For those who would like to learn more about developments in children’s literacy within a community of reflective learners
Proceedings of the National Conference on Future Directions in Literacy

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Preface

The Future Directions in Literacy conference ran on Friday 3rd and Saturday 4th March 2006 in response to the National Inquiry into the Teaching of Literacy.

It was convened to allow National and International figures to:
- Discuss the latest research and best practice in literacy education;
- Share in the public response to the National Inquiry into the Teaching of Literacy;
- Consider an overview of current issues in literacy education K-6;
- Challenge all participants alike, intellectually, professionally and personally.

In this way the conference provided a forum for teachers, policy makers and academics at an important time in Australia’s pedagogic history.

Whilst the published proceedings do not represent the complete set of presentations, the papers following give some insight into the strength of the conference program.

The papers published within the proceedings include:
- The opening address by the Dean of the Faculty of Education and Social Work;
- One of the key note addresses given by a visiting International speaker;
- As well as presentations that addressed the following themes:
  - a balanced approach;
  - diverse needs;
  - space to play;
  - assessment
  - new literacies
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It is my great pleasure to welcome to this conference on “Future Directions in Literacy” organised by the Faculty of Education and Social Work’s Division of Professional Learning at the University of Sydney. In doing so I wish to acknowledge the traditional custodians of the land on which this conference is taking place, the Eora people of the Gadigal Nation.

This is a very timely conference, taking place as it does when there is considerable public and policy interest in the teaching of language and literacy skills, prompted in no small part by the recent publication of the report of the National Inquiry into the Teaching of Literacy (2005a) “Teaching Reading”.

I am proud, as Dean of the Faculty of Education and Social Work at the University of Sydney, that we have on our staff some the finest teacher educators whose contribution to recent debates have been both thoughtful and incisive, despite the acrimonious and highly political tenor in which policy is being formed. The Faculty also has an exceptional reputation in the preparation of new teachers and in the field of continuing professional education, and we are particularly proud of our work in the literacy area.

Much comment on teacher education and the teaching of literacy has focused attention on supposed inadequacies in the way that we prepare new teachers for teaching literacy skills in the classroom. At its worst such criticism has resurrected tired old complaints that a sound grounding in phonics has been usurped by a ‘woolly’, and perhaps politically motivated, emphasis upon ‘constructivism’. Those of
you involved in teacher education will probably be groaning by now – because
technology in this area has long since moved on and the importance of an integrated and
multi-method approach to the teaching of reading is widely recognised by teacher
educators. In this respect, the National Inquiry into the Teaching of Literacy is
struggling to catch up with what is already happening in teacher education and in
schools across the country. On the other hand the Inquiry does, mostly by default,
throw up a number of issues that is worth us spending some time considering.

Frederick Douglas and his education as a slave in America. Douglas described his
surreptitious acquisition of literacy by tricking white children into sharing the letters
of the alphabet with him. As he acquired the ability to read and write he experienced,
as he put it, “a new and special revelation” about the nature of slavery: “I now
understand what has been for me a most perplexing difficulty – to wit the white man’s
power to enslave the black man ... From that moment I understood the pathway from
slavery to freedom”. Willinsky argues that not only does this statement affirm a
fundamental faith in learning; it also affirms the power of reading and writing in
enforcing the superiority of whites over blacks. Although Douglas appears delighted
with stealing the secret of fire from the gods, his statement also suggests the moral
hollowness of those whose authority is based on inscribing letters on a page.
Whatever education’s complicity with power, Douglas turns it against that power and
into something to be prized as it liberates.

It is in this sense that debates about literacy, and in particular the teaching of reading,
go to the heart of the role and place of education in our society. Without question,
learning to read involves the mastery of technical skills. Just as Douglas needed to
learn, even by surreptitious means, the letters of the alphabet, learning to read
involves: phonemic awareness; phonics; fluency; vocabulary knowledge; and, text
comprehension. As the report of the National Inquiry into the Teaching of Literacy
argues: “The research indicates that children starting school need these effective
approaches if they are to learn to read successfully”.

As teacher educators, if we didn’t take this evidence, and these skills, seriously we
would be doing a grave disservice both to beginning teachers and to the educational
interests of future generations. Very few people I have talked to or heard commenting in the media, and none in teacher education, have questioned the importance of the Inquiry’s findings in this respect. Indeed, many would argue that, for the most part, the report merely affirms the practice of teachers of language and literacy in our schools and also supports the practice of teacher educators. Yet, it misses an opportunity to affirm the wider significance of literacy in our society, that is, in the relationship between literacy and democratic participation, and it does this democracy a disservice by failing to acknowledge the social context and significance of illiteracy.

Too much of the literacy debate “forgets”; it forgets the complexity of our histories and how, as for Frederick Douglas, these histories position us in relation to knowledge, informing our understanding and use of skills. To uncritically read the Report of the National Inquiry is to assume that learners come to education free from prior experiences and independent from the histories of their communities and families.

The concept of “evidence-based teaching” is flashed around as though it provides solutions to all problems but the nature of “evidence” is itself so often selective, so often tuned to particular ways of seeing the world and interpretations of the experiences, needs and aspirations of different individuals and communities. Evidence inevitably stands in a relationship to values (if only in terms of what questions are asked) and assessments of evidence should be understood in relation to an exploration of the values that such evidence foregrounds.

The first piece of evidence of note that is referred to by the Inquiry report, before being quickly cast aside is that “15 year old students in Australian schools perform notably better than the majority of their counterparts in other OECD countries”. This is no mean achievement! Perhaps something for which our teachers and our teacher educators might reasonably expect some praise. But no, we will not find it here. We are instead presented with three further studies that proclaim that, despite this first piece of evidence, there really is a problem in the teaching of literacy.

A 1997 study by the Australian Bureau of Statistics found that approximately 20% of Australians aged 15 to 74 were identified as having “very poor literacy skills”. Putting
aside, the rather complex question of whether or not agreed definitions of literacy are being used in the definition of the problem, what this 10 year old study shows (the data was gathered in 1996) is that 20% Australians who attended schools between 1926 and 1996 have poor literacy skills. Of course it is quite likely that a significant number of these did not receive their education in Australia at all. Moreover, we might reasonably expect that for some English would be their second language. Regardless of these considerations, it is doubtful that teachers and teacher educators in today’s schools and universities can be held responsible for the literacy difficulties experienced by those born in the 1920s, 30s and so on.

Two further studies are quoted in the report in support of the view that there is a crisis in Australian literacy education. Unfortunately, the evidence from each of these two studies contradicts the other. Thus the National School English Literacy Survey from 1996 suggested that 27% of year 3 and 29% of year 5 students did not meet the minimum performance standards of literacy required for effective participation in further schooling. Again this evidence is 10 years old, but bear with me because the second piece of evidence that is quoted (MCEETYA, 2005) is far more recent and shows that in 2003, 8% of year 3 and 11% of years 5 and 7 were not achieving national benchmarks for reading. In other words, there appears to have been a significant improvement in literacy standards in our schools over a 7 year period!

But once again, instead of teachers and teacher educators being applauded for their success, we are told that “these outcomes are unacceptable”. Indeed we shouldn’t accept them, but at least let the high levels of literacy in our schools be acknowledged and let us acknowledge the contribution of teachers and teacher educators to the achievement and continual improvement of these high standards.

The Inquiry report is accompanied by a whole booklet which goes under the title “Literature Review” (National Inquiry into the Teaching of Literacy, 2005b). Unfortunately, for a document that places such an emphasis upon “evidence-based teaching”, the evidence contained in this document is rather sparse. Perhaps most disappointing is the admission on page 5 that “Due to uncertainty about operational definitions of learning difficulties and reading difficulties ... It is difficult to provide authoritative estimates of the proportion of children who have such difficulties”. It
might be argued that if there are operational difficulties in defining these terms, how can we have any certainty about the methods of teaching literacy that are appropriate for addressing such difficulties. But there is something else that worries me about the argument put forward regarding this lack of clarity about definitions.

A footnote on page 5 comments that: “an explication of the underlying ‘causes’ of such difficulties are beyond the remit of the present review... However, factors contributing to such difficulties include: socio-economic and cultural impoverishment, indigenous status, neuro-physiological and psycho-behavioural factors as well as inadequate and/inappropriate teaching and learning provision”. We are not told what proportion of the population with difficulties can be attributed to each of these factors or what evidence there is to support the claim that these factors are relevant or significant in the first place. What is apparent is that the report accepts that inadequate and/or inappropriate teaching, at the very worst, can account for only a proportion of the difficulties experienced by what in the first place is only a relatively small number of children. Yet endlessly the finger is pointed at teachers and teacher educators as a culture of blame is whipped up.

I could only speculate on what the agenda of the authors of this shoddy report might be. But their own use of language is telling. For instance, I am intrigued by what they mean by “cultural impoverishment”. Was Frederick Douglas “culturally impoverished” or did his lack of reading skills result from the institutionalised racism and socio-economic exploitation of slavery? Was his “new and special revelation” that enabled him to understand “the white man’s power to enslave the black man” the outcome of a phonetic road to Damascus? And in what sense is “indigenous status” a cause of illiteracy? Are we to understand that “blackfellas” are to blame for their poverty and degradation in Australian history, or that when they achieve high standards of educational achievement they have overcome their own “impoverished culture”? (Which is another way of saying “they become like us”).

In other ways the report of the National Inquiry is not as controversial as some of the hype would have us believe. Most of its recommendations are already firmly embedded in “good practice”, if not in the dogmatic and one-sided way that the report advocates. In other respects the report is a sad soulless document that says nothing
about the conditions of social variation that ought to command our attention. It is a report that advocates a technical solution to an ill-defined problem. It leaves many questions unanswered and not considered important enough to reflect upon.

a. Who has problems with learning to read?
b. What does their experience say, not only about the problem of illiteracy, but about social and economic participation and the nature of “citizenship” in our society?
c. How is the problem of illiteracy represented? What agendas are pursued by framing problems and solutions in particular ways?
d. What is the value of reading and how are teaching methods related to the ways in which this value is understood?
e. What assumptions about social participation underpin different approaches to reading and learning to read?

One of the saddest things about the report is the way it harks back to a glorious linguistic past when correct English was defined by rules handed down to us by our social superiors. This “glorious past”, of course, was never a reality. As Raymond Williams (1961) pointed out, it was perhaps Dr Johnson who first expounded the doctrine that the spelling of a word is the best guide to its pronunciation, yet such a standard was largely an artificial creation based on false premises. As Williams would, I am sure, have added if he had been invited to make a submission to the National Inquiry into the Teaching of Literacy, “The habits of language are too strong to be wholly altered by determined yet relatively ignorant teachers [such as the authors of this report], but the mark of their effort is still with us, and the tension they create is still high”. Not only is English spelling an extremely unreliable guide to pronunciation, the very notion of correct pronunciation is embedded in attempts to enforce the social superiority of some groups over others. The history of the living language by contrast tells of another story. Paradoxically, as Gunther Kress (2003) has argued, now, “at the very time when language is escaping the control of those who previously had been able to (deceive themselves that they could) legislate in this way”, the insistence on rules for the transliteration of letters into sounds (phonics) has once more raised its head as the gospel for teaching reading. But there are too many real problems for such an approach to have any credibility as the sole or even
principal method for teaching reading, despite its value as one among a number of strategies. It is quite impossible, as Kress argues, to settle on one form of English as standard. Moreover, some reflection on the colonial histories of the uses and misuses of language in the creation of difference as “cultural deprivation” might, in Australia, give us some pause for thought.

What gratifies me about this conference is that the speakers over the next two days are clearly aware of and engaged in a much wider discussion of the meaning, importance and pursuit of literacy in the context of democratic participation. Hopefully your voices will be heard above the dull reductionism and the historical indifference that some would place as constraints around Frederick Douglas’s idea of literacy as creating opportunities for “new and special revelation”.

References
National Inquiry into the Teaching of Literacy (2005b) Teaching Reading. Literature Review: A review of the evidence-based research literature on approaches to the teaching of literacy, particularly those that are effective in assisting students with reading difficulties. ACT: Department of Education, Science and Training.
Confusing The Role of Phonics in Becoming Literate in Alphabetic Scripts With The Role of Phonics in Learning to Read Alphabetic Scripts: Implications of the National Inquiry into the Teaching Literacy

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Abstract: In this paper I shall argue that while “Phonics Instruction” (knowledge of the alphabet, letter sound correspondences, phonemic awareness) plays a vital and necessary role in acquiring literacy in alphabetic languages, it plays a quite different role in learning to read alphabetic languages. I shall also argue that conflating “acquiring literacy” with “learning to read” can lead to quite toxic pedagogical practices.

Introduction
In December, 2005, Dr Nelson released Teaching Reading, the Report of the Committee of Inquiry into the Teaching of Literacy. (Australian Government, DEST, 2005) Dr Ken Rowe of ACER was appointed to lead the Inquiry. The Report and its surrounding publicity very much put the issue of phonics as part of reading instruction back into public debate.

In this paper, I intend to explore how those who were responsible for managing the Inquiry and ultimately producing the Report seem to have conflated “acquiring literacy” and “learning to read”, especially when it comes learning how to use alphabetic scripts.

Phonics Reading & Alphabetic Script: What’s the Issue?
Although they do not exhaust all the possibilities, there are two dominant, conflicting positions about the role of phonics in reading. Those who hold the first position (let’s refer to it as “Position #1”) argue that they have scientific, evidence-based research which conclusively shows that recoding print to sound (“decoding”) is an essential pre-requisite for constructing meaning from alphabetic script. This is the position held by those who conducted the Inquiry and wrote the Report. Those who hold the second position (let’s call it “Position #2”) argue just as strongly that readers of alphabetic script are predisposed to access meaning directly from the visual display, that the human brain has evolved to go directly to meaning without first going through sound. A corollary of this position is that teaching the full range of phonic generalisations explicitly and systematically before teaching comprehension strategies and skills is not only unnecessary, but it seriously complicates the development of lifelong, avid readers.

Let us examine each of these positions in more detail.

Position #1: Recoding Print to Sound Is An Essential Pre-requisite For Constructing Meaning From Alphabetic Script.
This position argues that “recoding” print to sound is an essential pre-requisite for constructing meaning from alphabetic script. It is a view that has experienced a resurgence of support, mainly because of the findings of the USA’s National Reading Panel’s (NRP’s) report (NICHD, 2000) which summarises the publications of one of
its panelists. (Linda Ehri). In this summary the Report explains how ‘research on word reading processes has distinguished several ways to read words.’ A reader might identify a word from memory (‘sight word reading’), or if encountering a word ‘never read before’, could ‘transform graphemes into phonemes’ and then ‘blend the phonemes’ to form a word ‘with recognisable meaning’. Or the reader might use ‘analogy to known words’ (Ehri, 2004: 325).

Those who advocate this position are forced to define reading as the set of phonological processes that convert letters of the alphabet to the sounds of speech. There are two corollaries associated with this definition:

- these processes have to be applied automatically
- this automaticity can only be done by intensive teacher-controlled instruction.

In essence this position argues that once the automatic transformation from written to oral language has occurred (through phonological recoding), readers then convert these sounds to meaning, by doing what they already do when constructing meaning when listening to spoken language, that is by using the already established oral language process. This in turn implies that comprehension is not really an act of “reading”; rather it is an act of “listening”, and therefore part of an already established oral language facility. In other words for advocates of this position, it is the automatic conversion from letter-to-sound that constitutes the act of “reading”. Going from sound to meaning is made possible by pronouncing each word, which (according to this particular definition) allows the reader to “hear” the word and retrieve its associated properties, including its meaning, from the reader’s mental lexicon. Once this is done meaning can be manipulated (so the argument goes) along with the meanings of other pronounced words in exactly the same way.

