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Submission on quality of school education.

Background
Our team has been studying reading performance for over twenty years as part of our study of visual memory (hereafter referred to as VAS memory). We have been published in Britain, USA and Australia and have lectured internationally. We were invited by the teachers in the Reading Reform Foundation (UK) to make submissions to the 2005 British Inquiry into literacy and we support the subsequent conclusions summarized in the Rose Report.

Enclosures:
We recently published a summary of our findings in "Reading Through Tears". It encloses many of the research references covered in this submission and we have therefore enclosed a copy as a quick reference source. The original sources are quoted in the book. Further copies can be supplied on request.

We attach three tables extracted from "Reading Through Tears". They contain our data on:-

- 911 Failing Readers (page18)
- 676 Average Readers (page115)
- 618 Superior Readers (page 123)

The tables are part of a study of the literacy performances of 3000 consecutive Tasmanian students. Our experience is that similar patterns that have been reported throughout Australia, New Zealand, Britain and many states in the USA.

We draw attention to the disturbing fact that the parents of 26.5% (N=795) of the 3000 children examined did not know if their child's reading level was average, below average or above average. Whilst these students are not included in the tables, the committee may think that 26.5% says something about the quality of reporting to parents. Reporting is not part of this submission but I am happy to discuss our future research & development in this regard.

As a result of over twenty years of testing of thousands of children, we have come to understand that a number of basic principles underpin the teaching of reading skills. This paper discusses the evidential support for just four of the more important principles.

1. **That, at the infant level of learning to read, the phonic and whole word processing learning strategies should be viewed as COMPETITIVE rather than COOPERATIVE strategies.**

In the period prior to 1970 most infant teaching had a dedicated phonic basis. Thirty years ago educational philosophy then reduced the status of phonics to that of being merely one among a number of strategies. From that philosophy arose the belief that we didn't need to teach phonics first, we could teach a range of strategies to infants and they would gradually acquire the capacity to apply them all. Whilst that may hold true for a few gifted infants, it is far from true for the vast majority of infants that we have studied; they merely applied one strategy and paid lip service to others.
We can identify the percentage of children who are habituated to whole word guessing because it a) is inaccurate b) generates signature error patterns (see "Reading Through Tears" pages 43-58). The percentages of these children are recorded under 'GUESS' in the attached tables.

Despite the fact that all schools claim to teach phonics, here are the percentages of children showing evidence of guess-dependency:

Age	*Failing Readers*	*Average Readers*	*Superior Readers*
9	*85%*	*71%*	*32%*
12	*75%*	*41%*	*13%*

The children are choosing guessing strategies
a) because their phonic skills are inadequate
b) because of teacher-encouragement of word-guessing
c) because guessing is a fast (but inaccurate) technique.

As a result of these observations, in 1988 we predicted that, the competition with alternative reading strategies should result in widespread phonic deficits. In 1996, eight years later, we confirmed our earlier predictions[1].

We were not alone. OFSTED in Britain was also reporting widespread phonic deficits in schools and recently the UK's Rose Report has also concluded that phonic skill levels are unacceptably low. The level of phonic failure in Tasmania is alarming but our contacts around the English-speaking world assure us that they are seeing evidence of the same patterns.

The tables record the evidence of the level of phonic deficits:

- *Letter sounds: 154 nine year-old "failing' readers were examined. After three years of compulsory education 42% still didn't know the sounds of 5 or more letters of the alphabet.*
  The problem does not go away. At the age of 12 we were alarmed but not surprised to find that the error rate had actually risen to 45%.

  The same problem existed even in 81 superior readers where 29% made more than 5 errors at age 9, rising to 33% by age 12. (See also Principle No 2).

- *Blending sounds: Blending three letters into a nonsense word (e.g. y+e+d = 'yed') is the process necessary for the APPLICATION of phonic skills. This task presented problems for 85% of Failing 9 year-olds and persisted in 55% of Failing 12 year-olds.*

- *Chunking syllables: Whilst 68% of Failing 9 year-olds made repeated errors when attempting to read simple 3 letter real words (e.g. 'bog'), 48% made repeated errors when chunking simple 2 syllable words (e.g. 'picnic') and 94% were unable to read simple 3 syllable words (e.g. 'continent')*[2].

