

HOW SHOULD WE TEACH READING?

Decades of research indicates that children should be taught to read using a 'phonological approach'. This method involves teaching students to develop knowledge of speech sounds and the letters that represent them. Dr. Kerry Hempenstall from RMIT University explains...

USE YOUR BRAIN AND TEACH CHILDREN TO READ PROPERLY

By [Kerry Hempenstall](#), *RMIT University*

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Almost half of all Australians aged 15-74 years had literacy skills below the level required to participate effectively in our society, according to a [2008 study](#) from the Australian Bureau of Statistics.

The Victorian Auditor-General has [noted that](#) efforts to improve the literacy achievement have done little to improve the average achievement of students across the state, despite an investment of \$1.19 billion in the six years prior to the completion of the study in 2009.

The report was also critical of the failure to assess the effectiveness of the key elements of its approach to literacy, for example, the [Reading Recovery](#) intervention for year one students.

PRODUCING FAILURE

The initial teaching of reading continues to follow a discredited model, and misteaching continues to produce an unacceptably high failure rate among students.

The main reason is that our system has ignored the enormous amount of research that can offer a solution to our literacy problems. This point was made in the [2005 Report](#) of the National Inquiry into the Teaching of Literacy.

Some of this research shows us how our brains react to different teaching approaches.

EXAMINING THE BRAIN

When functional MRI brain imaging is used to examine what is occurring when someone is reading, good readers are seen to activate several places on the brain's left hemisphere. These areas are used co-operatively to convert letters into sounds, and then to fit the sounds together to make words we know.

Flourishing readers have realised that the alphabet's letters are symbols intended to evoke those sounds, and they have learned how the sounds are blended to build words.

One of these left-brain regions ([parieto-temporal area](#)) is employed in [sounding out words](#).

BUILDING BLOCKS

Over time, as young readers perform this sounding-out of written words, they start to build a model of that word in another section of the brain ([occipito-temporal area](#)).

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When this process occurs regularly, students begin to display rapid, effortless reading rather than the earlier, slower, sounding-out strategy.

SOUNDING IT OUT

It is tempting to suggest that children should not be taught to sound out, because it isn't the way skilled readers respond to print.

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Once children latch on to the logic of our alphabetic language, it doesn't take many soundings-out to create the firm links necessary, but some children require more practice than others.

As this process continues words that look similar to now-known words are converted to models much more quickly.

Slower progress may relate to either genetics or inadequate experiences, including unhelpful teaching.

A DIFFERENT PART OF THE BRAIN

Those who struggle to read appear not to use these productive brain regions for reading. Instead, they create an alternative neural pathway.

It is purely a compensatory strategy involving the visual centres of the right hemisphere - looking at words as if they were pictures.

Little activity is observed in the [phonological areas](#) of the left hemisphere where capable readers' activity is dominant.

The brains of people who can't sound out words look different - there is less blood flow to the language centres of the

brain.

If this sequence (from sounding out to whole word recognition) is not adequately taught, some children will still figure it out for themselves.

However, too many will be forced to employ less rapid and accurate systems, such as prediction from a story's context, guessing from pictures or the first letter, or trying to memorise every word.

DEVELOPING EXPERIENCES

We now understand that the brain responds to multiple similar experiences. These stimulate activity in particular areas, building connections in and between those active brain regions.

That is how practice makes permanent.

Practising productive strategies forms and strengthens the optimal connections that stimulate subsequent reading development.

In the same way, routinely engaging in ineffective strategies also builds circuits in the brain, but circuits that are second-rate for reading.

These routines are not easy to break when students grow older, perhaps because particularly between ages five and ten a pruning process erases under-used neural cells.

CATCH THEM WHEN YOUNG

Forming neural links for language is relatively easy up to about age six, and though achievable after that time, requires much more effort. That is why effective initial teaching is so important.

Among those struggling readers, there are teaching strategies that can alter the inefficient pattern of brain activation. [Studies have indicated](#) that about 60 hours of careful daily phonics teaching alters the way the brain responds to print.

Inefficient right-hemisphere activity diminishes, and left-hemisphere activity increases. Subsequent MRI images appear much more like those of good readers. The measured reading outcomes include increased fluency and comprehension.

A TAXING EFFORT

The brain imaging studies have also shown how difficult and exhausting is the task of reading for struggling students. They use up to five times as much energy when reading as do fluent readers. It is not surprising that they prefer not to read.

Slow early literacy development usually predicts a progressive decline in academic progress across the primary and secondary years. Such students increasingly lose access to the curriculum, and many become early school-leavers.

The [2005 Australian NITL report](#) called for a renewed emphasis on the phonological approach to beginning reading, in which children take their first steps toward skilled reading by breaking words into sounds and syllables.

This can make a huge difference to the many students for whom reading is unnecessarily difficult, whether the cause involves brain anomalies (very few) or inappropriate teaching (the vast majority). Recent inquiries in the US and Britain

reached similar conclusions.

At a time when real reform is possible, it is unfortunate that some politicians and teacher organisations decry both the need for change and the strong evidence upon which the recommendations are based.

Our children's future is at stake. And it's time to move on this.

This article was originally published on [The Conversation](#). Read the [original article](#).

NEXT>>WHY TEACH SYNTHETIC PHONICS?

LEARN MORE ABOUT THE MOST IMPORTANT SKILLS IN LEARNING TO READ



How do children learn to read?

Research indicates that skilled readers are proficient in being able to decode unfamiliar words, while children with learning difficulties such as dyslexia have a 'neurological glitch' which makes learning to decode and self-teach difficult.



Decoding

Decoding allows children to access the thousands of words they have already heard but never seen in written form. Difficulty with decoding skills is a hallmark of the struggling reader.



Phonemic awareness

Phonemic awareness has been shown through research to be the single most powerful predictor of future reading ability in beginning readers.



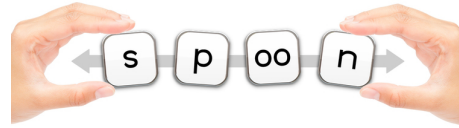
Letter-sound knowledge

Letter-sound knowledge helps students to 'decode' written language and teach themselves new words.



Blending

Blending, or the ability to join speech sounds together to make words, is a crucial [phonemic awareness](#) skill that helps students to read unfamiliar words.



Segmentation

Segmentation, or the ability to split words up into their separate speech sounds, is a crucial [phonemic awareness](#) skill. Segmentation helps students to develop spelling skills.

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