This view of reading can be represented thus:

```
LETTERS-------------->SOUNDS---------------------->MEANING
(READING)         (NON-READING)
```

What Kind of Scientific Evidence Supports This View?

It is important to understand the implications of this view of reading has on the research methodologies which its advocates employ to support their position. If one believes that the act of reading consists solely of the recoding of graphic symbols to corresponding sounds of oral language, then one will design, implement, and evaluate intervention projects based on this view. One will also design research projects which measure reading ability based on this view. Thus if one wants to prove that a certain intervention program lifts reading ability one will use a pre-test of reading which comprises items based on the ability to make accurate letter-sound conversions, then implement a program which teaches the skills and knowledge necessary for accurate letter-sound conversion, and when the trial has finished, will administer a parallel version of the pre-test to measure growth. It all sounds very “scientific”. The findings of such research have all the accoutrements of being “evidence-based”, and if the post-test scores rise significantly surely this proves that the intervention has “caused” reading to improve?

This is the logic which underpins the USA’s National Reading Panel’s 2000 Report into ‘scientifically based reading instruction’. According to “The Australian” of
December 8, 2005, which summarised the main findings of the Report (the day it was released) it is also the logic which underpins Dr Nelson’s report.

. . . the report - prepared by a panel of parents, teachers and academics led by Ken Rowe - has backed their push to embrace phonics as the key to reading. The inquiry calls for schools to embrace "systematic direct phonics instruction so children master the essential alphabetic code-breaking skills required for foundational reading proficiency".

Australian Council for Educational Research chief executive Geoff Masters said yesterday it was clear a systematic approach was needed.

"I think there's a very significant research base now in this area," Professor Masters said. (Maiden, 2005)

The Minister’s media release ran a very similar line:

Today I have released the final report of the National Inquiry into the Teaching of Literacy. Entitled Teaching Reading, the Report strongly recommends the use of a phonics-based teaching method - founded on proven and evidence-based strategies - to give students the best possible opportunity to learn to read and write in the early years of schooling.

The Report cautions against the exclusive use of the whole-language approach to the teaching of reading and finds it to be:

"...not in the best interests of children, particularly those experiencing reading difficulties". (p.12 of the Report) (Nelson, 2005)

On page 31 of the Teaching Reading report due homage is paid to the USA report where it is described in these glowing terms, . . . “the largest and most influential investigation to date into the relative effectiveness of different approaches to the teaching of reading” (Australian Government, DEST, 2005)

It is important to realise that the USA’s panel of reviewers selected and analysed a plethora of research studies carried out only by researchers who held the view of reading associated with Position #1. Their analysis of these studies allowed them to claim unequivocally that beginning readers needed phonemic awareness (the ability to hear and manipulate sounds in words) as a necessary prerequisite for learning to decode, that ‘good readers’ are fluent and automatic decoders, and that poor readers rely overly on context. This bias was noted by two well-known American researchers who undertook a review of the American report - Richard Allington and Michael Pressley - who commented:

‘As we reviewed the list of 2,500 (NPR’s) supported articles, we detected much less attention to the higher order processes related to comprehension than to the more atomistic components of reading, such as sound-letter and word skills. Moreover when we have been in the company of NICHD-supported researchers and leadership, there has been much too little discussion above the word level. It is easy to leave (NPR)-driven discussions with the impression that sound-, letter, and word-level processes are all that really matters in reading, that if sound-, letter- and word-processes could be solved, literacy problems would be solved’ (Pressley & Allington, 1999:169).

While Dr Nelson’s panel of analysts unashamedly display the same bias they are not as blatant about it. At least they went through the motions of calling for submissions and received more than 400 from a wide range of interested parties. Then they selected to use mainly those which supported their rationale. For example, despite a
number of submissions which fully documented the serious and significant flaws in the USA’s report, the authors of the Australian report shrug off such criticisms in a miserly footnote on p27 of their review of literature thus: “24. The findings of the National Reading Panel’s report phonics, however has not been without critique and controversy, (e.g Garan, 2001, Meyer 2003)” (Australian Government, Department of Education, Science and Training, Teaching Reading, Literature Review, December 2005, p 21). There is no explicit discussion of what the nature of this critique and controversy might be. Only two of a plethora of such critiques are cited leaving the impression that such critique and controversy is so small to be unworthy of further explication. This despite the incessant claims that only “evidence-based research” would be considered in the review.

What is of even more concern is that the most cited researcher in the references of both the Teaching Reading report and the Literature Review used as the basis of the report was Dr Ken Rowe, whom Dr Nelson appointed to conduct the review. The ethics of using so much of the research of the academic appointed to head the inquiry to support the Recommendations in the report is never raised. Of even more concern is that nowhere in the report is an explicit declaration or qualifier that the model of decontextualised word-level reading is based on a theory; rather it implies that it is an already established scientific fact.

Furthermore, like the American Panel, the Australian Panel has produced a set of documents which “frame” (Lakoff, 2004) “reading” as a stand-alone curriculum subject, predominantly involving psycho-perceptual processes, distinct from, and unrelated to, other language-based systems of making meaning. Like the American report, ours promotes (and endorses as “scientific”) a 1950’s view of reading. Like the American report, because of this psycho-perceptual perspective, the Australian report locks the recommendations which emerge from its analysis into a view of the reading as a “complex set of skills” made up of an hierarchical set of complex “habits”, which in turn promotes lock-step, teaching based on discredited “habit-formation” behaviourist theories of learning and teaching.

Position #2 Meaning Can Be Constructed From Alphabetic Script By Directly Accessing Meaning
Advocates of Position #2 challenge the assumption that readers must recode the visual display of alphabetic script to sound in order to comprehend the meanings the author of the text intended. The core of their challenge rests on a subtle but significant distinction between “meaning” per se and “clues to meaning”, especially when it comes to “linguistic” communication (i.e. communication that involves written and/or oral language). Proponents of this position argue that “clues” are not “stimuli” in the behaviourist tradition. “Meanings”, they argue do not automatically appear as if in response to some overt stimulus. Rather they are “constructed” (i.e. “figured out”) by thought processes which “use” these clues. Some of these clues are overt and observable, such as sounds and gestures, while others are tacit and unstated, such as mutual knowledge and beliefs. Advocates of this position define linguistic communication as “the exchange of meanings via the selective production and perception of clues from a variety of overt and covert cuing systems” (Strauss, 2005, p 49) The relative “mix” of cues from the various cuing systems can vary. For example given high degrees of shared knowledge and beliefs, some instances of linguistic information may need a wink, a nod or a grunt to convey a message. The oft cited
example from Dostoevski’s The Diary of a Writer in which he relates a conversation of drunks which consisted entirely of one unprintable word, is a classical example (Vygoskty, 1934).

For proponents of Position #2, the essence of the meanings that are communicated during any linguistic act are not to be found in the physical properties of the signs or medium with which they’re associated, nor can they be located in the neuronal synapses that were activated at the time. Rather, they are abstract conceptual structures, made possible by homo sapiens’ unique ability to use symbol systems and associate the meanings which symbols represent with acoustic, visual, or other physical phenomena that can pass through a physical medium. While the medium through which these symbol systems can pass are “physical”, the meanings themselves are “meta-physical”.

This view of reading can be represented thus:

\[
\text{LETTERS} \rightarrow \text{MEANING} \rightarrow \text{SOUNDS} \\
\text{(READING)} \rightarrow \text{(NON-READING)}
\]

In essence this position argues that phonological recoding is NOT an essential prerequisite for comprehending written text. Rather it asserts that not only is it possible, it’s actually more effective to go straight from visual symbols to meaning. The belief that reading is comprehension first and foremost also has implications for the design and implementation of reading research, especially the instruments which are used to measure reading ability. Rather than measuring reading ability by the ability to make direct graphic-to-phonic matchings (which are easy to measure and control) researchers who hold Position #2 have to grapple with the age-old problem of measuring the meanings which readers construct, something philosophers have not been able to do for the last few thousand years. Meaning does not lend itself to accurate measurement, because we still have not identified a basic unit of meaning to measure. Is there the equivalent of an erg of meaning? Or a kilowatt? Perhaps a kilometre? Because of this it is difficult to design and carry out the hypothesis-testing empirical kinds of research that those who hold Position #1 seem to value so highly. Does this mean that those who hold Position #2 cannot marshal strong “evidence-based research” to support them?

Definitely not.

What Evidence Is There To Support Position #2?
Proponents of Position #2 can invoke a wide and diverse range of scientific evidence to support their case, including:
1. Prelinguistically Deaf Children
Prelinguistically deaf children are a naturally occurring control group. By definition they can never proceed from print to sound, nor can they acquire phonemic awareness. Yet as Helen Keller showed (and as teachers of profoundly deaf children continually demonstrate), humans with no possibility of ever having access to the sounds of language, learn to read and comprehend complex meanings from written alphabetic texts.
2. The Phenomenon of Homonyms,
Homonyms are words that are spelled differently but have the same pronunciation. The different visual shapes (i.e., different spellings) of words such as rite and right, meat and meet, rain and rein, mince and mints show that it is the visual shape, not the sounds which determine meaning in these cases. This in turn indicates that alphabetic text can function "logographically." All this means is that two identical sets of sounds such as "The sun’s rays meet" and "The sons raise meat" can only be understood through the visual distinctions between sun’s-sons, rays-raise and meat-meet. Sounding these words out will not disambiguate the possible meanings. This can only mean that there are lexical and grammatical features embedded in the visual display of alphabetic text which take precedence over sound.

3. The Phenomenon of Homographs
Homographs are words that are spelt the same but are pronounced differently. Here are some examples:

- The bandage was wound around the wound.
- The farm was used to produce produce.
- The dump was so full that it had to refuse more refuse.
- We must polish the Polish furniture.
- He could lead if he would get the lead out.
- Since there is no time like the present, he thought it was time to present the present.
- A bass was painted on the head of the bass drum.
- I did not object to the object.
- The insurance was invalid for the invalid.
- There was a row among the oarsmen about how to row.
- They were too close to the door to close it.
- The buck does funny things when the does are present.
- A seamstress and a sewer fell down into a sewer line.
- To help with planting, the farmer taught his sow to sow.
- The wind was too strong to wind the sail.
- After a number of injections my jaw got number.
- Upon seeing the tear in the painting I shed a tear.
- I had to subject the subject to a series of tests.
- How can I intimate this to my most intimate friend?

These examples demonstrate that the spelling to sound system in English is governed, not by an alphabetic, sound-based set of principles, but by a logographic principle in which the integrity of meaning and grammar must be drawn on by the reader before the sound ("pronunciation") of the word can be determined.

Once the possibility of a logographic principle of English orthography can be acknowledged it is impossible to insist that the explicit, systematic teaching of phonics is the sine qua non of reading, or that the meaning of words must be constructed by first converting their spellings to sound.

4. Evidence From Archaeology & Evolutionary Theory.
Archaeological and more recent branches of evolutionary evidence also support Position #2. For example, recent evidence emerging from the fields of biological anthropology and neuro-anatomy show that:
• The human brain has evolved with both a visual and a phonetic path to meaning construction. (Donald, 1991; Deacon, 1997)

• These paths are autonomous. One is not a pre-requisite for the other, neither is one dependent or contingent on the other. (Ramachandran, 2003)

• The brain’s preferred route is to go from visual symbol, to meaning, then to sound. (Donald, 1991; Deacon, 1997)

• In the use of cuneiform, hieroglyphic and other logographic scripts direct grapheme to phoneme correspondence is impossible. Phonemes can only be known after the meaning of the symbol is understood. From a reading perspective, these systems have no more or no less expressive potential than alphabetic scripts. (Strauss, 2005).

5. Evidence From Psycholinguistic Research & Cognate Fields
Numerous psycholinguistic research studies have been conducted over many decades. These continually and consistently demonstrate that meaning must be accessed before sounds can be identified. In the 1950’s and 1960’s, there was a plethora of rigorous, experimental research studies into speech perception which disproved the hypothesis that the perception of continuous speech was merely one-to-one perception of individual speech sounds. A series of classic experiments by Miller, Heise & Lichten, (1951), Miller & Isard (1963), Pollack and Pickett (1964) and Lieberman (1967) clearly demonstrated that there was more to speech perception than the sounds which “meet the ear”. Lieberman summarised the results of this research thus:

Some of the distinctive features that specify each phonetic segment probably can be determined from the available acoustic signal. Other distinctive features cannot be uniquely identified. The listener therefore forms a hypothesis concerning the probable phonetic content of the message that is consistent with the known features. However, he (sic) cannot test this hypothesis for its syntactic and semantic consistency until he gets a fairly long segment of speech into his temporary processing space. The speech signal therefore remains unintelligible until the listener can successfully test a hypothesis. When the hypothesis is confirmed, the signal abruptly becomes intelligible (Lieberman, 1967, p165).

According to Lieberman this research shows that the sounds people hear are ultimately what they themselves have synthesised, and not what the speaker has produced. The reason this speech seems clear to a listener is because it is self-generated. In this sense, what these research studies show is that the clarity of speech is an “illusion. It is as if the listener fills in synthetically what isn’t there and “hears” the speech as perfectly normal, but through a distorting transmission line. Later research by Warren, (1970), Warren & Warren (1970), Warren & Obusek (1971), Obusek & Warren (1973) confirmed this interpretation.

In similar vein, numerous studies, carried out over several decades have also demonstrated that “there’s more to reading for meaning than meets the eye”. These studies clearly show that reading for meaning does not presuppose a prior translation of print to sound. Rather, like the speech perception research of the 1960’s, when engaged in the normal process of reading, readers (like listeners) form hypotheses of which words are in the text based on non-visual information and even ignore parts of
the visual display. (See Weaver, [2002] for an extensive review of the research which confirms these claims.)

**Does The Alphabet (DIRECTLY) Support Reading?**

The combination of English spelling, archaeological, evolutionary and psycholinguistic research evidence strongly suggests that the alphabet did not evolve in order to help readers. Rather the evidence summarised above suggests that the alphabet evolved to support writing. An alphabetic system like English enables people to make marks on paper (and other surfaces) in a simple and consistent manner so they will always look the same. In essence, alphabets are writers’ “tool kits” for putting words together. From a stock of just 26 basic shapes all the words of the English language can be represented. Moreover these 26 letters have names which define their shape. This means that novice writers can be told to write “d” “o” “double l” (doll) instead of “First do a ball and put a stick on its right hand side, then another ball and then two sticks next to each other” This is a much more cost-effective way of constructing and transcribing meaning than logographic systems such as Chinese, ancient cunieform or Egyptian hieroglyphics. In essence the invention of the alphabet made writing and transcribing much easier for scribes and with the invention of paper and the printing press made the scribing process more accessible to more people. While this in turn made reading more accessible, it had little effect on the reading process.

While the alphabetic system gives the illusion that reading consists mainly of translating visual signs to their phonetic equivalents there is strong archaeological and evolutionary evidence which argues that it does not and the implications of assuming that it does need to be carefully considered. In fact, despite the repeated public claims around the Teaching Reading Report that “science” supports the centrality of phonics in reading, the arguments made by those who favour Position #1 (Intensive Systematic “Extreme” Phonics) are based on a narrow, selective analysis of research studies which do not stand up to scientific scrutiny.