  On entry into high school, 86% of failing twelve year-olds were still unable to accurately read simple 3 syllabic words. (See also Principle No. 4). This closely conforms to our 1988 warnings.

2. That where infants are taught letter names before the letter sounds, the names then become the dominant and instinctive memory. That dominance of letter names then undermines later attempts to acquire the sounds necessary for blending and chunking, leaving the child without reliable phonic skills, necessary for spelling and reading long and unfamiliar words, throughout primary school and beyond.

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[1] Harrison, Zollner & Magill "The Hole in Whole Language" Aust. J.Rem.Ed. Vol 27, No. 5, 1996

[2] The counterintuitive finding that accuracy on 2 syllabic words should be better than either 1 or 3 syllabic words had in fact been predicted in our 1988 paper. The reasons for this prediction are discussed on pages 97-99 on "Reading Through Tears".

After three years of instruction:

- *one third of 154 Failing Readers still exhibited confusions between names and sounds within 3 letter words.*
- *Similar degrees of confusion were found in Average Readers.*

After six years of instruction:

- *30% of Failed and Average Readers entering high school still repeatedly exhibited these confusions.*
- *Superior Readers entering High School showed none of these confusions.*

3. That we are teaching whole word guessing too early.

There are two basic flaws undermining the principle of encouraging whole word guessing strategies in infant school:

i) Some children cannot word-guess.

VAS Theory, developed by our team, links almost every aspect of literacy from name/sound confusions to proof-reading and was described by Martin Turner; Britain's most respected Educational Psychologist as "The most exciting development in literacy in a decade".

The committee might find it convenient at this point to touch upon its basic features but it is covered in more depth in "Reading Through Tears" (p 43-153).
Briefly:-

- Whole-word processing involves looking at a word, paying attention to some letters in the word and then guessing the rest of the letters using word-shape or the meaning of other words in the sentence.
- The number of letters to which this attention is paid is termed the VAS[3] level.
- We have released without charge our research software to measure this; it takes about a minute to measure and requires no special skills[4] .
- The higher the VAS level, the richer the basis for word-guessing.
- Level 3 VAS has been found to be the minimum level necessary for the start of reliable whole word processing.
- VAS is developmental like height and weight but develops at more predictable rates.
- Boys are relatively delayed in a range of developmental skills and VAS is yet another. Boys on average develop VAS almost a year later than girls.
- Teaching word-guessing strategies to infant boys at a time when they lack the capacity to process such guesses is therefore inappropriate and discriminatory.

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[3] VAS is the abbreviation of Visual Attention Span. An infant who is encouraged to word-guess with level one VAS can pay attention to only one letter. S/he may therefore process a word like 'magnet' as 'm_____'. But that pattern fits more than 400 words rendering whole word guessing unreliable. The same child, a little older will develop level 2 VAS and will then process 'magnet' as either m_g____ or m____t but word-guessing is still inaccurate because there are still over 40 words that fit this pattern (meat, mat, mate, magnet etc). It isn't until a child can hold 3 letters in memory m_g__t that the child has sufficient information to make a reasonable guess (however the word could still be maggot, magnet or midget). Level 3 VAS is therefore the minimum level of storage necessary for whole word processing.

[4] www.theharrisontest.com

NB. VAS only relates to whole word guessing. A child with both low VAS and poor phonics will inevitably be a non-reader but a child with low VAS and good phonic skills does not need to depend on word-guessing and may therefore still be a competent reader and speller.
The philosophical belief that children can learn to read in much the same way as they learn to speak is not only a scientific nonsense but it has lead to the false assumption that teaching-reading strategies can be taught in any order.
An early emphasis on whole word guessing:

a) from the meaning of other words in the sentence
b) on the basis of word-shape

has therefore been inappropriately emphasized in our infant schools for almost thirty years (for condemnation by researchers see "Reading Through Tears" page 9)

The recent USA public inquiry has however recently concluded that the first assumption, (guessing words from their context), applies to as few as one sentence in eight.
VAS Theory (see 3 i) above) now kills off the second assumption (infantile whole word guessing) by demonstrating that guessing words from their overall shape assumes a level of memory storage that is still underdeveloped in 50% of infant approaching the age of eight.

