

Submission 169 EofB Inquiry

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Dr. B. Nelson
Parliament House
Canberra

Nov. 12th 2000



Dear Dr. Nelson,

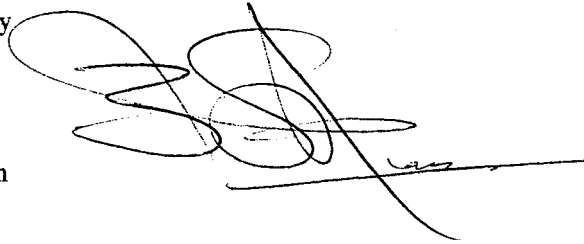
I head a team of teachers and other professionals committed to understanding why children fail to read. We have access to thousands of children and are therefore one of the few independent sources of data on literacy outside Education Departments.

- In 1988 we published a warning in the Australian Journal of Remedial Education that about one third of students under the age of nine had Visual Attention Span levels (a specific aspect of visual memory) below the minimum levels necessary for whole word processing.
- We also demonstrated that males were almost a year retarded in VAS development during these infant years.
- We therefore warned that infant teaching methods which involved significant levels of deduction from sentence meaning, from overall word shape was particularly inappropriate for these males.
- We urged the return to synthetic phonics for all children. The low VAS children have no alternative because they cannot guess; the high VAS children develop inaccurate guessing habits.
- We predicted that if these infant teaching methods prevailed during the infant years, about seventy five percent of children entering high school would be unable to read long words and would be poor at spelling.
- In 1996 at the invitation of the Editor of the Journal of Remedial Education we confirmed our 1988 predictions¹.
- Between 1988 and 1998 we published, lectured, and trained over 1000 teachers here and overseas.
- Our warnings were almost universally ignored by educators in Australia, most of whom are believers in the top-down, holistic, teach-everything, approach to teaching reading. Such educators would instinctively reject a synthetic phonic approach to teaching infants.
- Whilst that is changing slowly, our teacher-training colleges and those bureaucrats administering teaching and testing continue to be dominated by holistic believers and teacher training remains inadequate.
- The problem is made insurmountable by an antipathy towards formal testing of discreet sub-skills both by these holistic believers, aided and abetted by education union leaders, who are motivated by a philosophical/political antagonism to testing and perhaps also by opposition to anything that will allow testing of teachers. If you survey the end-of school reports issued by Australian schools you will detect the holistic flavour of testing and the dearth of advice to parents about deficits in sub-skills. You will find the same holistic contamination in State education department testing procedures. You may begin to understand the discrepancies between the 14% failure rates reported by state departments and our latest data which shows failure rates many times worse than that figure.

¹ 'The Hole In Whole Language'. Harrison, Zollner & Magill Vol. 27., No. 5, 1996 Aust. Journal of Remedial Education.

- By 1998 the senior teachers on my team refused to waste further time making submissions and concentrated instead on teaching, research and development. We are currently preparing a series of papers based on our analyses of about 20 different aspects of literacy in each of over 2500 children.
- Instead of wasting further time making submissions, we therefore propose to soon release our diagnostic systems on the Internet in conjunction with one of the large computer companies. Any parent, any teacher will soon be empowered to predict which infant is at risk and to better understand why older children have developed the signature error-patterns of a failed reader.
- I attach a brief introduction to VAS Theory. After all these years I have no expectation that it will be understood by those of a holistic disposition but nevertheless I feel obligated to go through the motions one last time before we bypass educators and empower the parents and teachers directly.
- I have concerns that current infant teaching methods, in failing to diagnose the children at risk, in failing to properly inform their parents, necessarily fail to provide appropriate teaching. My legal advice is that those omissions offend aspects of some Australian Disability Acts and make teachers or their departments vulnerable at law. I would remind you that we are talking about one child in three, most of them boys.

Yours faithfully

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

Byron Harrison

VAS level 1:

If a child can only hold one letter in memory they are likely to choose the first letter. They therefore process the word magnet as m____. Such a child may therefore misguess the word as measles, mistletoe, mother. There are in fact over 400 words that will fit this visual pattern; too many to make an accurate guess. Reliance on whole word guessing is therefore inevitably inaccurate in such a child. Nor can the child guess from the overall meaning of other words in the sentence because the same problems of word guessing usually applies to other words in the sentence.