**The Recommendations Of the Teaching Reading Report; Tonic or Toxin?**

I believe the positive and/or negative impacts of any policy are contingent on how those charged with implementing the policy INTERPRET these details. Whether a policy outcome has tonic or toxic effects on the community depends on the beliefs and values of those who are supposed to put it/them into practice.

Our federal government’s recent Inquiry into Teaching Literacy is no different. It produced 20 policy recommendations. Will these recommendations turn out to be “good” or “bad” for Australian literacy education. While only time will tell, here is my analysis of the implications of each of these recommendations MIGHT be, depending on how one interprets each.

(Appendix A or Handed out at conclusion of presentation)
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Assessing the literacy needs of students who speak Aboriginal English

Ann Daly

Abstract
The first of two related research projects was carried out to see if there might be evidence in NSW schools to support the assertion of Muhlhausler and Rose (1996) that Aboriginal English speakers in desert schools need explicit methodology similar to that used with ESL students. This research analysed the grammar results from NSW literacy tests for students who speak Aboriginal English compared with non-Aboriginal students. The results were also compared to the results of students who speak English as a second language (ESL) to determine the relative degree of difficulty experienced and which skills were more difficult. The results suggest that there should be a similar level of support to that provided for ESL students but that the literacy needs can be different. The second research project critically analysed the Basic Skills Test and the results of the same students in order to identify any evidence of bias. No bias was identified in the language texts, however, differential reading results suggested cultural preferences for certain genres and/or differential learning experiences.

Introduction
Before discussing the research, it is necessary to define Aboriginal English (AE) and to outline the factors and research that led to the investigations.

It is important to stress that Aboriginal English is not a deficient form of English. It is a different dialect of English, which forms an important part of identity and culture in Aboriginal communities. It varies from community to community because each form of it developed from a combination of English and the local Aboriginal language and there are hundreds of Aboriginal languages across Australia. Aboriginal English is the first language of many Aboriginal students and teachers should recognise that it is the starting point for these students in any learning program.

The education system still has a long way to go in recognizing the home language of Aboriginal children, and in addressing the particular needs of Aboriginal speakers of English. These children have the undeniable right to learn SE, and this is indeed a prerequisite to equal participation in areas such as employment and further education. AE speaking children
should also have the right to education that begins with their own dialect and to learn SE as a second dialect.” (Eades 1995, p. 43)

Acceptance and respect for Aboriginal English is, therefore, a natural requirement of the Aboriginal Education Policy of the NSW Department of Education and Training. However, Standard Australian English (SE) is the language of power and ability to use it gives people access to their rights. Consequently, all students, including Aboriginal students, are expected to be able to read and write SE to meet the requirements of the English syllabuses in NSW.

The evidence that Aboriginal children are achieving very poorly at school can be found in the results of the NSW Basic Skills Tests. A graph of BST results for alternate years from 1998 to 2004 is at Appendix A. From this graph it can be seen that the mean results for Aboriginal and Torres Strait Islander (ATSI) students have consistently been way below the mean results for all students in the state despite small improvements from year to year. The difference between the means for ATSI students and the means for all students is nearly three times the difference between boys and girls. For example, the Year 5 ATSI mean score for Literacy in 1998 was 51.1, which was 5.1 score points below the mean score for all students, whereas the mean score for boys was only 1.9 below the mean score for girls. Students who have lived in Australia for four years or less and never or only sometimes speak English at home also achieved a significantly higher mean (53.5) than ATSI students.

The relevance of these figures may not be fully apparent until people become aware that the average growth of all students in NSW from Year 3 to Year 5 is about one skill band or between 6 and 7 points on the BST scale. Therefore, the 1998 Year 5 mean for ATSI students (51.1) put these students nearly two years (5.1 points) behind the average student. In fact, in Year 3 in 1998, the mean score for all students, which is on the same scale as Year 5, was 49.2 and the mean for ATSI students in Year 3 in 1998 was 44.3, a difference of 4.9. If the differences for Year 3 students (4.9) and Year 5 students (5.1) are compared, one can see that over time ATSI students are falling even further behind.
Literature Review

While Aboriginal English and standard Australian English are usually mutually intelligible there are major differences in vocabulary, grammar, meaning, sounding system, gesturing and socio-cultural context. The House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs Language and Culture stated in their Report, *A Matter of Survival* (1992), ‘that the failure of schools and teachers to identify, accept and take into account the separate features of Aboriginal English is a major factor in Aboriginal children’s poor performance in school’.

Unfortunately, the following state of affairs outlined by Diana Eades (1995, p.43) is still far too prevalent in NSW schools:

“*There is still a widespread lack of acceptance of Aboriginal English, which is often based on ignorance. In areas where Aboriginal English does not sound very different from SE both Aboriginal and non-Aboriginal speakers are often unaware of the subtle but crucial differences between the two dialects. People often think that there is no real difference between Aboriginal English and non-standard English. In fact … the pragmatic differences, which relate to the way that language is used in its cultural context, are often crucial to communication.*”

“*Aboriginal children are still being wrongly classified as ‘slow learners’, in large part because of their different ways of communication, particularly their different ways of responding to teachers’ questions. In fact, in the 1980s, Aboriginal children were so over-represented in remedial classes, which were then known as ‘OA’ classes, that it was widely believed that ‘OA’ really meant ‘Only Aboriginal’.***

Diana Eades recommends “two way” (or bi-dialectal) education but says, “The training of teachers to recognize both AE and the needs of its speakers is still almost nonexistent.” In fact, the first time that a bi-dialectal education project
was trialled in NSW was in 2004. A report about the project was presented at the National Indigenous English Literacy and Numeracy Strategies (NIELNS) Conference in Sydney, November 2005 and the benefits discussed included increased communication, cultural understanding and pedagogical awareness among teachers. The project focused on accepting spoken AE and explicit teaching about reading and writing SE in meaningful tasks for specific purposes such as translating AE stories from the community into SE. Community members were employed as Aboriginal Research Assistants in this project.

Diana Eades (1993, p.4) points out that dialectal differences include semantics (words and their meaning), pragmatics (how language is used in socio-cultural contexts) as well as syntax (grammar). There is often specific regional variation in word meanings between Aboriginal communities and there are also some English words used with different meanings in AE, for example, ‘deadly’ means ‘really good’ and ‘lift’ means ‘steal’ or ‘hit’ (Simpson, Munns & Clancy 1999, p.5). The way people find out information is different too, in that when Aboriginal people want to find out ‘substantial or personal information, they typically do not use direct questions’ (Eades 1993, p.4). Similarly, the direct question and answer format which ‘is so central to western notions of how to teach children … doesn’t appear to be characteristic of interaction between Aboriginal people and their babies’ (ibid.).

In Australia, we could take warning from a situation that developed in the United States from a related issue. Chambers (1983) reports how, in Ann Arbor, Michigan, African-American parents at an elementary school in a low-income housing area took the School District Board to court in 1979 in a landmark case. The parents charged that the School Board had failed to recognize the language difficulties faced by their children and had failed to educate them accordingly. The children were all speakers of the Afro-American dialect of English (known then as Black English Vernacular, or BEV, more recently as Afro-American English), which, like Aboriginal English, is a significantly different dialect of English. The children, who were achieving very poorly at school, were classified by the school as learning disabled, or in need of speech therapy. The parents’ case depended on whether BEV was sufficiently different from SE to
constitute a barrier to learning. With the help of linguists, the parents were successful. The judge ordered that the School District recognize BEV, develop a program to help teachers to recognize it, and offer teachers methods of using that knowledge in teaching African-American children SE (Chambers, 1983). The implications of this American case are significant for teachers of AE speaking students in Australia (Eades 1995, p. 44).

Eagleson, Kaldor and Malcolm (1982, p.196) recommend teaching SE as a second dialect (TSESD) but Harkins (1994) considers that a TSESD approach is not adequate for Aboriginal students because of their considerable exposure to SE. Harkins does not refer to the linguistically important fact that SE is neither their mother tongue nor their preferred language. Harkins contends that rather than learn a new dialect of English, students need ‘ways of separating out which English expressions are of use in a non-Aboriginal context and which are not’ (op.cit. p.195). She fears that a deficit approach will be adopted and Aboriginal students will lose their identity. However, in their outline of the differences between TESL and TSESD, Eagleson, Kaldor and Malcolm (1982, p.197) show that they know that students who speak AE have difficulty in separating dialectal differences and have a strong sense of identity with the AE dialect. They also stress the need for teachers to assess receptive competence and create realistic programs that will motivate students (op.cit. p.198).

In their recommendations to the Commonwealth government, Muhlhausler and Rose (1996, p.188) note features of AE that relate to the local Aboriginal languages, for example, the limited use of conjunctions; only ‘and’, ‘but’ and ‘then’ are used by Anangu in their language Pitjantjatjara, so they are the only conjunctions used in Anangu AE. They also specifically recommend that English should be taught as a second language program and that teaching across the curriculum should incorporate content, methodologies and ESOL materials provided that ‘two way’ learning (in two cultures) is used (op.cit. p.346). Since Muhlhausler and Rose’s research was carried out in remote schools, and since “people often think that there is no real difference between Aboriginal English and non-standard English” (ibid), it seemed pertinent to investigate and prove whether or not Aboriginal primary students in NSW
experience significant linguistic difficulties in literacy that are related to the features of Aboriginal English. In a qualitative study, Malcolm and Koscielckie (1997) identified the features of Aboriginal English used by the Aboriginal community at La Perouse in Sydney, for example, interchanging ‘is’ and ‘are’ and ‘was’ and ‘were’, the use of ‘gonna’ for future, the omission of the copula or auxiliary verb, unmarked plurals, use of ‘them’ as demonstrative adjective and either omission of prepositions and articles or usage that diverged from SE. However, this research was with older members of the community, not younger members.

There was no quantitative research on Aboriginal English and young students in NSW. In view of the fact that Aboriginal English is another dialect, not another language, and Muhlhausler and Rose had recommended ESL methodology, it also seemed relevant to investigate whether any linguistic difficulties would be of a similar nature and/or magnitude to those experienced by students from a non-English speaking background (NESB). In order to compare and contrast the features of English used by ESL learners, the features delineated in the Natural Order Hypothesis proposed by Krashen (1982) were assessed. Krashen's proposed order progresses through stages from use of the verb ending ‘ing’, plural ‘s’ and copula verb in the first stage, to the use of auxiliary and articles in the second stage. The use of the irregular past tense comes in the third stage and use of the regular past tense, third person singular verb endings and possessive ‘s’ are the last features to be acquired.

Grammar Research

The research was conducted in 1999 using results from the language section of the 1998 Basic Skills Test (see an example at Appendix B) and the 1998 Trial Writing Assessment Tasks in NSW. The tests included a wide range of linguistic items in both written and multiple-choice formats. The assessment data included the use of articles, verb tense, verb form, subject-verb agreement, modality, noun agreement, prepositions, pronouns, demonstrative adjectives, conjunctions and sentence structure. In 1998, the Trial Writing Assessment tasks were conducted with 20 per cent of NSW students in Years 3 and Year 5 but there were no schools from remote areas that volunteered for the trial.
Consequently, it was expected that the Aboriginal students would speak Aboriginal English of the ‘light’ variety used in rural and urban areas, not the ‘heavy’ variety used in remote areas (Eades, 1993).

From the schools that participated in the Trial Writing Assessment Tasks, the Aboriginal Programs Unit identified eleven schools from the Dubbo, Bathurst, Shellharbour and Penrith Districts as having communities where Aboriginal English is spoken. Principals of these schools agreed to the research and advised that both their Aboriginal and non-Aboriginal communities did not have high economic status. It was therefore unlikely that any differences in achievement could be attributed to socio-economic status.

Grammar Research Questions
Student responses to specific items (test questions) were assessed using Rasch analysis and the Quest computer program to determine whether there was any significant bias (statistical discrimination) experienced by any of the research groups that were compared. The following six research questions were considered:

- **Aboriginal to non-Aboriginal** – Which items concerning grammatical skills in literacy tests were significantly more difficult for a sample of Aboriginal students, who come from communities speaking Aboriginal English, compared with students from the same schools who are both non-Aboriginal and non-NESB?
- **NESB to ESB** – Which items concerning grammatical skills in literacy tests were significantly more difficult for all NSW NESB1* students compared to ESB students from the sample schools?
- **Aboriginal to NESB** – Are the grammatical skills that were significantly more difficult for the Aboriginal group similar or different to the skills that were more difficult for the NESB students? If different, how are they different?
- **Aboriginal to Aboriginal English features** – Are the grammatical skills that were significantly more difficult for the Aboriginal group similar to the grammatical features of Aboriginal English identified in the literature?
• **NESB to ESL features** – Are the grammatical skills that were significantly more difficult for the NESB group similar to the grammatical features outlined by Krashen (1982) in his Natural Order Hypothesis?

• **Proportion of Aboriginal to proportion of NESB** – How does the proportion of Aboriginal students who did not achieve grammatical skills compare with the proportion of NESB students who did not achieve those grammatical skills?

* NESB/ NESB1 - students who have been in Australia for four years or less and never or only sometimes speak English at home

A bias analysis on Quest was produced to compare the difficulty of items for ATSI and non-ATSI. The bias analysis determines the probability of different groups achieving their various results on the same test. A probability of .05 or less was taken to show a significant difference in the difficulty of the items for the two groups. Bias analysis could not be performed on data from the whole state because of the large numbers involved. However, the item difficulties across the whole state are available and can be compared by other means. During the processing of data for the whole state, the difficulty of items across the whole spectrum of literacy items is assessed and anchored to a common scale. Accordingly, the order of difficulty of the items on the scale can be assessed and compared for different groups to show how many positions each item has moved up or down the scale. A move of five positions or more on the scale was arbitrarily chosen as being significant.

**Grammar Results**

The results showed that some items from the language section of the Basic Skills Tests were significantly more difficult for Aboriginal students than they were for non-Aboriginal students and most of these items reflected features of Aboriginal English. For example, Aboriginal students in the sample were significantly more likely to select the past participle, *seen*, instead of the past tense of the verb, *saw*, to choose *are* in place of *is*, or to select the pronoun, *them*, instead of the demonstrative adjective, *these*. These language choices
made by the Aboriginal students are in keeping with the features of Aboriginal English noted by Malcolm and Koscielecki (1997) in their research with the Aboriginal community at La Perouse.

In the Writing Assessment Tasks, the Aboriginal students were more likely than non-Aboriginal students to use articles, prepositions and sentence pattern in ways that were inappropriate for written English grammar. These features are shown in the examples of differences between Aboriginal English grammar and Standard Australian English grammar given by Eades (1995).

The comparison of state-wide NESB results with the results for the Aboriginal sample of students showed that some grammatical skills, such as verb tense, were equally difficult for both groups. In both Year 3 and Year 5, the use of subject-verb agreement when writing a description and the use of articles when writing instructions were more difficult skills for NESB students. These skills are features of English grammar that are acquired later by ESL students according to Krashen (1982) in his Natural Order Hypothesis. In both Year 3 and Year 5, the selection of the appropriate preposition and the selection of the appropriate written verb form were significantly more difficult skills for the Aboriginal group of students. Other skills which were more difficult for Aboriginal students than they were for NESB students, included sentence pattern, which was more difficult for Aboriginal students in Year 3, and the use of modality when writing instructions, which was more difficult for Aboriginal students in Year 5. A table summarising these results is at Appendix C.