Evidence.
At the age of seven, 49% of Failing Readers, 29% of Average readers and only 5% of Superior Readers (N=345) still lacked the VAS level necessary for reliable whole word processing. We predict that an initial phonic emphasis would have produced superior reading and spelling outcomes in most of these children; it would also have reduced the level of male failure and thereby reduced the wide diversity in reading levels that make infant class teaching so difficult.

This recommendation has recently been confirmed by the Clackmananshire longitudinal study ("Reading Through Tears" pages 206-207) that showed that:-

- *after seven years those classes that taught traditional phonics from the outset, continue to outperform the' teach everything' infant groups in almost every aspect of reading and spelling.*
- *Exactly as we predicted, the performance of boys equaled that of girls in the phonics-first classes.*
- *Interestingly (and outside our research), the socio-economic influence, so often blamed for reading failure, was also significantly reduced in the phonics-first classes.*

ii) The sequence of learning.

It is our experience that most remediation takes the form of trying to improve phonic deficits. However phonic remediation is rendered almost impotent, if applied after word guessing has become habituated because phonic skills are going to be initially slower than the fast but inaccurate guessing strategies already embedded. Remediation thereby often requires not only the teaching of phonic skills but the repetition of phonic practice until the phonic skills become fast enough to compete with the inaccurate but fast guessing skills. In many cases that level of phonic remediation proves difficult even for a one-on-one remedial tutor; it is well nigh impossible in a busy classroom. Once the inaccurate guessing habits are embedded they therefore tend to remain even in the face of remedial teaching.

VAS Theory not only allows us to identify the children at risk, it explains why whole word guessing is inherently inaccurate and allows us to identify the signature error patterns that arise from premature whole word processing.

At the age of nine:

- *85% of failing readers exhibited the typical patterns of guess-induced inaccuracy.*
- *On entry into high school at age twelve, 75% continued to show the same signature patterns of inaccurate guess-dependence.*
- *71% of average readers showed the same guess-inaccuracy patterns at age nine and 41% at age twelve.*
- *32% of Superior nine year-old readers and 13% of superior readers showed the same patterns.*

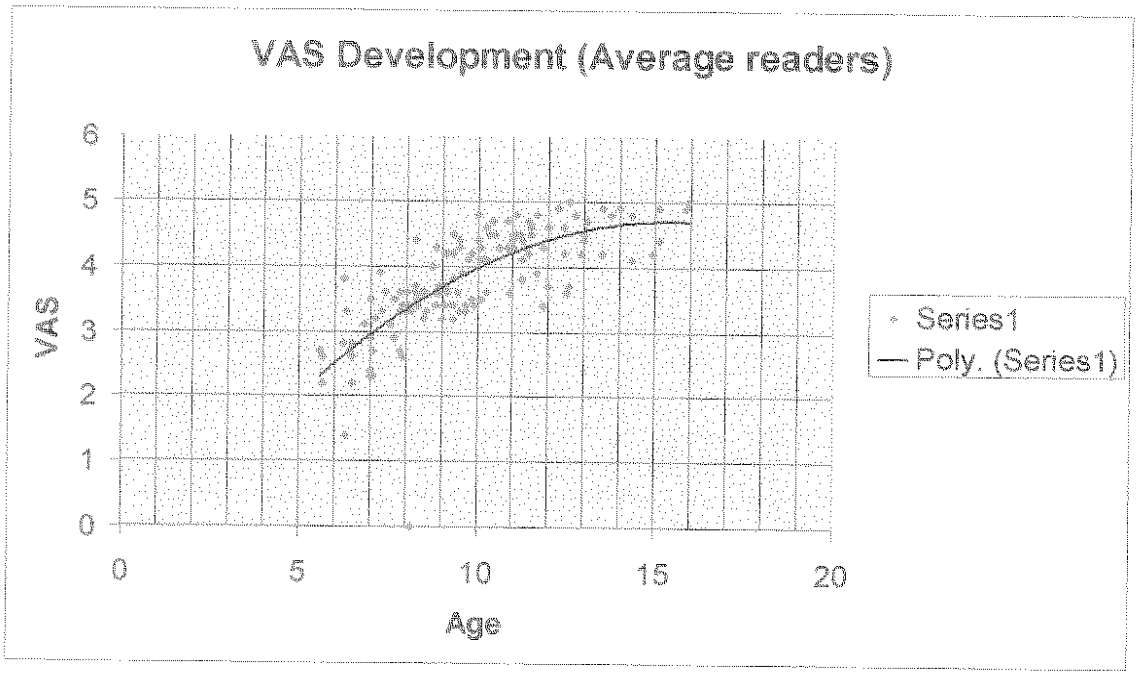
Guess-dependency and inaccuracy is endemic in our schools as a direct consequence of unscientific teaching methods imposed upon our teachers during their training.