VAS level 2:

VAS development is like weight and height; it grows over time. The child with a VAS level of 1 will later develop the capacity to process 2 letters in memory.

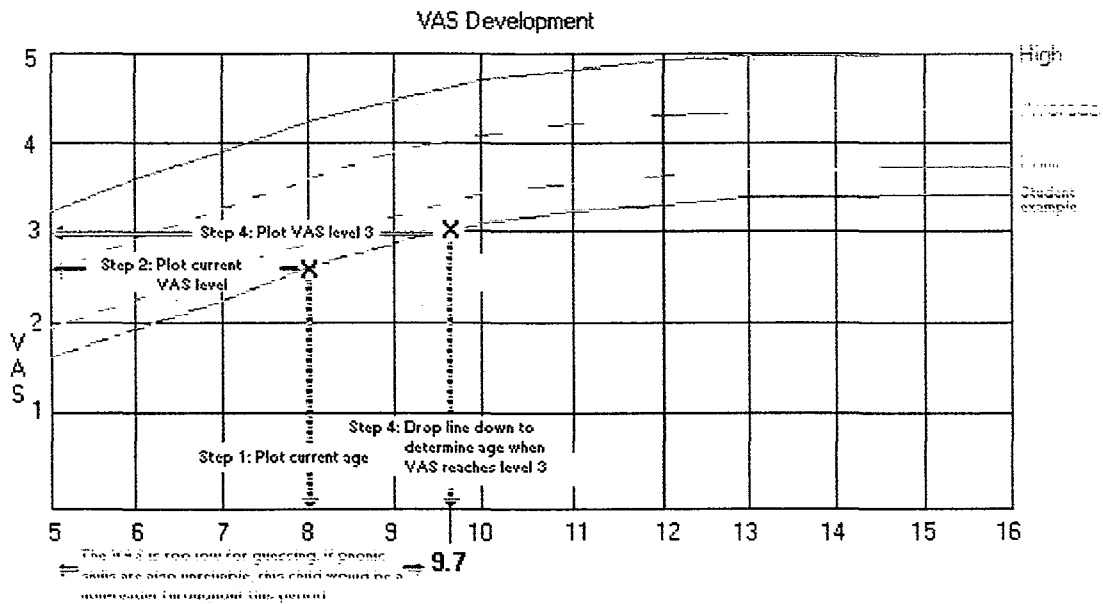
The infant with level 2 VAS will usually select the 2 end letters, (m__t) in short words. However there are still more than 40 words (meat, mist, moat etc) that will fit the m__t pattern, and so word-guessing is still not reliable.

VAS level 3:

However when the child can process 3 letters, (m_g_t), there are then only a few words that form a match in memory (maggot, magnet, midget etc). It is only then that the child may begin to effectively use context cues.

The problem is that, once inaccurate guessing becomes established, the inaccuracy, the inattention to mid-word letters and their sequence persists. Infants should therefore not be encouraged into whole word guessing strategies if they have a low VAS level for they are doomed to fail.

The graph of a typical low VAS child:



The lower curved line (starting at about 1.6 on the left hand scale) represents the VAS development of a child with a low VAS. You will see that this child didn't develop level 3 VAS until he was 9.7 years.

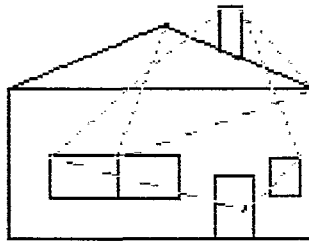
- During this time he would be unable to word-guess (males on average were lower in VAS development than females during the critical learning to read stages).
- If he had no phonics as well as a low VAS, he would inevitably be a non-reader.

Visual Attention Span Theory.

Visual Attention Span (VAS) is a relatively new concept in reading. Before children start school, long before they start to read, they have spent years scanning the world about them. If they paid equal attention to every object their visual memory would be overloaded with trivia.