Discussion of Grammar Results
These findings suggest that teachers need to be aware that students who speak Aboriginal English have as much need for explicit teaching of SE as do NESB students. However, the results also indicate that the teaching strategies for Aboriginal students should not be the exactly the same as those for ESL students, since the language features they focus on may differ.

The results also suggest that in order to achieve equity for Aboriginal students, the following recommendations by Davies, Grove and Wilkes (1997), about
research and training for teachers of Aboriginal students, should be carefully considered by education authorities and teacher training institutions:

- Educators should be trained, through in-service and teacher education courses, to recognize the specific language ecology of the Aboriginal community (whether traditional or urban) in which they will teach.
- Teachers should be trained in the explicit teaching of English (ESD) with an Indigenous teacher and AEWs should be trained to act as models of L1 and L2 language use.
- Further investigation should be conducted into the use of the Aboriginal oral language (Aboriginal English) as a transfer strategy to SE in the early stages of schooling.

**Outcomes**

This research was used to argue the case that students who speak Aboriginal English need specific and explicit teaching strategies to the same degree as ESL students. As a result, in 2000 the Basic Skills Test program began to provide support documents containing relevant teaching strategies for these students in the same way that it does for ESL students.

The documents to date have focused on explicit modelled and guided teaching strategies and have recently included information about what teachers should do prior to the modelled teaching in order to ‘build the field’ for students who may have different cultural or semantic understandings about the content of lessons. The documents encourage teachers to conduct explicit, well-scaffolded lessons in order to achieve the two requirements of the NSW Department of Education and Training: to accept and respect Aboriginal English and to teach Standard Australian English. The approach recommended for writing is to identify purposes for using SE and to distinguish between spoken language and written language, that is, to set purposes and choose audiences for writing that require the use of SE, then to model specific writing skills and jointly construct texts before students are supported and guided to produce their own.

**Analysis of Texts Research**
The subsequent research was carried out in response to a query by an Aboriginal Education Consultant about whether the aforementioned results of Aboriginal students could also be attributed to bias against them in the discourse of the texts. A differential analysis of the results of the same students and a critical analysis of the texts and questions was carried out for both the language and reading sections of the 1998 Basic Skills Test.

The short children’s texts in the tests (procedures, narratives, descriptions etc) do not contain the oppositional binaries of longer texts or the traces of other readings like media or policy statements do, so the critical literacy frameworks developed for these texts are not appropriate. Consequently the framework that was used to look for cultural bias in the texts is that of Lohrey (1998), which looks at the contexts of situation, form, author, voice, genre, rhetoric and world view.

An Aboriginal teacher from the then Aboriginal Programs Unit was consulted about the results and what might have caused them. The Aboriginal teacher agreed with the analysis of the texts and considered that the discourse of the texts in the language section of the BST would not have adversely influenced Aboriginal students. Accordingly, the findings from the first research project can be accurately related to features of Aboriginal English. However, analysis of the Reading section revealed some very interesting findings.

**Reading Results**

There were some questions where Aboriginal students performed better than their non-Aboriginal peers and others where they performed less well. Some texts and questions, that were difficult for all students, were actually easier for Aboriginal students and vice-versa.

Most narrative texts seemed to be easier for Aboriginal students. However, one text, which was a fact file containing four separate information reports with headings and facts listed below, had questions that were easy for the whole state, but harder for the Aboriginal students in the sample. That is, a smaller
proportion of the Aboriginal students answered these questions correctly. A part of the text and related question is at Appendix D.

One particularly interesting finding was that a text that did not have an authentic voice was difficult for Aboriginal students even though it was about an Aboriginal person, Marlene Stewart. For example, a question about the meaning of the words, ‘looked forward to’ in this text, was more difficult for Aboriginal students (see Appendix E).

However, questions about a text from a similar cultural discourse, Flying Fish, were easier even though the text was foreign (from Papua New Guinea) and the questions were higher level inferential and main idea questions (see Appendix F).

Another interesting finding was that a text, Sink or Swim, which presented a science experiment in the guise of a magic trick did not impart the intended knowledge about science. The question ‘Why does the egg float?’ was harder for many Aboriginal students with many of them choosing the incorrect response, ‘It is a magic trick’. However, a question about the performance of the trick was easier for Aboriginal students (see Appendix G).

**Discussion of Reading Results**

More Aboriginal students than non-Aboriginal students were able to make inferences and read between the lines in narrative texts. This could be because narrating stories and recounting events are more familiar discourses in Aboriginal communities. This result is similar to what Heath (1983) discovered in the Piedmont Carolinas in the US, where the black community of Trackton had a strong oral tradition of narrative discourse. The Trackton children were used to comprehending hidden meanings in the stories and this helped them in their reading, once they could get past the hurdle of learning to decode.

The fact file may have been more difficult because the text was an unfamiliar discourse. It is possible that these students may not have been exposed to
many factual texts. Shirley Brice Heath (1994, p.92) noted about Trackton children, that they ‘seem to have skipped learning to label, list features, and give what-explanations. Thus they need to have the mainstream or school ways presented in familiar activities with explanations related to their own habit of taking meaning from the environment’.

Brice Heath’s recognition of students’ ‘own habit of taking meaning from the environment’ acknowledges their capacity. This is similar to Luis Moll’s (1992) concept of ‘funds of knowledge’ in the way that it helps us to see students as resourceful. It also supports Pat Thomson’s (2002) metaphor of ‘virtual school bags’ in that it encourages us to use students’ own cultural and linguistic resources as a starting point for learning.

**Conclusion**

The poorer performance by Aboriginal students on factual texts and their higher achievement on narrative texts would suggest that Aboriginal students need to be presented with a range of texts written for different purposes, not just narratives, even though narratives may be their preferred discourse.

The lower performance by Aboriginal students on a text written by a non-Aboriginal person about an Aboriginal person suggests that teachers need to recognise that an authentic voice in texts may be even more important than the content in order to make a text seem relevant and be accessible for Aboriginal students. In other words, a text about Aboriginal people needs to have an authentic voice to automatically engage Aboriginal students without the need to explain alien terminology and scaffold learning. Such authentic voices are found in books such as the *Indij Readers* series (2004) and *the Big Mob Books for Little Fullas* (BOS 1997). Since other school texts and language practices often do not match language use in home communities, it is often necessary to scaffold learning experiences to build a bridge between home language use and school language practices. *Turnaround Pedagogies* (Comber, 2005) provides many case studies that exemplify building bridges between home and school practices and some concern Aboriginal and Torres Strait Islander students. Healy (2004, p.95) warns that when students cannot employ their own cultural
perception and experience in the classroom, ‘the result may be that we deny these students entrée into wider social, political and professional lives’ and ‘We may also deny them their culture through the process of assimilation’.

The grammar research, showing that students who speak AE have as much difficulty with literacy skills NESB students, suggests that Aboriginal students would benefit from being taught explicitly about the language structure of SE texts. An in depth schema for doing this is explained in ‘Scaffolding Reading and Writing for Indigenous Children in School’ by David Rose, Brian Gray and Wendy Cowey (1999). The grammar results, which show that that the features of AE are related to the grammar skills that are difficult for students, also suggest that teachers need knowledge about the features of AE and their implications for teaching. These features and implications have recently been well outlined by Haig, Konigsberg and Collard (2005).

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Abstract
Reading is so much more than decoding letter and sound relationships. Recent political agendas and reports, however, continue to over-emphasise code-breaking, often conflating it with learning to be literate. Children must learn to question texts if they are to develop an understanding of cultural differences and diversities and challenge injustice and disadvantage. This paper draws on continuing work with primary teachers and children in a diverse range of Sydney classrooms. It demonstrates clearly how valuable drama can be in helping children transcend the technical or ‘basic/operational’ (Rowan, 2005) using their already rich imaginations to read and understand the multiple meanings and perspectives of contemporary children’s literature.

…there is no single ‘essence of reading’ that we can spell out and then stamp on each reading event from classroom to classroom, year level to year level, curriculum subject to curriculum subject… (Freebody, 2005,p.8).

Most western education systems (and cultures) have traditionally overvalued technical and scientific aspects of thinking, reading, speaking and writing. One reason for this may be that they are easier to measure. In particular, reading has often been defined as a linear process starting with the successful translation of letter and sound relationships and only then moving to developing an understanding of the meanings being conveyed (Ehri, 2004). Even when meaning is focused on in such a bottom-up model, the comprehension process is once again conceptualised as linear, moving from literal to the more sophisticated inferential and evaluative understandings. For me, reading is much more than sound, letter and word processes. It is about engaging with a text (be it oral, written, visual, electronic) to understand and analyse more than its literal meaning. To do this we use our past life experiences, our grasp of the way the language is
organised, our decoding and predictive skills and our interpretation of a particular context.

As Chapman (2005) and Eisner (2005) assert when referring to the U.S. *No Child Left Behind* report, newly conservative trends worldwide seem to have heightened a kind of literacy reductivism when, ironically, the whole notion of what it means to be literate has become increasingly complex. The recent Australian *National Inquiry into the Teaching of Literacy* and its subsequent report, *Teaching Reading* (DEST, 2005), provide yet another exemplar of this reductive approach. The report recommends that all schools ensure that ‘systematic, direct phonics instruction’ is provided to ensure that children develop proficiency in reading. While important, an overemphasis on the decoding aspects of the learning-to-read process will not automatically lead to an ability to construct meaning from texts (Freebody, 2005). Often it can also lead to learners’ loss of motivation and engagement with texts (Comber and Kamler, 2005). Similarly, a lack of appreciation of the particular audience and context that you are speaking to/writing for will result in a lifeless text even if particular text-type conventions are observed.

Because the media and the Report from the National Inquiry into the Teaching of Literacy, *Teaching Reading* (DEST, 2005) have concentrated on reading and foregrounded the letter-sound aspects of learning to be literate, this paper, while acknowledging that this is important, focuses particularly on enabling children to move beyond this to become critically literate. As Hanlon writing more generally about the whole curriculum and Tasmania’s *Essential Learnings* (2004, p.57) argues:
A new kind of curriculum which focuses on the study of core concepts or big ideas across discipline boundaries is called for. The complex issues we face do not come packaged in boxes labelled subjects or disciplines. By the explicit teaching of thinking using the forms of inquiry at the heart of the disciplines we can promote deep understanding and help our students to reach higher intellectual standards. By being explicit about values and ethics we might also help to make them better people.

Initially, this paper defines critical literacy before moving to a discussion of drama as critical pedagogy. The paper draws on data gathered from research in three primary classrooms in Sydney during the last twelve months using a multi-site case study methodology. It uses teachers’ and students’ comments as well as examples of children’s work as evidence of how drama can enhance the development of critical literacy, promoting deep understanding of the multiple perspectives around issues that face us in contemporary Australian society.

**Critical Literacy**

As Rowan (2005, 2001) argues so coherently, more than ever before, children of the 21st century need to be critically literate: they need to have an awareness of how texts are constructed and able to be read (interpreted) as well as how they function in different cultural contexts to communicate a particular set of beliefs and/or values. Space constraints in this paper make a discussion of the many definitions of critical literacy impossible. Most definitions, however, cite the following principles based on the work of Freire as summarised by Lankshear (1994):

- **Analytic habits of thinking, reading, writing, speaking, viewing which go beneath surface impressions, traditional myths, mere opinions and cliches**
- **An understanding of the social contexts and consequences of any subject matter**
- **The ability to discover the deep meaning of an event, text, technique, process, image...**
- **The ability to apply that meaning to the individual’s own context (i.e. move from the generic to the personal)**

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• The ability to challenge the assumptions underlying texts.

The increasing tendency to measure literacy achievement through national testing regimes actually works against gathering the kind of evidence that will demonstrate the development of students’ critical literacy as defined above. Process drama, however, employed as one form of critical pedagogy has the very strong potential to realise every one of the principles above.

Quality Literacy through Drama as Critical Pedagogy

The essence of process drama (O’Neill, 1995) is the opportunity for students to enact or to take on role, to walk in someone else’s shoes (eg, Ewing and Simons, 2004, Ewing, 2004, Hertzberg, 2004, O’Mara, 2003, Kempe, 2001, Hertzberg and Ewing, 1998, McMaster, 1998, O’Neill, 1995, Wagner, 1994 and Bolton, 1992, Hughes, 1992, 1991). While the use of enactment in enhancing literacy development is well documented by many authors including those cited above, drama as pedagogy is not as widely used in primary classrooms as it should be given its power to transform learning. Process drama through its embedded learning activities enables students to understand meanings conveyed. Its use helps students to develop a thoughtful approach to reading, described by Freebody (2005, p.11) as, ‘reconnecting ourselves with events and characters, and with understanding these through our always developing engagement with always changing patterns of cultural order’.
Drama strategies, including, readers' theatre, storytelling, depiction, teacher in role, mantle of the expert, puppetry, hotseating, improvisation and thought-tracking, (Ewing and Simons, 2004) grounded in authentic contexts but distanced from children’s actual experiences, can be used in the classroom to support every aspect of critical literacy development. The imagined and physical contexts of drama worlds allow students to go beyond the superficial or stereotypical to explore the making of meanings in a multi-sensory medium (Baldwin and Fleming, 2003), hence the title of one strand of this conference is *Spaces to play* (Gleeson, 2000, Williams, 1991). Drama starts with the students’ already rich imaginations but can be a sophisticated tool for building decoding, vocabulary, syntactic, discourse and metacognitive skills and knowledge. In addition, drama strategies encourage the dimensions of quality teaching frameworks so much part of current pedagogy discourse (Education Queensland, 2000; NSW DET, 2003).

The remainder of this article contextualises and evidences these assertions through the analysis of the teaching of a unit of work to stage two students in three primary classrooms.

**The research context and the participants**

Teachers and students in three Sydney year three classrooms participated in the current study which is part of a much larger quality teaching project in each school. Two of these schools are located in the Northern Beaches district of Sydney and one school in the inner city. The school population in each context is very diverse and students experience a broad range of socioeconomic contexts. In each case the researcher had been approached by the principal to
work as a mentor alongside teachers who were keen to develop students’ critical literacy. In School A funding was provided by a NSW DET Quality Teaching project. School B was part of the national *Boys Lighthouse Project* so the focus was particularly on improving the engagement of a number of male students in the class. School C allocated funding from the school’s professional learning budget.

The twelve teachers involved ranged from an early career teacher to one with more than twenty-five years teaching experience. At the beginning of the project, individual teachers in each school were released to work with the mentor to identify their concerns or needs in light of the system and school expectations and strategic goals and directions and to discuss what unit of work was to be taught to their class. The teachers thus controlled the whole process and identified needs in the context of their own classes. Evaluations of more recent professional learning projects across Australia (eg the Australian Quality Teaching Projects) have recognised the imperative for teachers to drive their own professional learning. (See, for example, Ewing, Smith, Anderson, Gibson and Manuel, 2004; Ewing, Hoban, Herrington, Anderson, Smith and Kervin, 2005).