4. That dependency on whole word processing creates a ceiling of about 7 letters for accurate word length readability.

As a rule of thumb we find that the guessing of long words in a guess-dependent child is significantly limited by a child's VAS level[5] and that the formula 'VAS + 2 = guessable word length' generally applies. This means that a child with a VAS level of 1 will struggle to guess words with more than three letter words (VAS 1+2= 3) whilst a child with a VAS of 5 can be expected to attempt up to seven-letter words (VAS 5+2=7). Bu, since we knew that few people develop a VAS of more than 5, we predicted that VAS development should impose a ceiling on the length of guessable words of (5+ 2) seven letter words.

[5] Obviously there are many infant word-guessers with low VAS who manage to correctly guess a long word such as 'elephant'. Testing however shows that these children are still only making a guess on the basis of the first letters and the length of the word. They therefore will make errors on other words; 'elegant' for example would also be misguessed as 'elephant'.

The following curve demonstrates how VAS development slows over time until it reaches an upper limit of level 5.



In the 1980s we therefore predicted that, on entry into high school, about 75% of students who were made dependent on word-guessing should struggle to accurately read phonetically simple but long multisyllabic words containing more than seven letters (e.g. 'continent' or 'Eromanga') We confirmed this prediction in a paper written in 1996[6].

If you look at the three tables attached to this submission you will see that, on entry into high school at age twelve, 86% of Failing Readers and 71% of Average Readers all repeatedly struggled with phonetically simple but long words that a grade 3 child with phonics should read with ease. Culturally this is a disgrace in Australia given that our Aboriginal culture includes place names based on long, phonetically simple, multi-syllabic words such as Eromanga.
The problem is not limited to failing readers; 54% of superior nine year-old readers also struggled with such words and, on entry into high school 38% still struggled with long words, particularly if unfamiliar.

5. Benchmarks have been dumbed down.
We feel compelled to point out that benchmark testing has been inadequate & misleading. It reflects historic political and philosophical attitudes that had nothing to do with literacy and science and everything to do with hiding failure and conforming with unscientific philosophical beliefs about the way children learn to read.

[6] Aust. J. Rem. Educ "The Hole in Whole Language". Harrison, Zollner & Magill Vol. 27, No 5. 1996

The attached 3 tables were drawn up at a time when the Tasmanian Minister for Education was claiming that less than 4% of Tasmanian children failed the levels set down by the National Benchmarks. Yet we know that in this population there should be about 2.5% truly dyslexic children, an additional number of children with limited intellect, a number of children who had missed schooling for a variety of reasons plus many children with immaturity and/or attention disorders and/or hyperactivity etc. etc. A fail rate of 'less than 4%' is therefore an unbelievably low figure and can only be explained by the tests being pitched at a standard of failure so low as to make the test meaningless and a waste of teachers' time.

Compare the 4% claim with our data (and let us be generous here and only consider the Average Readers).

