However, clearly some dodos survived as they did not become extinct until much later.

This discovery is helping to rehabilitate the image of this much-ridiculed bird. The very fact that the dodo was still alive and well on Mauritius 4,000 years after a drought that claimed the lives of thousands of animals is an indication of the bird's ability to survive. The remains are also helping scientists to find out more about the anatomy of the dodo, for example that it was a much slimmer bird than any pictures suggest.

As scientists learn more about the dodo, and begin to see the bird in a new light, we are reminded that the dodo was badly misjudged. Maybe it is humans who should be judged, as we can have a devastating impact on the natural world. No other creature should be allowed to go the way of the dodo.



The complexity of language left many pupils struggling with 'drought', 'parched', 'suffocation', 'extinct', 'rehabilitation', 'indication', 'unearthed' and 'receding' in a short section.

The focus on vocabulary was also highlighted in the many questions which relied upon having a depth of language knowledge. For example (the infamous question 16):

**16** ...milled around in bewilderment (page 8)

Explain what this description suggests about the baby warthogs.

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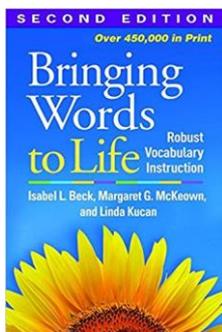
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2 marks

**So what approach should teachers take to teaching vocabulary according to the research?**

One of the key texts is Beck and McKeown's superb 'Bringing Words to Life'. In which they state:



*Reading aloud alone is not sufficient to build vocabulary or to increase comprehension – is the talk surrounding read-aloud activities that helps students gain experience with language representing ideas and concepts.*

**Beck and McKeown (2001)**

Beck and McKeown use research to illustrate that explicit instruction, including lots of talk around language, is a central component to building word knowledge and word 'consciousness'. They also illustrate which words – 'Tier 2 and 3' words – we should be teaching; the language that children will be more typically exposed to in books rather than spoken English.

In addition, the use of assessment should be a central tenant for learning – assessment *as* learning – not just as a summative tool.

## What is good assessment of vocabulary and how have Kyra Research School been working with the Mobilise Project to find out what impacts pupils?

The Mobilise project is in its second year in Lincolnshire and involves over 250 schools – primary, secondary and special schools – with a choice of research to focus on including aligning classroom practice to the findings from cognitive science and neuroscience.

According to Beck et al. (2001) we should use multiple strategies, repeated exposures - 12 exposures enough for most students, but others require 20 or more to have a deep insight into the nuances of Tier 2 words.

Over the past couple of months a group of schools in Lincolnshire have been testing how to use repeated exposure to language using retrieval practice (more on this technique can be found here: <http://www.learningscientists.org/blog/2016/6/23-1> ).

Around 400 pupils were involved in trial which tested three conditions: massed practice – just teaching without follow on retrieval practice (control group); and using retrieval practice with different lengths of ‘expanded retrieval’ – different length gaps between the remembering episodes (interventions A and B). Our early data analysis has been revealing – there certainly seems to have been a significant learning gain for Year 5 pupils using retrieval:

	Control v Intervention A	Control v Intervention B	Intervention A v Intervention B
Effect size (g)	0.32	0.28	-0.06
p-value	0.016	0.022	0.444

\*Significant with alpha P = 0.0167

This initial analysis of Year 5 indicates a moderate ‘effect size’ of retrieval practice and the probability of this being down to chance is low for Intervention A compared to the control (indicated by the p value) and a small positive Intervention B v Control. There is little difference in impact between the interventions A and B. **In simple terms, the intervention, using expanded retrieval, seemed to allow pupils to remember and understand the language for longer.**

‘Effect size’ is a measure for indicating additional progress an intervening could have (over a 12 month period).

For EEF trials, the ‘Months’ Progress’ measure shows the number of *additional* months of progress that children receiving the intervention made, on average, compared to the ‘control group’ who did not receive it.

The effect size describes the size of the difference between two groups in a standard and comparable way. However, it can be difficult to understand what a given effect size will mean for the progress of children and young people. That is why the EEF translates effect sizes into a measure of months of additional progress, as shown in the table below. In the Lincolnshire trial, on average pupils could have made an additional four months progress over a year.

<b>Effect size from to Months' additional progress</b>		
-0.04	0.04	0
0.05	0.09	1
0.10	0.18	2
0.19	0.26	3
0.27	0.35	4
0.36	0.44	5
0.45	0.52	6
0.53	0.61	7
0.62	0.69	8
0.70	0.78	9

### **What are the implications of the Lincolnshire Research?**

In a nutshell - dissemination, scaling up, and... more research and replication! Lincolnshire schools have worked collaboratively to test the current understanding of learning new vocabulary. It certainly seems that Year 5 pupils, and other year groups in the trial, have benefited from this form of school-based research and now the task is to disseminate this widely and see if we can replicate the findings.