Each week over one or two terms the mentor modelled strategies in the classroom. The class teacher built on these sessions in light of the class’ needs and her own focus for the particular unit of work. One unit used in all three classes was based on Anthony Hill’s *The Burnt Stick*. A summary of the unit divided into teaching sessions appears below. It must be emphasised that the teachers extended many of the ideas presented briefly depending on their students’ needs, interests and engagement in the unit. For example, one teacher was particularly keen
to develop her students’ ability to work cooperatively in small groups. Another was concerned to challenge her male students intellectually given that their ability was not being realised in the quality of their responses to classroom tasks.
### The Burnt Stick (Andrew Hill) Integrated Unit

**Developed by Robyn Ewing and Peter Colwell**

**Suitability** Years 3-8

**Duration** 10 sessions approx 25-40 minutes each over several weeks.

**Focus:** *English:* Reading and understanding narrative and factual texts, creating their own factual and fictional texts

*Human Society and its Environment:* Develop an understanding of the issues around the stolen generations and reconciliation

*Creative Arts:* using crayon and charcoal drawing, voice collage, depiction, tapping in and hotseating to explore the concept of ‘home’ as well as indigenous/white issues around the stolen generations

**Anticipated outcomes**

It is anticipated that during the unit students will:

- explore a range of factual and fictional texts around the stolen generation
- examine this controversial period of Australia’s history from a range of different perspectives
- translate textual descriptions to images
- work cooperatively in small groups to discuss and depict their understandings
- use their bodies to represent critical moments in a narrative text and convey different moods, thoughts and feelings
- demonstrate their understanding of different perspectives through a PMI chart
- explore the differences between narrative and exposition
- write in role as one of the characters in the story
- write an exposition arguing their point of view clearly
- articulate their understanding of ‘reconciliation’

### Session 1:

Students brainstorm emotion words that describe how they feel about their home (or special place). They choose one word from their list to depict. In a circle they take turns to say and depict their word. Percussion instruments can be used with the words spoken by the students to create a voice collage. This activity is repeated to represent how they would feel if they were taken from their home and not allowed to return. To the count of ten students can transform from a feeling of warmth/acceptance/security to one of isolation/despair etc.

### Session 2:

In pairs students read a newspaper article/factual report to build up their field knowledge about the stolen generations. They record their understandings on a mind map. Teacher leads a discussion about the knowledge students have developed about this topic.

### Session 3:

Teacher reads the opening pages of *The Burnt Stick* without showing students the illustrations. Students use oil pastels to sketch their image of the idyllic Pearl Bay Mission. Teacher reads the description of Dryborough Station and students draw it. A display of the images of Pearl Bay Mission vs Dryborough Station is built up on the classroom wall with quotes from the text alongside the children’s drawings.
Session 4: Students read the rest of the story in small groups and discuss their reactions to John’s experiences.

Session 5: In small groups students choose three critical moments from the story to present as still images/freeze frames. The class views these. The teacher ‘taps in’ to find out how different characters are feeling. The still images can be recorded with a digital/conventional camera. These are then used for assessment of students’ understanding of the issues raised through the text. Students can also write captions to accompany the critical moments chosen.

Session 6: Students choose four or five characters they would like to hotseat (eg Mrs Grainger, John, Jabal, the Big Man from Welfare, John’s mum, one of John’s friends). Allocate one character to each group. Students then develop questions in small groups that are of most interest to them. They can also prioritise these questions. Five students are chosen to be the characters. Students then hotseat them. Later students choose one of the characters and write in role describing what happened from this perspective.

Session 7: Teacher introduces a “Plus/Minus/Interesting (PMI)” inventory and models some examples. Students then complete their own PMI about the practice of removing indigenous students from their families.

Session 8: Teacher models the structure of an exposition using the issues around the stolen generations as a topic. Students contribute their ideas using their inventories. A number of subsequent writing sessions can follow in which students take a current issue in their local community and develop their own exposition. Later these are shared in small groups and discussed.

Session 9: Older groups can watch *Rabbit Proof Fence* and discuss how the issues are presented through the media of film contrasted with the written text.

Session 10: Students brainstorm words that encapsulate the concept of reconciliation using the understandings they have developed over the last ten sessions. Which words are most meaningful for them? If desired these words can be depicted as for session 1. Students choose the five of most relevance for them and write them on hand-cut-outs which have been decorated.

Additional related sessions: Students can spend time immersing themselves in indigenous art and stories depending on time and purposes of the unit.

N.B. Further details about the drama strategies can be found in Ewing and Simons (2004), Ewing (2004).
Findings

A range of methods was used to collect data to evaluate the process together with the learning outcomes. Examples of students’ work were collected with permission from both students and parents. Students reflected on the unit at its conclusion. Each teacher was engaged in conversational interviews about the process both with the researcher and more formally with their principal. In two of the schools an independent evaluator was employed to conduct interviews with the teachers. In one school he also undertook focus group discussions with groups of students. He writes in one report:

*High expectations of the students were also apparent in the year four classroom where ____ was mentoring an early career teacher in literacy pedagogy. The students were able to describe to me how the activities led them to a deep understanding of the themes of two texts, Boy Overboard and The Burnt Stick....The conversation I had with these four students revealed their deep understanding of characters, themes and meaning of texts. This finding was supported by the teacher who has noticed that the students engage with texts at a deeper level since these activities and strategies were introduced at the beginning of the year (Loughland, 2005a,p.7)*

A selection of student comments and excerpts from their writing and drawing appear below:

On the value of drama:

• *Drama was good because we got to feel how John Jagamarra felt.*

• *I think it was a great way of learning what happened with aboriginals and why it happened.*

• *I liked writing what it was like at Pearl Bay Mission that put your mind to the text and you had to think what is was like back then.*
In writing about the critical incidents chosen, one student commented that he chose:

when the big man from welfare is standing over me ready to take me away. When I woke
I saw him standing on top of me. I was feeling very angry and scared because I didn’t
know what he will do to me.

Another, choosing Liyan, John’s mother, wrote: John’s mother is sad because they
would take her beloved son away.

Writing in role as John another student wrote: I miss my mum and my family. I wish I
was back at Dryborough with my family. I wish I could swim in the pool in the creek
where w used to swim after rain and lie on the lizard rock where we would lie afterwards
sunning ourselves after our swim.
Children were taken away and never to be seen again.

The Stolen Generations

The white people wanted the children to forget the Aboriginal culture. The children were forced to work for the white people.

Children from Dryborough Station to P.B.
Figure 2: Mindmap

The children were stolen from their family

People got scared

The Stolen Generations

Parents tried to hide

Help! Help! They would say but no way out

White people took white kids away

Brother and sisters were spoilt
All the other people look like they're enjoying their time, but I'm not even sure I came all this way. I can think of 15 people and friends I used to see when I was younger.
In each context the unit stimulated the students’ understanding of a complex issue from a range of different perspectives. Each of the teachers commented that their students’ oracy, reading and writing skills had improved markedly over the term. This paper is not arguing that this unit was the sole reason for this improvement in student outcomes. At the same time, however, each teacher felt strongly that the use of drama with literacy had been an important factor in this improvement. In school B where the teacher was focussing on boys’ engagement, the teacher cited a range of examples where the boys in her class had worked hard on the activities in the unit producing high quality responses to the issues raised. She particularly noted the power of hotseating and depiction as strategies successful in engaging these students. One boy in the class was accepted into group activities for the first time and, also for the first time, was able to work cooperatively. In addition, teachers commented on the improvement in students’ overall ability to work cooperatively.

**Conclusion**

Australian politicians and educational policymakers must move beyond preoccupations with the measurement of technical literacy outcomes. Drama provides important opportunities for all students to develop their imaginations, read texts to see beyond surface or stereotypical meanings and develop their own use of language. Children can produce interesting and sensitive written and oral work as a result of working collaboratively on sculpting and depiction in pairs and small groups. Tapping in enables them to play with words and give particular attention to what words they will choose to
communicate their emotions. Looking at each other’s depictions also helps them honour each other’s work and at the same time, realise that there are many alternative meanings and interpretations to a text. In the above unit students were able to understand that there are always multiple perspectives about historical events and often no one ‘right’ answer. The students moved from talking and drawing to reading and writing – from an expressive use of oral language to a more abstract use of language. Many of the understandings they developed cannot be measured in test situations.

The use of drama in primary classrooms can facilitate the development of student imaginations, build on their creativity and, at the same time, improve their literacy skills. If students develop their own understandings of who they are through walking in others’ shoes, they will in time hopefully transform their world and see new possibilities. This paper demonstrates clearly how important it is to bring drama strategies together with authentic literature to encourage primary students to read beyond the text and so develop critical literacy.
References


Hertzberg, M. (2004). Unpacking the drama process as intellectually rigorous – “The teacher gives you the bones of it and we have to act the muscles”. Drama Australia Journal 28(2)41-53.


Probing Relationships Between
Literacy Research, Policy Development and Classroom Practice

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University of Wollongong

Abstract
This paper will report on preliminary findings of a collaborative investigation of literacy across wide-ranging contexts. Probing literacy policies, research and practices, we have asked the question: What is the nature of the relationship between literacy research, policy development, and classroom practice? Such a question is timely in the current climate of literacy inquiries and reforms. This question is explored in this paper, making key connections to Australia’s national agendas. From this exploration, future directions for literacy that this study suggests are discussed.

Amidst literacy inquiries and proposed reforms in Australia and overseas, the nexus between literacy research, policy and practice remains a vexed issue. Research articles continue to proliferate in journals and other venues. Government-funded reports continue to present findings of literature reviews that may be exhaustive but, at times, are also highly selective and prioritise preferred paradigms of research and teaching. In the popular press, research is recontextualised again, sometimes seeing researchers pitted against one another in a sensationalised public arena.

In this variegated and often contentious context, this paper seeks to explore some aspects of the nexus among literacy research, policy and practice. It does so with a specific focus on research reported in the Australian Journal of Language and Literacy (AJLL) over the past five years. Findings of an analysis of this archive is presented and discussed in the broader context of recent national agendas and reports in Australia – notably, ‘Teaching Reading’ (DEST, 2005).

The ‘Nexus Project’
This paper is located in a larger collaborative project, ‘An Investigation of the Relationship Between Literacy Research, Policy Development and Classroom Practice’ (Harris, Derewianka, Turbill, Cambourne, Cruickshank, Fitzsimmons, McKenzie, Chen and Kervin, 2003). Dubbed the ‘Nexus Project’, it critically examines current trends, practices and gaps in literacy research in relation to prior-to-school and school settings from early childhood on. The impetus for this study, and the paper at hand, has had its
roots in quite practical concerns in terms of identifying research issues perceived as having high priority. There seemed to be no explicit research agenda on the part of the education systems and no transparent system of funding or tendering. Teachers appeared to feel marginalised and disenchanted by top-down imposition of research findings. Academic literacy researchers were discouraged by bureaucratic obstructionism and lack of direction.

These perceptions led this research team to ask deeper questions about the nature of the relationship between literacy research, policy development, and classroom practice. A number of questions were generated, as we considered the collective futures of literacy teachers and researchers, from which this paper focuses on the following two:

- What is the nature of literacy research and its presentation in journals and conference proceedings that are intended for mixed audiences that include researchers and teachers, such as the Australian Journal of Language and Literacy?
- What happens to research findings in the process of reinterpretation by policymakers?

This paper explores these two questions, first in relation to the Australian Journal of Language and Literacy (AJLL), and second, in terms of the ‘Teaching Reading’ report (DEST, 2005). The analysis of the latter report considers inter alia what, if any, is the uptake and recasting of research published in the AJLL 2000-2005 archive.

**Analysis of AJLL Literacy Research Publications**

This section reports on an analysis of 80 research articles published in the Australian Journal of Language and Literacy February 2000 to June 2005. This archive has been selected as the journal is Australia’s long-standing literacy journal published by the Australia Literacy Educators’ Association, an affiliate of the International Reading Association; and its subscriptions include individual researchers and teachers as well as institutional subscriptions by schools.

Analysis began with a categorical analysis informed by research constructs of focal topics, literacy definitions, settings, participants and methods, and implications and recommendations. Authorship also constituted a key element in this analysis. The ‘About the Author’ notes that appear in each issue of AJLL were used to identify authors’ professional roles. This yielded a sense of whose voices are directly authored, and whose experiences are filtered through the eyes of others.

A spreadsheet was developed, in which these categories were completed for each article. Next, thematisation and frequency counts were conducted and produced sub-categories within each category.

This analysis yielded a characterisation of the nature of literacy research reported in this key national venue in Australia; and longer-term, in the next phase of the Nexus Project, provides a basis for this research team to undertake comparative analyses with other
literacy journals published overseas. Each part of the analysis is presented below and used as springboard to further investigation of teachers’, researchers’, policy makers’ and employer groups’ perspectives in the Nexus Project.

**Who’s Who among AJLL authors?**

A total of 121 contributors are represented in this 2000-2005 archive. The categorical breakdown of authorship is shown in Figure 1. Researchers working in University and other types of settings constitute 86% of this authorship. In contrast, teachers represent 10% (most involved in post-graduate study), while those designated to be working with teachers in consultancy and professional development were less represented at 3%.

**Figure 1. Who’s Who Among Authors in AJLL, 2000-2005**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>University lecturers/researchers</td>
<td>97</td>
<td>80%</td>
</tr>
<tr>
<td>Teachers</td>
<td>12</td>
<td>10%</td>
</tr>
<tr>
<td>Designated researchers</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>Consultants, advisers, PD providers</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Personnel in government departments</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>121</td>
<td>100%</td>
</tr>
</tbody>
</table>

In the main, university and other designated researchers are filters through which experiences and perspectives of teachers, students and parents are represented in this archive. Most of those who authored their research are not teaching in school or prior-to-school settings, and those who are teaching are not reporting research on their work in this venue. This finding contrasts with practitioners’ journals, such as ALEA’s *Practically Primary* and *The Middle Years*, where teachers insert their voices more frequently as authors, and researchers less so. The question this finding raises is, Might this uneven representation reflect and reinforce problematic nexus between research and practice? This question is under investigation in interviews with teachers, researchers, policy-makers and employer groups in the next phase of the Nexus Project.

**Focal Topics Under Investigation**

A broad range of topics have been researched and published in the 2000-2005 AJLL archive, as seen in Figure 2.
Figure 2. Topics that have been reported in *AJLL* 2000-2005

<table>
<thead>
<tr>
<th>Topic</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home &amp; community literacy practices</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>Critical literacy</td>
<td>7</td>
<td>9%</td>
</tr>
<tr>
<td>Reading difficulties &amp; special needs</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>Gender and literacy</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>Literacy assessment and reporting</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>Multiliteracies</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>Teachers’ perspectives of literacy issues &amp; pedagogies</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Writing in classrooms</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Adult literacy</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Classroom text studies</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Classroom discourses</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>ESL</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Language across the curriculum</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Policy development</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Reading debates and beyond</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Preservice teacher education</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Oral reading</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Reading skills</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Parent/school partnerships</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Transitions</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Classroom literacy practices for indigenous children</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Children’s perspectives of literacy</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Prior-to-school literacy</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Comprehension</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Intertextuality</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>School literacy culture</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Classroom practices for disadvantaged children</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>
Some topics appear disparate within the AJLL five-year archive, but articulate with theory, research and practice disseminated elsewhere. Some topics represent more sustained threads of cohesion within the archive, such as articles on critical literacy and multiliteracies, aided by themed issues. Concentrated topics such as multiliteracies represent and anticipate current and future needs perceived by researchers in their collective interest groups.