We found that at the age of 9, (the age when the 4% benchmarks were assessed):

- *44% of average readers were unable to accurately sound out five or more of the sounds of the alphabet.*
- *29% made repeated errors on 3 letter words containing b, d or p.*
- *44% struggled to blend three sounds into a syllable*
- *38% made mistakes when reading simple three letter words*
- *10% made repeated errors when reading simple 2 syllable words*
- *88% made repeated errors when attempting to read simple 3 syllabic words.*
- *20% made repeated proof-reading errors when trying to identify which spelling was correct on 4 letter words (e.g. laed, laid, laod, loed, luad, liad)*
- *71% displayed the signature inaccuracies associated with whole word guessing.*

No matter which of these basic skills had been tested there is no way in which a failure rate of only 4% could have been achieved. The national benchmarks were clearly dumbed down to hide failure and we need to ask ourselves how the education departments and education faculties failed to detect these massive levels of failure for thirty years. We should note that the British Literacy Inquiry has also condemned benchmarking as being an effective monitor of reading performance.

Unless we understand WHY reading methods failed and WHO was responsible, we run the real risk of a) making the same mistakes in the future and of b) putting responsibility for reform back into the same hands that got it wrong for thirty years. We need to provide a new, science-based system for diagnosis, accountability, management, training, teaching and research. Only then can we develop effective policy and resources.

From the comments made in section 5 it is clear that one of the priorities must be much better detection of phonic deficits. That includes knowledge of sounds and the blending of sounds and syllables plus an inventory of less regular words in common usage. Anyone can do that. However that diagnosis tells only half the story; we also need to understand the other side of the coin, the child's capacity to process whole words. Once we have evaluated BOTH strategies teachers will have a powerful new tool for detecting the children-at-risk, predicting outcomes, determining appropriate teaching methods, establishing best practice and reporting to parents.

Take the example of a child with low phonic skills but high VAS levels[7]:
The high VAS means that the student will develop guessing capacity earlier than many other students and may therefore appear to be in the top 20% of readers in the class and not be considered to be at-risk. But remember that Phonics and Whole word guessing are COMPETITIVE strategies in infant grades. There is therefore a strong possibility that this infant will rapidly develop guess-dependency, particularly in the hands of a teacher who has been trained to encourage guessing from shape or context.
This student may then resist the establishment of phonic skills because they are initially slower than his reasonably good word-guessing skills. However by grade 4, words are getting longer and begin to increasingly exceed his VAS+2 formula word-guessing limitations. (In our lectures we call these 'the brick-wall kids', children who get off to a flying start but then seem to fall back to the middle of the class by grade 4). The embedded, fast, guessing habits may now hamper remedial attempts to belatedly instill phonic skills and the student is condemned to a life-long level of fairly good guessing, ongoing struggle with long and unfamiliar words and his spelling will remain well below its potential because the guessing habits resulted in inattention to the mid word letters and their sequence (see chapter on proof reading in "Reading Through Tears" pages153-155). The resultant loss of confidence in writing, together with his inaccuracy of reading long and unfamiliar words may result in this child avoiding career choices that involve further study and yet developmentally this child was potentially a candidate for university.

The point we make here is that, by knowing BOTH the phonic level as well as the VAS level, teachers could have anticipated this child's ultimate struggle. They would have known that high VAS infants develop guessing capacities very early and that therefore the phonic skills must be put in place early in infancy, before the guessing habits becomes embedded.

With that combined knowledge of VAS plus Phonic levels, teachers will know what strategies they should not teach, what they need to teach and what signs of failure to look out for thus leading to earlier and better targeted intervention.

Research & Development.
We are currently developing on-line software that will provide all this information and more. It will

- test the various sub-skills including both phonic and VAS levels,
- compare the level of every sub-skill with age-norms based on what we and our panel of teachers would expect children to know if properly taught.
- issue an 'OK', 'danger' or 'warning' level depending on the volume of failure.
- generate an automated and detailed report that will
    - identify and quantify each specific deficit
    - identify appropriate remedial resources and

[7] VAS Theory itself is discussed in more detail in 'Reading Through Tears'(ISBN 0-646-45166-9) by Byron Harrison and Jean Clyde and is available via VAS Research Box 388, Kingston, Tasmania 7050

- provide teaching tips appropriate to the specific sub-skill deficit diagnosed.

This system is being tested on-line and will be available to parents and teachers.