Even babies have learned to be selective in what aspects of their world they wish to process. When looking about a room for example they will be attracted by the sight of a door opening or a curtain billowing. They may pay some attention to a picture on a wall but they will pay almost no attention to the wall itself because it is featureless and contains little interesting visual information. These are the habits that a child has honed prior to learning to read.

In the 1970s and 1980s we were interested in what aspects of line drawings attracted visual attention. We showed both children and adults a line drawing of a house and then tracked the aspects of the house that attracted their attention.



We found, in line with earlier research, that the aspects of the drawing that attracted attention were:

- those areas where the contours changed (like the corners of doors and windows) and
- those areas that intruded into surrounding space (like the chimney).

When we applied this technology to words we found the same patterns applied to pre-reading infants: UNLESS THEY WERE TRAINED OTHERWISE. They were naturally attracted to the two end letters and to any lower case limbed letters with ascending or descending limbs intruding above or below the level of surrounding letters.

We called these letters *High Visibility Letters*. In a word like *magnet* the high visibility letters are therefore /

- the letters at the end of words (e.g. *m__t*)
- The letters which either hang below or stick above the level of surrounding letters (*_g_t*)

(The lines indicate letters which attract little attention)

The high visibility letters in the word *magnet* are therefore *m_g_t*.

At the age when a child begins to read, these limbed and end letters are therefore the ones that attract most attention. If the child is encouraged to look at the word 'magnet' they therefore tend to pay attention to the high visibility letters (*m_g_t*) and guess the rest UNLESS THEY ARE OTHERWISE INSTRUCTED.

However many infants can't hold 3 letters in memory. Some infants can only hold 1 of these letters in memory at a time. That infant is said to have a VAS (Visual Attention Span) level of 1.

- If he had limited phonics as well as a low VAS, he may either become phonic dependent or guess-dependent but with inaccuracy.
- A period of 4 years of failure would almost certainly have soured his attitude towards reading. The chances of effective remediation would therefore be reduced. A period of about a year of guessing is usually sufficient to start the habituation process.
- Development of sight words would be delayed unless the phonic skills were reliable. Recognition would have become particularly habituated to the end letters on small words (words longer than 6 letters get a little more complex).
- Proof reading, one of the last skills to be mastered, would be overly dependent on end letters and there would be inadequate attention to mid word letters and their sequence (remember that whilst whole word guessing requires left-to-right saccadic scanning, it involves little left-to-right processing). Spelling is thus handicapped from the start in that the child doesn't readily detect when a spelling 'looks right'.
- Spelling is also handicapped if the phonic skills are inadequate. A person with phonic skills can spell the word *Istanbul* by simply writing down the sounds that he hears, in the sequence that he hear them. But if he is habituated to guessing he both lacks accuracy in hearing those sounds and sequencing skills.

Teachers are trained to teach all the skills. However guessing is faster than blending sounds and syllables; a child may therefore prefer to guess.

- If they guess with a high VAS some become guess-dependent and begin to struggle about the age of ten when word length begins to exceed VAS-based guessing capacity.
- If they guess with a low VAS they will fail from the very start.

Once fast guessing becomes established, the child will tend to resist returning to the slower phonic strategy. Remediation is therefore rendered ineffective.

If the phonic skills are not well taught initially, children tend to learn letter names instead of letter sounds. That then undermines the child's capacity to blend sounds and syllables together. This habit is difficult to remediate even with one-to-one tuition.

We must therefore teach the slower phonics first and that means instructing all parents and pre-school teachers to establish the letter sounds and not letter names. That is not happening in our schools.

Summary:

There are many reasons why a child may fail to learn to read. Some are impossible to bypass by teaching. VAS however is intimately linked with an infants capacity to word-guess and to use predictive cues. If teachers were trained to teach the synthetic phonic alternative then the effect of the VAS would be dramatically reduced. The barriers lie in the teacher training institutions, in the failure to research sub-skills (letter reversals, name/sound confusions, capacity to blend sounds and syllables together, tendency to base guesses on end letters etc etc) and the political opposition to independent testing by teacher unions. We have no expectation that you will change any of those power bases. We may however be able to bypass them via the Internet.