The extent to which these topics match teachers’ concerns constitutes the next phase in the Nexus Project: Are these topics of interest and assistance to teachers? What topics do teachers seek to read about? Is sustaining threads of topical continuity helpful and engaging for teachers? Similarly, policy-makers perspectives will be explored – the extent to which these topics are of interest and taken up by them.

**What is this thing called ‘literacy/ies’?**

With a journal dedicated to language and literacy, it might be assumed that each article that addresses literacy will provide an explicit working definition or characterisation of literacy as seen through the lens of the particular author/s. Literacy is not a phenomenon that is known for uniformity of definition – there are many definitions of literacy, as there are facets of this complex, changing and sometimes elusive phenomenon. The challenge of definition was accentuated in a recent conversation with colleague Ken Cruickshank who noted that ‘literacy’ was coined after ‘illiteracy’ and is one of the more recent words added to the English language. Indeed, ‘literacy’ does not have an equivalent in many other languages, unlike ‘reading’ and ‘writing’. When we talk of literacy, then, are we confining the term to written text, or can it include spoken language too? Is visual literacy included? And what of technoliteracies and multiliteracies? Is ‘literacy’ one multi-faceted entity, or are ‘literacies’ many entities?

With these questions and reflections in mind, definitions of literacy/ies, as made explicit by authors, were explored in the 2000-2005 *AJLL* archive. Across 80 articles in the archive, eight categories of definitions of literacy emerged, as seen in Figure 3. This overview presents variety in terms of dimensions of literacy that have been defined (e.g., ‘multiliteracies’, ‘critical literacy’), but overall presents a broad, inclusive collection that echoes sociocultural portrayals in contemporary society.

**Figure 3. Definitions of Literacy made explicit by authors of *AJLL* 2000-2005**

<table>
<thead>
<tr>
<th>Definition</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not explicitly defined</td>
<td>58</td>
<td>73%</td>
</tr>
<tr>
<td>Defined in terms of multiliteracies</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>Defined in terms of critical literacy (and ML)</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Defined as socioculturally constructed practices</td>
<td>4</td>
<td>5%</td>
</tr>
</tbody>
</table>
Not defined but multiple perspectives and changing nature acknowledged | 2 | 3%
Defined in terms of reading difficulties | 2 | 3%
Defined in terms of tertiary literacies | 1 | 1%
Defined in terms of literary theory (intertextuality) | 1 | 1%

However, a large percentage of the archive (73%) did not provide explicit definitions. Those ‘in the know’ of particular ways of characterising literacy/ies could perhaps read between the lines, but what of those who are not or who are on a different page? Does this lack of explicit definition present a barrier between research and practice? The next phase of the Nexus Project will explore such questions with teachers, researchers, policy makers and employer groups.

**Settings, Participants and Methods**
27 articles, comprising 34% of the archive, were discussion papers, literature reviews, text analyses, artefact analyses, document analyses, instructional analyses, assessment score analyses and ABS analyses.

53 articles, constituting 66% of the archive, involved research inquiries directly conducted *in situ*, or through remote means such as written questionnaires, or both. Of these 53 inquiries, 27% used methods such as written questionnaires, interviews, focal group discussions and researcher-designed protocols that were not contextualised by *in situ* methods. 24% of the inquiries used *in situ* methods of observations, interviews, and artefact collection. 15 % inquiries used a combination of both *in situ* and more remote methods.

As for participants involved in the reported research, teachers were involved in 44% of the articles in the archive. 11 of these instances involving teachers entailed remote participation by written questionnaires, interviews and researcher protocols; while 19 studies involved *in situ* participation by way of researcher observations, interviews and artefact collections that directly involved teachers; and five studies involved combinations of both *in situ* and more remote methods.

Students were involved in 43% instances (12 in remote ways, 21 instances that involved *in situ* participation, and one study that involved both). Parents participated in 18% of the research – 7 remotely and 7 *in situ*.

A breakdown of settings for these 53 inquiries is shown in Figure 4.
Figure 4. Settings in the AJLL 2000-2005 Archive

### Socio-economic settings n = 53

<table>
<thead>
<tr>
<th>Range</th>
<th>Low</th>
<th>Middle</th>
<th>Random</th>
<th>Not specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>14%</td>
<td>8%</td>
<td>4%</td>
<td>30%</td>
</tr>
</tbody>
</table>

### Cultural and Linguistic Diversity n = 53

<table>
<thead>
<tr>
<th>Range</th>
<th>English</th>
<th>Chinese</th>
<th>Random</th>
<th>Not specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>6%</td>
<td>1%</td>
<td>4%</td>
<td>35%</td>
</tr>
</tbody>
</table>

### Locality n = 53

<table>
<thead>
<tr>
<th>Urban</th>
<th>Suburban</th>
<th>Regional</th>
<th>Rural</th>
<th>Remote</th>
<th>Other</th>
<th>Not specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>11%</td>
<td>14%</td>
<td>4%</td>
<td>6%</td>
<td>4%</td>
<td>6%</td>
<td>29%</td>
</tr>
</tbody>
</table>

### Type of setting n = 53

<table>
<thead>
<tr>
<th>Prior-to-school</th>
<th>Primary school</th>
<th>Secondary school</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>11%</td>
<td>74%</td>
<td>15%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Overall, trends indicate a shift to research conducted in lower income settings and settings of cultural and linguistic diversity – a contrast to criticism once levelled at literacy research for tending to be middle-class and English-speaking oriented. Primary schools are strongly featured, with early childhood setting and secondary settings much less so. Yet, studies of transitions featured in this archive – the segmentation of research between settings might undermine the ability to address transition issues.

The impact of *in situ* research versus the use of more remote means alone on teachers’ uptake of research might also be considered. Also worth considering are issues of research funding, time and access – one paper, for example, noted costs of conducting their research in a remote area. The Nexus project’s next phase will explore issues such as these from teachers’, employers’ and researchers’ points of view.

**Implications and recommendations identified explicitly by authors**

A plethora of recommendations emerge across the five-year archive of *AJLL*, as shown in Appendix A. As may be gleaned from this appended document, some recommendations are very specific, while others are more general. Some recommendations form cohesive threads of continuity. Overall, there is a relative absence of internal dissent.

These recommendations serve a number of functions in this archive, which are to:
- Recommend specific practices and ways of thinking
- Identify alternative conceptualisations
- Call to action participation in ‘bigger picture’ discussions and policy development
- Showcase classroom ideas that work and recommend them to others
- Confirm efficacy of existing practices
- Bring conceptualisations and practices into question
- Identify further research directions
- Raise questions for discussion and research
- Identify challenges
Clearly, recommendations transcend theory and research to include literacy pedagogic implications. The question then is, How do these recommendations reach teachers, policy makers, employer groups and other members of intended audiences? This question is the subject of further investigation in the next phase of the Nexus Project; and is taken up in the Discussion of this analysis that now follows.

Discussion of the AJLL analysis

In terms of critically examining the nexus between research, policy and practice, the previous analysis raises a number of issues and questions. Some of these have been raised as the analysis was reported above. Some are now taken up more concertedly.

It first needs to be noted that collectively as an archive, the 80 articles included here in the main represent broad and inclusive characterisations of literacy, although these are not always explicitly defined. On its lines of inquiry, argument and recommendations, the archive might be characterised by its breadth, inclusivity, and a sense of consensus within itself while debating contentious issues represented beyond this archive in other venues. Predominantly, qualitative approaches are used, often combined with quantitative methods. Less frequent was the sole use of quantitative methods. As will be seen, this finding has important implications vis-à-vis Australia’s national report on ‘Teaching Reading’ (DEST, 2005).

On the question of how research intersects with policy and practice, there is concern that the answer to this might well be, not always effectively. Luke (2003a) has argued the need to develop a common vocabulary and a mutually shared set of strategies that provide for repertoires of practices, to ensure inclusive and effective meeting of individual student needs. Wran (2005), in his submission to Australia’s National Inquiry into Literacy, put the case that ‘eduspeak’ erects barriers between research and practice. Studies reported in the archive itself reported on teachers’ concerns not necessarily being researchers’ concerns (Hammond & Macken-Horarik, 2001); and engagement with binary oppositions between literacy approaches is not a concern for teachers who generally favour eclecticism (Broadley et al, 2000).

In the light of these perspectives, and the previous analysis of research articles, possible barriers between research and practice might be deduced to include the following:

- Who’s doing the research – as noted and previously discussed, the large majority of authors reporting research in the 2000-2005 AJLL archive are researchers and not teachers or personnel working in professional development roles with teachers.
- Polarisation of perspectives with which teachers do not share a major concern, in their preference for eclecticism and drawing on repertoires of teaching practices (not that polarisation was in clear evidence in the AJLL 2000-2005 archive).
- Ways of telling the ‘story’ – the language of reporting and the style of structuring research. For example, recommendations tend to be outlined at the end of a research article. This is a different approach, obviously, to the more ‘show and tell’ descriptive and reflective approaches found in practitioners’ journals. Understandable as these differences are (and not judging that one is ‘better’ than the other), tensions underpin this distinction in terms of what defines and is accepted as a ‘research publication’ in
research journals, vis-à-vis institutionalised and bureaucratised guidelines. These guidelines present a dilemma for University researchers in their endeavours to converse with teachers about their common work and mutual concerns, when institutionally ordained ways of reporting may not be congruent with ways of receiving and engaging with the reporting. Bernstein’s notions of vertical and horizontal discourses are relevant here - the horizontal characterised as everyday, context-dependent, implicit and often contradictory and changeable (see also Foucault, 1972) and the vertical viewed as formal, systematically principled, explicit and coherent.

- Researchers’ topics may not be teachers’ concerns. For example, while multiliteracies articles report on pedagogies and practices related to the incorporation of multi-modal texts in classrooms, teachers concerns’ are often at a more fundamental level – resourcing and professional development to keep up with technological advancements (Knowles, 2004).

These issues, with an openness to other possibilities, are to be explored in follow-up interviews in the next phase of the Nexus Project: If not research, then what do teachers access that influences their pedagogic work? What role does the popular press have, in its recontextualisation and manipulation of research studies and pitting researchers against one another in a public arena?

Defining literacy also emerged as an issue in the analysis of the *AJLL* archive. While literacy may be increasingly complex, multi-faceted and elusive, the power of defining it cannot and should not be under-estimated. If defined vaguely or not at all, the question we need to ask ourselves is: What kind of phenomenon are we researching, teaching, debating, polarising, and developing national agendas and policies for?

The Broader Context of National Literacy Inquiries, Reports and Agendas
The question of defining literacy continues to take on significance when considering the nexus between literacy research and policy – as revealed when now exploring the ‘Teaching Reading’ Report (DEST, 2005) in relation to this paper’s second question, What happens to research findings in the process of reinterpretation by policy-makers? Additionally and specific to this paper, what, if any, is the ‘Teaching Reading’ Report’s uptake of research and characterisations of literacy published in the five year *AJLL* archive, and to what effect for the Report’s recommendations?

Before proceeding, it needs to be noted that the ‘Teaching Reading’ Report is very welcome in terms of the attention and priority that this document gives the inherently significant endeavour of learning to read. What follows is intended to be a considered commentary of the report, in terms of how and what research is implicated in the recommendations that are identified. Space prevents this analysis from being exhaustive. Consequently, this discussion focuses on a core notion in the document: ‘evidence-based research’.

Amidst the ‘Teaching Reading’ Report’s 20 recommendations, shown in Appendix B, ‘evidence-based research’ frequently recurs in relation to evidence based pedagogy, preservice teacher education, professional development and partnership programs.
The Report defines evidence-based research in its Glossary as involving ‘the application of rigorous, objective methods to obtain valid answers to clearly specified questions’ (DEST, 2005, p. 85). This definition is elaborated on in terms of ‘(1) systematic, empirical methods that draw on observation and/or experiment designed to minimise threats to validity; (2) relies on sound measurement; (3) involves rigorous data analyses and statistical modelling of data that are commensurate with the stated research questions; and (4) is subject to expert scientific review.’ (DEST, 2005, p. 85).

This definition of evidence-based research excludes much of the research published in the 2000-2005 AJLL archive. However, this definition does resonate with recent national reports on literacy, and is purposefully aligned with particular definitions of literacy. Consider, for example, the ACER report, ‘Closing the Gap Between Research and Practice: Foundations for the Acquisition of Literacy’ (de Lemos, 2002). This paper, as overviewed in Figure 5, presents a telling example of how literacy and research may be defined and categorised in ways that marginalise, alienate and exclude – thereby restricting who might participate, and how, in the nexus of research, policy and practice.

This visual provides a schematic representation of the Introduction to this report. Its numbers indicate the exact sequencing of this Introduction. In its identification of ‘a broader definition’ of literacy, the report presents a ‘grab bag’ of literacy practices, contexts, processes and dimensions. This definition, while appearing comprehensive and inclusive, is next put in a position of conflict, because it ‘rejects’ a more narrow definition. This point segues into ‘a narrower definition’ that the report identifies as ‘ability to read and write’. This definition is not put into a position of contestation; instead it is highlighted as ‘the conventional or commonsense view of literacy’, implicitly acceptable to all.

The report then aligns each of these definitions with a particular research paradigm for investigating literacy. The ‘broader definition’ is aligned with ‘descriptive studies’ that use ‘ethnographic and case study approaches’. The ‘narrower definition’ is aligned with ‘experimental studies’. Questionable as this alignment is - and one that omits a range of research approaches and their various combinations - this alignment has serious consequence for further exclusion.

This consequence is evident in the next statement in the report’s introduction: ‘For the purposes of this review, the narrow definition will be adopted. This will allow the review to focus on those aspects of literacy that are seen as of critical importance in an education context’ (de Lemos, p. 3, my emphasis). In these last few words, not only is ‘a broader definition of literacy’ excluded (and in fact, the many characterisations, nuances and studies embodied therein), so too are ‘descriptive’ research paradigms for investigating literacy.

Such approaches to defining literacy and research polarise perspectives and prioritise preferred standpoints while excluding or marginalising others. Clearly, the approach
taken to definitions above challenges those who work in and/or consume other paradigms of research or who work across borders and blend approaches, as evident in the 2000-2005 AJLL archive – effectively excluding the research reported in this archive from the report and its accompanying literature review. This approach renders highly problematic the nexus between such research and conceptualisations of literacy, and the recommendations at hand in the ‘Teaching Reading’ Report.

In contrast, Ladwig’s (1996) critical realist approach to educational research suggests a constructive dialogue between qualitative and quantitative, hermeneutic and positivist paradigms – an antidote to polarisations and a solution with much potential to address the ‘Teaching Reading’ Report’s call for ‘rigorous evidence-based’ literacy research, pedagogy and partnership programs. A more constructive approach longer-term, then, to enhancing the nexus of research, policy and practice would be a broadening of the conceptualisation of research beyond ‘evidence based research’. Such conceptualisation would involve taking on sufficient of this definition to reflect what we each do as researchers, but to also characterise research in terms of continua of research approaches, rather than in terms of discrete and competing entities. It is not the case that any one approach is ‘better’ than others; rather, each approach needs to be appraised in terms of its sense of ‘fitness’ for the research needs at hand.