Managing literacy in schools.

One of our greatest needs is for school principals to MANAGE literacy in their schools but they can't manage anything without reliable performance data. We are now close to being able to place that power in the hands of school principals.

All the diagnostic data arising out of the class teacher's test will automatically flow to the Principal's database. That will:

- analyse the performance of each child
- summarise the performance of each class
- identify children at-risk
- identify classes that are overloaded with problems (so that class-size reduction and the placement of key teachers can be considered for potentially problem classes)
- provide a more objective, more accurate and independent basis for the principal's report to parents etc.

At the same time the principal will also be able to access the same information about recommended teaching strategies and assessment of risk given to the class teacher. That will enable principals to enter into meaningful dialogue with their teachers about their remedial plans and resource needs and enable principals to supervise the progress of a particular child or class. This detailed and independent information about each child's progress, strengths and weaknesses then provides a basis for data-based discussion with parents and form the basis of end-of-year reports.

The same processes can also be extended to Regional, State or National levels to provide a basis for research on which policy can be based.

The future:

We receive few complaints and many plaudits from parents about high school teaching. For the time being we can therefore afford to leave the high schools to get on with their excellent professional work. Reform must be based on improving diagnosis, intervention and reporting in infant years and on remediation in primary school years.

Infant v Primary teaching.

Infant teaching should be recognized as a discreet and specialized area of learning. Infants are distractible; they love repetition, singing tables and gold star rewards. The current fad of grouping infants around a single group-desk and the avoidance of repetition is therefore totally out of keeping with their developmental needs.

Testing basic skills

Testing basic skills becomes easy and predictive once we have added the VAS factor into the testing. Our data on VAS levels is a clear indication that our past (and now discredited) forays into teaching sophisticated higher-order predictive cueing and word-guessing strategies, whilst appropriate to older children, were totally at odds with the developmental capacities of many infants.

A few infant-age realities:

- That the infant years up to the age of nine be acknowledged as the period for establishing basic literacy skills
- That regular testing of outcomes is necessary to diagnose children at-risk, to design remedial activities and to plot progress. (VAS levels cannot be detected by mere observation).
- Infantile reading difficulties are usually accompanied by distractibility. These children are often difficult to keep on-task when distracted by other children. There is therefore merit in our creating remedial situations that offer one-on-one remedial teaching.
- These children don't just need to learn at the pace of the other children, they need to catch up. This additional work therefore requires additional teaching. If additional teaching cannot be accommodated within the framework of a normal school day, then referral to specialist remedial tutors should be recommended to parents. At present there is widespread resistance from schools to undertake such referral but the schools also fail to create the alternative, a support group of retired or part-time teachers to attend the infant and primary schools and effectively reduce the teacher/student ratios.
- If these additional supports are not provided in infant grades then, by the age of nine, many of these children will have lost confidence and self-esteem and are condemned to an unnecessary level of failure.

Reporting

The division of responsibility for education between states and commonwealth therefore should be tailored to provide the arms-length objectivity demanded by science.
The states should continue to provide the education and the initial training but the commonwealth should assume responsibility for a standard curriculum, the testing of outcomes, the inspection of schools, design and delivery of postgraduate training, research and development.

Reporting to parents remains a problem because this requires input from the local chalk-face teachers as well as independent evaluation of outcomes. Allowing teachers to fill the dual role of teacher and reporter has not worked. OFSTED in the UK ("Reading Through Tears" pages 176-181) and Donnelly in Australia both refer to teachers writing reports in an overly optimistic form. This lulls parents into complacency and the resultant delay, before the need for remediation is formally acknowledged, then provides time for errors to become embedded. This prolongs remediation and degrades remedial outcomes.

Allow me to finish on a sober note. Our team initially had decided to not make a submission to the committee on the grounds that we have been making submissions ever since issuing our first warning in1988.

The minority report of the 1989 House of Reps. Inquiry stated that they were 'appalled' to find that no education institution in Australia had reliable data on literacy levels and yet almost twenty years later we have Benchmark testing claiming impossible 96% pass rates.
For more than 20 years parents have been complaining that reports failed to provide early warning that their child was struggling and yet in 2007 the reports continue to be couched in terms that few parents can understand.

