



# “Neuromyths”

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What are parents to do when they find that a child of theirs is really struggling with learning to read – as children not infrequently do? There are a number of commercially-available programmes that advertise themselves as capable of solving this problem. i.e. capable of turning struggling readers into competent readers, and parents are often tempted to turn to these.

One problem with these programmes is that they are usually very expensive, possibly costing the parents thousands of dollars. But a more serious problem with most of them is that there is no evidence at all that they help children learn to read. Many of these programmes claim that they are based on evidence about how the brain works and what this evidence tells us about how children learn. But these claims are often based on “neuromyths”. Neuromyths are claims about how the brain works that simply have no basis in brain research (it is an unfortunate fact that brain science has not yet got to the point where it has discovered anything that can usefully be applied in the classroom).

For example, consider the DORE/DDAT programme, which was widely available in Australia in the mid-2000s. Its proprietor, Wynford Dore, a businessman who made his fortune from his paint-selling company, established a chain of Dore Achievement Centres across Australia, where the DDAT programme, claimed to help children with reading difficulties (and ADHD and Asperger’s syndrome), was administered to such children. The programme was aggressively marketed throughout Australia and was expensive. It consisted of a series of exercises aimed at improving the function of a region of the brain called the cerebellum, and it was claimed that reading difficulties, ADHD and Asperger’s syndrome were due to impaired functioning of that part of the brain.

That was a neuromyth: no brain research supported that claim. Nor was there any scientific evidence to indicate that going through this programme improved a child’s ability to read. These criticisms of the DORE programme were made by me on “Four Corners” in 2007 (see <https://tinyurl.com/2x2aua>). The DORE company threatened legal action against me, but nothing came of that. Instead, in 2008 the company went into liquidation (interesting accounts of all of this can be found at <https://tinyurl.com/m8wmebf> and <https://tinyurl.com/kpnefrw>).

The DORE programme is not unique in these problems. There are numerous other programmes claiming to help children with reading difficulties that are expensive, that lack independent scientific evidence that they are of any help for children who are having difficulties learning to read, and that make at best tenuous claims of being based on new developments in brain science. Examples of these include *FastForWord*, *BrainGym*, the *Irlen coloured lenses* programme and, currently, the *Arrowsmith programme*.



It is disturbing that some of these programmes have been taken up by State and Federal education authorities and actually used in Australian schools even though there is no independent scientific evidence that they work. For example, the website of almost every Australian State Department of Education endorses the BrainGym programme. Why is this the case when there is no independent scientific evidence that this programme does what it claims to do?

What's a parent to do, then? A wise course of action, when contemplating using any commercial programme to help a child who is having difficulty learning to read, is to ask the vendors of the programme what the evidence is that the programme does actually help such children. What would count as evidence here? Vendors saying "I'm telling you that it does" doesn't count: they would say that, wouldn't they? Anecdotes from parents who have used the programme and believe that it worked for them don't count either, since we don't know how many parents there are out there who used the programme and considered that it didn't work. What is essential is research that has been carried out by scientists who are independent of the organisation marketing the programme, that showed improvements in children's reading, and that was published in reputable scientific journals. Some reading programmes have passed all of these tests ("Jolly Phonics" is one that has, and so is MultiLit). Many have not.

A valuable resource for parents who are contemplating enrolling in one of these programs is offered by Macquarie University's Special Education Centre (MUSEC). At [http://www.musec.mq.edu.au/community\\_outreach/musec\\_briefings](http://www.musec.mq.edu.au/community_outreach/musec_briefings) the public can download one-page reports on many different methods that claim to be able to help children who are having difficulties learning to read. Each report offers a verdict about the method ("Not Recommended" or "Worth a Try" or "Probably Only Mildly Effective", for example) and explains how that verdict was reached. These reports are written by experts and can be trusted. At that website parents can read reports about BrainGym, the Dore programme, the Irlen lens approach, FastForWord, and various other methods they might be considering using.

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