A Foucauldian post-structuralist perspective is also helpful here to re-thinking the nexus of research, policy and practice (Foucault, 1972). With its notions of intersecting, divergent and competing discourses, this perspective illuminates the contradictory and changeable nature of our actions as human beings. Therefore, research in this approach acknowledges such inconsistency and analyses bias and assumptions for their underlying beliefs and agendas. As argued by Johnson (2002) in her classroom research published in the AJLL archive, shifting between different discourses – whether these discourse intersect, diverge or compete with one another – should not be problematic, provided those who are so doing – that is, teachers, researchers and policy-makers – are aware of the shifts that are occurring and the various discourses that are framing them.

On classroom pedagogy, the ‘Teaching Reading’ Report states as its first recommendation that ‘teaching strategies based on findings from rigorous, evidence-based research that are shown to be effective in enhancing the literacy development of all children’ (DEST, 2005, p. 38). The ‘all children’ is not an entity that can be readily defined. This phrase may be well intended as a rhetorical device and appears to be inclusive. Nevertheless, it is a troublesome device when it comes to recommending teaching practices that work for ‘all children’. Its underpinning egalitarian assumptions, which make this recommendation appear inclusive, is in reality at odds with the notion of repertoires of practices documented in the AJLL 2000-2005 archive, which allow teachers to choose and adapt teaching strategies according to learners’ needs and contexts (Luke, 2003a) – and may even see teachers shuttle seamlessly among approaches as they teach (Johnson, 2002).

A phrase that also occurs in the ‘Teaching Reading’ Report better acknowledges the nature of the student population with whom teachers work– ‘individual children from
diverse backgrounds and locations’ (eg., found in the third recommendation on p. 38). Further, this construct demands we know something about these ‘diverse backgrounds and locations’. Thus implicated is the need for research of a sociological and ethnographic kind that does not appear highlighted in the Report’s Glossary definition of ‘evidence-based research’.

Still on classroom pedagogy, the ‘Teaching Reading’ Report explicitly and strongly recommends ‘systematic, direct and explicit phonics instruction so that children master the essential alphabetic code-breaking skills required for foundational reading proficiency’ (DEST, 2005, p. 38). This recommendation is not in dispute in this paper, provided appropriate methods are chosen to meet learner needs. Clearly, phonics is an important sub-skill involved in code-breaking practices that, in turn, are part and parcel of reading (Harris, Turbill, Fitzsimmons & McKenzie, 2006). Code-emphasis is a strongly recurring theme throughout the report and its constituents are given considerable coverage in the Glossary.

In the same recommendation, however, the Report also states, ‘Equally, that teachers provide an integrated approach to reading that supports the development of oral language, vocabulary, grammar, reading fluency, comprehension and the literacies of new technologies’ (DEST, 2005, p. 38). The use of ‘equally’ here seems to denote a broad and inclusive view of pedagogy. However, such a view appears undermined by what is included in the clause that follows – fairly inclusive in its itemisation, but representing another ‘grab bag’ reminiscent of the de Lemos report (2002) that bundles everything that is not so strongly favoured as priority into one group, and placing it second to what is singled out and more clearly prioritised and emphasised.

Further, there is a potential internal contradiction here between ‘systematic, direct and explicit phonics instruction’ and ‘an integrated approach to reading’. The former term is associated in the Report’s Glossary with ‘“presenting material in small steps, pausing to check for student understanding and eliciting active and successful participation from all students” (Rosenshine, 1986, p. 60). Grounded in behaviourist theory… direct instruction programs are designed according to “what” and “how”, not “who” is to be taught’ (DEST, 2005, p. 85, my emphasis). Negating ‘who’ in this context may be consistent with egalitarian assumptions apparent in the mention of ‘all children’ in the Report’s first recommendation. However, there arises an internal contradiction in regard to the Report’s recommendation for catering to diverse student needs and building partnership programs with parents that build on children’s home and community experiences – such advocacy invokes notions about ‘who’ as much as ‘what’ and ‘how’ for different needs and contexts will shape these pedagogic choices.

Questions raised by the Report’s definition of ‘systematic direct instruction’ include, how might this approach marry with the ‘equally’ placed emphasis on ‘an integrated approach to reading’ in the same recommendation? Not defined in the Glossary, how might an ‘integrated approach’ co-exist with a ‘small steps’ approach that reportedly (according to the Glossary) does not concern itself with ‘who’ is being taught? What might consequent reading instruction look like in classrooms vis-à-vis a mapping framework such as Luke
and Freebody’s four practices of coding, meaning, pragmatic and critical practices (1999)? An inclusive nexus of research, policy and practice is needed to answer questions such as these.

On partnerships with children’s parents and caregivers, the ‘Teaching Reading’ Report recommends the provision of ‘workshops, programs and guides for parents and carers to support their children’s literacy development. These should acknowledge and build on the language and literacy that children learn in their homes and communities’ (DEST 2005, p. 40, my emphasis). This recommendation resonates with several studies reported in the AJLL 2000-2005 archive. Yet, in this report, acknowledgment is not given to this research. Further, it is not clear what paradigm/s of instruction is/are to be adopted in this provision, and if they are meant to be the same paradigm as recommended for teachers in classrooms. If they are meant to be similar, then there is a risk of supplanting rather than ‘building on’ children’s home and community experiences. If not, how school and home experiences might form a comfortable nexus that provides continuity of experience, such that builds on the past and paves the way for the future (Dewey, 1969) needs careful documentation and support at this policy level.

This recommendation raises questions that again implicate the need for an inclusive nexus of literacy research, policy and practice. For example, How will providers of parent programs know about the usual interaction patterns, literacy practices and day-to-day activities that occur in and across children’s homes to build on? On what evidence base of home literacy practices will these programs be developed? Clearly, such questions require processes of working towards shared and mutual understandings of one another’s experiences through dialogue – a process that might be described as constructivist in nature (criticised in the report) and further understood from post-structuralist perspectives (not highlighted in the report), that could enhance the sensitivity, effectiveness and sustainability of such programs.

Enhancement of such programs and this particular recommendation in the ‘Teaching Reading’ Report triangulates with DEST’s National Agenda in Early Childhood and, specifically, this Agenda’s National Read Aloud Summit, launched in 2005 and to become an annual event. At the inaugural and very welcome meeting of 2005, a cross section of participants were represented, predominantly from early childhood, medical and commercial sectors. Some Universities were also involved.

Emerging from this Summit was a clear and needed valuing of children’s early literacy experiences, with an emphasis on reading and print. Early childhood literacy research can only contribute to this national initiative. For example, research reported in the AJLL 2000-2005 archive indicates the need for Early Childhood literacy teaching and research to go beyond traditional models of literacy and emergent literacy, to provide meaningful and contextualised experiences that account for children’s multiliteracies (Jones Diaz, Arthur, Beecher & McNaught, 2000). There also is a need to move further into a multimodal language when considering preschool emergent literacy – we should not assume specific print-based practices as prerequisite for other literate practices (Carrington, 2001).
This exploration of the ‘Teaching Reading’ Report and related material, in terms of 'evidence-based research', reveals processes of definition, polarisation, prioritisation, and exclusion or marginalisation. Further, this exploration resonates with Luke’s perspective that policy development may be less allied with systematic and inclusive application of research, and more involved with ‘arbitrary play of discourse and truth, power and knowledge’ (Luke (2003b, p. 98). In this play, we may see evidence of Bernstein’s notion of recontextualisation of research by its appropriation and refocusing (Bernstein, 1996).

Luke further suggests reconceptualising ‘evidence-based research’ in terms of ‘a more complex, theory-driven analysis, using and triangulating a range of social statistical, demographic, economic, sociological, ethnographic as well as psychometric data sources’ (Luke, 2003b, p.98). Such an approach would provide a more inclusive and multi-faceted nexus of research, policy and practice that is needed in these increasingly complex times.

Concluding Discussion
This paper has presented outcomes of an analysis of the 2000-2005 archive of research publications in the *Australian Journal of Language and Literacy*. It has done so with a view to assist a critical exploration of the nexus between research, policy and practice, and possible barriers therein. The discussion that arose from this analysis identified possible barriers. This discussion was then located in the broader context of Australia’s recent and current national inquiries, reports and agendas. This discussion focused on issues around ‘evidence-based research’, some problems associated with restrictive definitions and polarisations, and the potential of additional approaches for providing a more inclusive nexus between literacy research, policy and practice. This discussion identified areas in which research published in the *AJLL* archive could support and inform particular recommendations and areas of concern; yet were excluded through the power of selecting, prioritising and defining a particular kind of literacy research and aligning that research with particular ways of characterising literacy.

In his foreword to Ellis’ ACER report ‘Balancing approaches: revisiting the educational psychology research on teaching students with learning difficulties’, Freebody (2005, p. ii) wrote:

‘It is simply no longer the case that a review of research literature on basic skills education can claim for itself a po-faced neutrality. The best it can hope for is that it can enrich and sharpen the lines of debate, giving us better heuristics for agreement or disagreement, at the same time as pointing to potential convergences and more confident professional applications - that is, turning the heat up on some points and down on others. A good review can convince, but it can also press us to improve our grounds for rejection.’

In response to polarisations that have continued to eventuate, there is a need to move beyond dichotomies, in the recognition that they serve agendas and interests at policy and research level more than they do teachers and students at the chalkface. As argued by Anstey and Bull (2003, p. 141) in the *AJLL* archive, we need to consider ‘when and why various teaching techniques are preferable to the site-specific needs of our local teaching
contexts and the unique needs of our diverse students’. The prevalence of *in situ* studies in the *AJLL* archive seems well placed to contribute to such consideration. So, too, does the notion of ‘dialogue’, echoed by Mills (2005, p. 78) when writing to the need to ‘go beyond the central binary oppositions of past pedagogies, transforming these to reframe innovative and relevant literacy pedagogy for the changing times’.

**The Nexus Project’s Future Directions**

This collaborative project is now moving into its next phase. This phase consists of interviews, focal group discussions and document analyses, involving teachers, researchers, teacher educators, policy makers and employer groups across prior-to-school, primary school and secondary school settings in publicly funded and private sectors. Meanwhile, analysis of research literature will continue, and encompass journals overseas as well as conference proceedings. National reports and policy statements will continue to be examined, as begun in this paper.

Multiple perspectives, we argue, are necessary if our ultimate aim – and surely the aim of national literacy reports and agendas – is to be realised. That is, to improve the quality of children’s learning environments, so that they may experience success in acquiring literacy repertoires that equip them to function effectively now in their educational contexts and in the rapidly changing and unknown worlds of their tomorrows.
References


Canberra: DEST.


Ellis, L. A. (2005). Balancing approaches: revisiting the educational psychology research on teaching students with learning difficulties. *Australian education review, Canberra: ACER.*


Freebody, P. (2005). Foreword to Balancing approaches: revisiting the educational psychology research on teaching students with learning difficulties. *Australian education review, Canberra: ACER.*


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1. 'Two opposing views of literacy'

2. 'A broader definition'

3. Literacy as process of deriving meaning from text and as social practice shaped by context and incorporating macro language skills and various literacies.

4. 'Rejects the notion that literacy can be defined in terms of a set of narrow psychological skills.'

5. 'A narrower definition'

6. Literacy as ability to read and write, to convert written text to the spoken word and vice versa, to comprehend and produce written text.

7. 'The conventional or commonsense view of literacy.'

8. Descriptive studies using ethnographic and case study approaches documenting contexts and interactions across diverse settings.

9. Experimental studies of specific processes underlying reading and writing and how these processes can be enhanced by specific teaching.

10. For the purposes of this review, the narrow definition will be adopted. This will allow the review to focus on those aspects of literacy that are seen as of critical importance in an education context.
Appendix A.
Recommendations Identified in the AJLL 2000-2005 Archive

AJLL – Implications and Recommendations

Each entry represents one frequency count.

None
- Restates findings/conclusions and leaves it there

Text in classrooms
- Need to use social issues texts
- Need to exploit all variables of text to enrich and extend children’s understandings and responses
- Need more research to explore new and innovative texts that can support early reading development
- Need to continue exploring how children respond to and interpret picturebooks that use metafictive devices

The ‘Bigger Picture’ of Policy and Participation
- Need to be active in debates over what forms of literacy education are most appropriate for all citizens
- Need to move beyond methods and develop a common vocabulary and a set of shared strategies and approaches that are appropriate and effective for communities – need repertoires of practices that might include reading recovery, ESL and EFL instruction, bilingual transitions, learning support, special education intervention, home, school, community partnerships and so on
- Need for commitment to shared vision and collaborative mission at whole school level.

Views of literacy
- Need to acknowledge and act on the ‘true’ nature of literacy as a culturally determined social practice
- Re-thinking and re-tooling for educators re new technologies
- Early Childhood literacy teaching and research need to go beyond traditional models of literacy and emergent literacy, to provide meaningful and contextualised experiences that account for children’s multiliteracies
- Need to move further into a multimodal language when considering preschool emergent literacy – don’t assume specific print-based as prerequisite for other literate practices
- Appropriateness of critical literacy to young children, because it makes their interests central – it is in all their individual and collective interests – needs to be ongoing, analytical, in classrooms, and take stock of children’s vastly different repertoires of practices (including electronic practices)
- Critical literacy is important – we need to face up to the cultural significance of popular culture in children’s lives, and assist children to question and challenge texts and the society that creates them
- Need to attend to reality of new and emerging literacies. But we need to acknowledge that conventional, hard copy forms of ‘linear’ texts will continue for some time, and have complementary roles in a range of contexts
- None of the literacy pedagogies since 1950s is sufficient for literacy in contemporary culture – need to go beyond binary oppositions, transforming these to re-frame innovative and relevant literacy pedagogy for the changing times

**ESL**
- Need to link pedagogic practices (eg., email dialogue) to formalised evaluation plans, such as portfolios
- Need to have seamless integration of technology activities in the literacy curriculum
- ESL students need emotional support and resources while away from home furthering their education – eg., email communication to facilitate cross-cultural communication

**Home/school partnerships**
- Need to reconsider/recognise that national literacy assessment initiatives have done little to further partnerships – no real collaboration
- Differences in staff and parent perspectives are most acute in vulnerable populations. To break cycle of disadvantage and low literacy, parents and staff must both speak out and listen to each other, to develop shared understandings
- Discourse practices can disempower parents in relations to schools. Partnership discourses and practices should be matched, and parents given opportunities to contribute to policies
- Need to build on students’ cultural capital, evolving dispositions and material circumstances, linking with multiliteracies
- Use of learning technologies that encapsulate technoliteracies can facilitate and support meaningful and authentic communication between home and school.