The factor that caused us to reverse our decision and make one last submission was the release of the findings of the three international inquiries into the teaching of reading. These inquiries now vindicate the criticisms that we have leveled at teacher training, testing and reporting for 20 years. VAS Theory explains WHY the failure was inevitable and sets the stage for a revolution in testing, teaching and the design of remedial resources. These are the fields to which we and others are now moving.

Our best wishes go to the committee together with a plea that they think laterally and resist the urge to take the easy remedial path to yet again return the responsibility for reform to the same leaders of education that have repeatedly refused to reform in the past.

Byron Harrison
(Research Director)

prospective teachers are adequately trained.

Benchmarking Australian Primary School Curricula

Dr Kevin Donnelly Executive Director Education Strategies

October 2005

In addition to identifying the characteristics of better performing education systems, this report has also benchmarked examples of state and territory intended curriculum documents against overseas documents.

**** Very strong evidence *** Strong evidence ** Some evidence * Limited evidence

Early years reading

Q'land	QLD	NSW	Vict	Tas	NT	SA	WA	Calif	Eng	NZ
Detailed	**	***	**	*	**	**	**	****	***	*
Unambiguous	**	***	**	*	**	**	**	****	***	**
Measurable	**	***	**	*	**	*	**	****	***	*
Academic content	**	***	*	*	*	*	*	****	**	*

As suggested later in this report, the principal reason why Australian intended curriculum documents are not as sound as those from other countries is because, since the early 1990s,

Australian states and territories have adopted various versions of outcomes-based education

(OBE). Stronger systems, as measured by the TIMSS results and the curriculum analysis associated with this report, in opposition to Australia, adopt a syllabus or a standards approach.

English recommendations

The comparative analysis of intended curriculum documents demonstrated, in the areas of literature and early years of reading, that the Australian documents are not as rigorous or sound as the Californian and the English examples. The recommendation is that an English syllabus be developed with particular attention to strengthening the areas of literature and early years of reading.

In relation to the early years of reading, the recommendations are that

- a national English syllabus be developed, based on year levels and including, but not restricted to, essential knowledge, understanding and skills related to the early years of reading,
- less emphasis be placed on the whole language approach and greater emphasis on phonics,

12 The Australian Readers, published as part of the federally funded Discovering Democracy Program, received consistent praise from schools and teachers and, according to the Curriculum Corporation, are the most regularly re-ordered part of the programme.

13 The following should be considered in the light of the recommendations arising out of the National Inquiry into the Teaching of Literacy.

12- resources be provided for teacher professional development, based on sound research as to the most effective way to teach literacy, and

- teacher training in the area of early years of literacy being examined to ensure

THE FAILING READER (N=911)

56% of small words contain the letter b,d or p and yet, at the end of infant school, almost 1 failing child in three hasn't mastered the difference.

At the end of primary school 40% of failing readers still confuse letter names and sounds.

Note that, in line with VAS Theory predictions, children make less error on 2 syllabic than on 1 or 3 syllabic words.

If you teach guessing strategies to children with low memory and poor phonics, you should expect inaccurate guessing to persist.

AGE	NUMBER TESTED	SOUNDS %FAIL	VAS % <3	READING 3 LETTER WORDS (% MAKING ERRORS) b/p	N/S	1 SYL	2 SYL	3/SYL	GUESS	BLEND3 SOUNDS	PROOF READ
5	8	75	87	67	56	83	67	100	67	n/a	n/a
6	101	73	77	71	33	96	66	99	78	84	n/a
7	158	49	49	54	34	89	79	96	73	53	67
8	162	49	32	43	31	88	58	98	81	64	64
9	154	42	17	29	33	68	48	94	85	54	56
10	124	43	8	30	41	66	37	99	81	54	47
11	35	45	27	24	40	56	27	92	74	57	52
12	69	57	6	9	30	36	19	96	75	55	33
13	55	53	7	25	27	54	27	89	71	49	45
14	31	35	10	19	19	52	23	74	55	42	39
15	14	45	0	20	20	90	15	40	39	45	35

We are teaching guessing strategies to infants and yet, at the age of 8, almost 1 in 3 still lacks sufficient memory for guessing.

These failing children, cannot read the text levels necessary for further education.

It is claimed that schools teach phonics. Here is evidence of children leaving school who still struggle to blend 3 sounds together.

After 10 years of schooling almost half of the failing children still have confusions between names and sounds.

Close to leaving school 3 out of 10 failing children are still struggling with simple 3 letter words.

These near-school leavers are struggling to spell, partly because they cannot recognise mid-word spelling errors in 4 letter words like 'laid/leid/loed/laed etc'.

THE AVERAGE READER (N=676)

29% of seven year-old average readers have insufficient visual memory for effective whole word guessing strategies.

29% of 7 year average readers still have bdp confusions.

Note that, as predicted by VAS Theory, less errors are made on 2 syllabic words than 1 or 3 syllabic words.

At a time when learning to read by writing and guessing, 20% were still insensitive to mid-word spelling errors.

AGE	NUMBER	SOUNDS	VAS	READING 3 LETTER WORDS (% MAKING ERRORS)						BLEND3	PROOF
	TESTED	%FAIL	% <3	bdp	M/S	1 SYL	2 SYL	3 SYL	GUESS	SOUNDS	READ
5	10	46	73	73	22	100	100	100	50		
6	62	32	54	54	23	93	69	100	68		
7	87	57	29	29	19	76	54	100	77	46	37
8	64	49	6	6	29	63	29	93	70	51	27
9	102	44	4	4	29	38	10	88	71	44	20
10	85	50	2	2	39	27	13	83	55	43	12
11	91	37	2	2	30	12	7	71	39	40	50
12	65	46	3	3	29	12	9	71	41	37	13
13	40	48	0	0	24	2	2	49	15	58	18
14	26	32	4	4	19	8	8	54	19	46	8
15	24	33	0	0	17	0	0	50	29	41	18

At the end of 4 years teaching, 44% of average readers still had significant confusions on letter sounds.

Towards the end of high school, 19% of average readers were still struggling with name/sound confusions.

After 8 years of schooling, 12% of average readers were still misreading 3 letter words.

50% of average readers struggled to read long words at the end of year 10.

If guessing is taught early, the inherent inaccuracies persist.

THE SUPERIOR READER (N=618)

Good readers develop sufficient VAS for whole word guessing by age 7, average readers by age 8 and poor readers by age 9.

Both average and superior readers have mastered bdp confusions by age 8. Many poor readers never master bdp confusions.

Guessing inaccuracy persists even in good readers. Many average and poor readers habituate guessing inaccuracy throughout their schooling.

Significant numbers of superior readers have not mastered basic phonic blending after 10 years of schooling.

AGE	NUMBER TESTED	SOUNDS %FAIL	VAS % x3	READING 3 LETTER WORDS (% MAKING ERRORS) bdp	N/S	1 SYL	2 SYL	3 SYL	GUESS	BLEND3 SOUNDS	PROOF. READ
5	9	40	70	33	11	56	44	100	44	n/a	n/a
6	68	23	33	22	20	74	44	93	70	n/a	n/a
7	100	34	5	14	37	44	19	81	81	24	6
8	95	31	2	6	27	29	10	70	48	28	8
9	81	29	0	3	26	14	3	54	32	32	5
10	78	40	0	1	23	10	1	56	30	27	3
11	66	33	0	2	18	3	5	41	18	23	5
12	47	33	0	0	19	2	0	36	13	28	0
13	37	25	0	3	27	3	0	41	8	22	0
14	30	36	0	3	13	3	0	27	17	35	0
15	7	0	0	0	14	0	0	14	0	0	0

About 1/3 of superior readers have persistent problems with letter sounds.

Name/sound confusions persist even in superior readers.

Superior readers achieve accurate guessing of small words by age 11, average readers by 13. Poor readers habituate inaccurate guessing.

Superior readers master 2 syllabic words by age 9, average readers by age 11. Poor readers remain inaccurate.

Whole word guessing fails at the 3 syllabic level even for superior readers.

1.