**Assessment**
- Need to be clear about purposes of assessment
- Need to re-value teacher judgment in assessment, and invest in it through professional development
- Make performance expectations for literacy education explicit
- Use testing programs as opportunity for professional development
- Be mindful that assessment is contextualised and value-laden
- Teachers are supportive of Reading Development Continuum – a useful framework with variety of uses – impacted these teachers’ classroom practices and provided a systematic approach to assessing, recording and reporting
- Need to make assessment more effective
- Need to recognise difference in arriving at site valid judgments and those with system validity
- Need to observe learners’ process, product and context in which processes and products are accomplished.
- Important that teachers are skilled at observing and recording children’s oral language with insight and understanding – teachers who can build on and transform the language these children bring from their homes and communities
- Systematic profiles of individual children is one mechanism that works resume
- Teachers need to do diagnostic assessment that will help identify failing students’ needs
- Need for innovative and inclusive web-based and other multi-modal assessment approaches

**Teacher perspectives**

- Lack of major concern over relative merits of whole language and phonetic approaches [Pauline: might this be because teachers are eclectic? It’s academics who polarise and territorialise, engaging in border disputes and territorial skirmishes]
- Teachers see that failing students are a major concern
- Need to forge teaching/research links – an area needing more research, or (and more likely) where results of research are not getting to teachers in a form that they find useful – needs to be relevant to their style and context
- While teachers’ priorities intersect with those of current research, they do not match exactly. Relatively little impact at classroom level of researchers’ concerns with literacy theory, of impact of digital texts on what it means to be literate, or multiliteracies.
- New and old ways of teaching language and literacy have always co-existed. Need to understand conflicts that exist between and within particular teachers’ discourses of literacy, so as to allow schools to address their staff’s changing notions of literacy change
- Teachers need to examine their own literate practices vis-à-vis class, gender and race, so as to understand how they impact on those practices they promote in classrooms
- Teachers need to keep abreast of reading materials and methods, to be well informed, able to evaluate approaches and materials supporting a range of methods, and adapt to changing conditions of language, literacy and communication
- Teachers know no single approach or simple solution will lead all students to a high level of literacy. Defaulting to an eclectic approach fails to give students or teachers a coherent shared experience of literacy. Teachers need principled conceptual frameworks to guide thought and action.
- Teachers with a high degree of agency in improving literacy outcomes for students, especially those form disadvantaged backgrounds, are theory users and builders, and articulate their theoretical reasons clearly and cogently.

**Preservice teacher education**

- On assessment and feedback to preservice teacher education students, need for written responses and mindsets for teachers to their students
- Need for preservice teachers to acquire proficiency in language necessary to explaining mathematical ideas
- Need for systemic support for preservice teachers and teachers in PD courses, re Aboriginal English, early Aboriginal literacy, cultural subtleties, to nurture indepth understanding about Aboriginal culture and language

**Gender**
- Need to consider equity issues when using electronic media
- Need more extensive research on relative absence of a critical meta-language
- Need for teachers to consider sustained use of resources and PD packages on boys and literacy
- More research on roles of fathers and other male role models re literacy practices and engagement
- More research on how perceptive insights of boys committed to reading can inform teachers and parents as they attempt to encourage other boys to read more extensively for leisure
- Need to refine definition of reading to include boys’ textual choices and better represent the realities of their reading practices
- Need to move beyond narrow definitions of school achievement and success (national performance indicators) and consider complexities of interplay between masculinity, school and literacy
- Boys’ interest in electronic literacies gives them an advantage over girls

**Classroom pedagogies**
- Need complete picture of four practices (coding, meaning, pragmatic and critical practices)
- Use of drama for critical literacy is recommended
- Need to crate space for students to consider what kinds of literate beings they wish to become – interrogation of texts (what is) and exploration of new social action (what might be)
- Educational systems must ensure that students are provided with all the resources they need to engage with and learn from the program; and design and deliver programs that are culturally responsive and futures-driven
- Given rate of social, cultural and technological change, new learning environments and text types will proliferate, and therefore educators need to challenge and adapt their pedagogic practices
- Use pedagogies to teach students how to use their identity as a reader more strategically, and identify knowledge and strategies to read strategically
- As teachers and researchers, we must continue to discover and celebrate new ways of artful teaching
- Connect literacy with children’s social goals
- Realise and act on potential for intertextual connections, to enhance collaboration and meaning-making in classrooms
Home and community literacies, and nexus with school
- Traditional and emergent literacy models may not be able to fully embrace cultural and social variations in literacy learning, so that children who experience other than dominant English-speaking book-based literacy are not marginalised within those frameworks
- Disparities between home and prior-to-school settings
- Libraries shifting from books and buildings to bytes, transforming their textual forms and practices – students need to acquire skills of new information literacies

Adolescent literacy
- Need to incorporate choice, to build on students’ knowledge
- Need to provide for multi-modal responses to reading

Reading difficulties and special needs
- Need to review/question and enhance level of appropriateness of instructional strategies chosen for struggling readers
- Many resources are more than 20 years old and need revision. Need to understand what’s being assessed by particular measures. Need to assess oral language. Problem of equity of access to appropriate educational services needs to be redressed
- Texts that represent deaf people offer an opportunity for deaf students to engage in literate practices in meaningful contexts
- Success of children with learning difficulties need concentrated efforts by teachers, parents and students themselves – need support, in many instances, throughout their education
- There is no one literacy program or strategy that is effective for all children with learning difficulties – need to consider students’ diversity, fragility of learning, identification and assessment, early years programs, ongoing support, variety of programs – need for $$$
- A successful model was in-class, collegial and provided range of appropriate texts
- Need broader range of home/school communication
- Success ingredients of a program at a Centre: changing activities regularly; small group lessons; re-visiting and practising skills; using assessment battery; games to practices and apply skills
- Multi-level, flexible, small group instruction is confirmed and recommended
- Diagnostic assessment is confirmed and recommended
- Need access to speech/language and ESL specialists
- ESL students not always receiving additional support
- Need for highly organised time and comprehensive coverage of background knowledge, decoding and naming, vocabulary, fluency, strategy use and text structures.

Writing
- Need for explicit teaching strategies that highlight terms to be used in writing
- National Strategy in England – professional understanding to be extended to pedagogy of writing, particularly boys
- Teachers have a pivotal role in assisting students to write successfully – in this, teachers need to be explicit and linguistically aware

**Transitions**
- Primary/Secondary transition – teachers take less part I secondary schools in the teaching of reading. In Year 7, many students are floundering and don’t see the connection between reading competence and later success in life

**Visual literacy**
- Need for more research to develop research-based theoretical frameworks to guide teaching and assessment of students’ understandings of how images contribute to interpretive possibilities of texts. Develop model of image/text relationships in intermodal construction of meaning and questions which guide and assist children with accessing meaning that arises from this relationship.

**Tertiary literacy**
- Can Universities cater for increasing student diversity in current market-driven agenda? Need to develop educational practices that grow from an understanding of importance of human relationships and communities of practice in learning, and find ways to facilitate growth in these communities

**Prior-to-school settings**
- Need for more systemic attention to the large body of research on unequal access to rich preschool learning opportunities and its exacerbation of social and educational inequalities
- Problem of providing excellent preschool programs for *all* children remains a challenge for educators, policy developers and governments
Appendix B.
Recommendations from Australia’s National Report ‘Teaching Reading’ (DEST, 2005)

1. That teachers be equipped with teaching strategies based on findings from rigorous, evidence-based research that are shown to be effective in enhancing the literacy development of all children.

2. That teachers provide systematic, direct and explicit phonics instruction so that children master the essential alphabetic code-breaking skills required for foundational reading proficiency. Equally, that teachers provide an integrated approach to reading that supports the development of oral language, vocabulary, grammar, reading fluency, comprehension and the literacies of new technologies.

3. That literacy teaching continue throughout schooling (K-12) in all areas of the curriculum. Literacy must be the responsibility of all teachers across the curriculum, to provide an educationally sound program meeting the specific skill and knowledge needs of individual children from diverse backgrounds and locations.

The Role of Parents

4. That programs, guides and workshops be provided for parents and carers to support their children’s literacy development. These should acknowledge and build on the language and literacy that children learn in their homes and communities.

School Leadership and Management

5. That all education authorities and school leaders examine their approaches to the teaching of literacy and put in place an explicit, whole-school literacy planning, monitoring and reviewing process in collaboration with school communities and parents.

6. That all schools identify a highly trained specialist literacy teacher with specialised skills in teaching reading, to be responsible for linking the whole-school literacy planning process with classroom teaching and learning, and supporting school staff in developing, implementing and monitoring progress against individual literacy plans, particularly for those children experiencing reading and literacy difficulties.

7. That specialist postgraduate studies in literacy (especially in teaching reading) be provided by higher education providers to support the skill base and knowledge of teachers, including the specialist literacy teachers.

Standards for Teaching

8. That Teaching Australia – Australian Institute for Teaching and School Leadership, in consultation with relevant professional associations, employers from the government and Catholic school sectors and representatives of the independent schools sector, together with relevant teacher institutes and registration bodies, develop and implement national standards for literacy teaching, initial teacher registration, and for accomplished teaching, consistent
with evidence-based guides for practice. It is further recommended that these standards form a basis for the accreditation of teacher preparation courses.

**Assessment**

9. That the teaching of literacy throughout schooling be informed by comprehensive, diagnostic and developmentally appropriate assessment of every child, mapped on common scales.

10. That a confidential mechanism such as a unique student identifier be established to enable information on an individual child’s performance to follow the child regardless of location, and to monitor a child’s progress throughout schooling and across assessment occasions.

**The Preparation of Teachers**

11. That the key objective of primary teacher education courses be to prepare student teachers to teach reading, and that the content of course-work in primary literacy education focus on contemporary understandings of:

12. That literacy teaching within subject areas be included in course work of secondary teachers so that they are well prepared to continue the literacy development of their students throughout secondary schooling in all areas of the curriculum.

13. That significant ‘lighthouse’ projects in teacher preparation and education be established to link theory and practice that effectively prepares teachers to teach literacy, and especially reading, to diverse groups of children.

14. That the conditions for teacher registration of graduates from all primary and secondary teacher education programs include a demonstrated command of personal literacy skills necessary for effective teaching, and a demonstrated ability to teach literacy within the framework of their employment/teaching program.

**Ongoing Professional Learning**

15. That schools and employing authorities, working with appropriate professional organizations and higher education institutions, provide all teachers with appropriate induction and mentoring throughout their careers, and with ongoing opportunities for evidence-based professional learning about effective literacy teaching.

16. That a national program of literacy action be established to:
   - design a series of evidence-based teacher professional learning programs focused on effective classroom teaching, and later interventions for those children experiencing reading difficulties
   - produce a series of evidence-based guides for effective teaching practice, the first of which should be on reading
   - evaluate the effectiveness of approaches to early literacy teaching (especially for early reading) and professional learning programs for practising teachers
   - investigate ways of integrating the literacies of information and communication technologies in classrooms
- establish networks of literacy/reading specialist practitioners to facilitate the application of research to practice
- promote research into the most effective teaching practices to be used when preparing preservice teachers to teach reading

17. That Australian and State and Territory governments’ approaches to literacy improvement be aligned to achieve improved outcomes for all Australian children.

18. That the Australian Government, together with State and Territory government and non-government education authorities, jointly support the proposed national program for literacy action.

Looking Forward

19. That the Australian Government Minister for Education, Science and Training raise these recommendations as issues for attention and action by MCEETYA, and other bodies, agencies and authorities, that will have responsibility to take account of, and implement the recommendations.

20. That progress in implementing these recommendations, and on the state of literacy in Australia, be reviewed and reported every two years.
"It was the best of times, it was the worst of times; it was the age of wisdom, it was the age of foolishness; it was the epoch of belief, it was the epoch of incredulity; it was the season of Light, it was the season of..."  

Charles Dickens (Retrieved February 12, 2006 http://www.quoteworld.org/quotes/3649)

Dickens, writing about life in the 18th century, could easily have been writing about classroom literacy instruction in the new millennium. In a few carefully crafted words he eloquently characterized and puzzled over the tensions that existed between the burgeoning industrial age and the agricultural way of life that the new technologies challenged. His words sweep us up as readers into the tensions, reminding us through the printed words of a novel that whenever new, groundbreaking technologies appear on the scene, it is inevitable that people will live through a gritty time of transition that entails the pull of the new against the push of the old. Such times of major technological transition challenge our values, change our notions of work, and result in transformations of our practice.
I believe that it is currently the best of times and the worst of times for literacy pedagogy in the educational era of the new electronic, digital and information driven millennium. New computer technologies and the resulting new forms of electronic texts such as e-mail and multimedia websites require new conceptions of literacy and literate behaviors (Flood et al, 1997; Leu & Kinzer, 2000). As a result of the increasing politicization of reading instruction in the United States and other countries such as the United Kingdom (Beard, 2000), governments are passing laws and commissioning reports that value students' traditional product-oriented literacy achievement over newer computer driven literacies (Labbo & Reinking, 2000). Educators frequently grapple with how to address the transitional tensions that exist between the push forward of new digital literacies and the pull backward of traditional literacy.

The purpose of this paper is to explore how educators can negotiate the push and pull of traditional and new literacies by valuing both and by crafting computer related activities that follow well grounded and theoretically based guidelines. I organize the paper around the following questions: What are new literacies? How do our values surface as we experience the push of new literacies and the pull of traditional literacy? What theoretical perspective undergirds notions of effective pedagogy for both traditional and new literacies? How do computer technologies support students' traditional literacy development? Why do new literacies require instructional transformations?

What are new literacies?

New literacies required for meaning making with computer technologies are complex and multiple in nature. Multiple literacies involve combinations of symbolic modalities that are situated within specific social practices (New London Group, 1996;
Gee, 2000). Thus meaning making in a new literacies environment includes learning how to read and write with multiple modalities (e.g., graphics, animations, video, audio narration, music, special effects, hyperlinks, search engines, power point presentations, and print) in ways that are significant within particular cultural groups (Andrews, 2004).

According to Lankshear and Knobel's (2005) Short Classification scheme, new literacies can include electronic gaming, synchronous communication, asynchronous communication, mobile communication, weblogs, webpages, multimedia text production, scenario planning, critical literacy, Zines, Fan fiction, Magna/Anime, memes, and Adbusting. It is beyond the scope of this paper to address all of the new literacies listed in the Short Classification scheme. Therefore I focus on sampling of new literacies that I most frequently encounter within literacy instruction in elementary school classrooms and new literacies that are described by some leading thinkers in the field of literacy and technology.

**How do values surface as we experience the push of new literacies and the pull of traditional literacy?**

To engage in new literacies of computer technologies, users must utilize new strategic operations that allow them to successfully, thoughtfully, and efficiently navigate electronic, digital tools and resources (Knobel & Lankshear, 2005). Consider that in order to access the Dickens's quote online I experienced the push of new literacies. I **needed** to use or learn how to use new operational strategies: knowing how to access a search engine, succinctly identifying key words for the search, reading the list of results and efficiently determining which link was likely to provide the exact quote, scanning for information and several sites, linking to other web pages within documents that included
supplemental information, critically reading information to determine credibility, deciding which resource to use, and copying and pasting from the website. In other words, the operational strategies I possess allowed me to engage in the functional use of new literacies for an authentic purpose. However, the need to function in the World Wide Web environment wasn't the only motivation guiding my decision making process.

I realized that my cultural and workplace peers in the educational academy value work that results from a carefully constructed assembly of knowledge from credible resources. To operate in this academic culture, I needed to cite the quotation website and record the date of retrieval in order to substantiate and to recognize the intellectual contribution of Dickens, the author and originator of the passage.

I also experienced the pull backward of traditional print-based literacy that required me to reflect upon and use my ability to read print. For example, I needed to be able to read words on the screen and connect them to a larger schema for comprehending text. I also have strong and fond memories of vicariously stepping into the gritty realities of 18th century England when I originally read the novel, A Tale of Two Cities, many years ago in a high school English Literature course. I read the novel in a cultural setting that taught me to value the turn of a phrase and the skillful use of sweeping metaphors that situate fictional events within an historical milieu. To this day, I prefer to read novels and devotional writings that I expect to emotionally or spiritually move me in print rather than on a computer screen.

What theoretical perspective undergirds notions of effective pedagogy for both traditional and new literacies?

I suggest that a productive theory that educators can use to guide both traditional
and new literacies pedagogy is based on Osborne and Wittrock’s Generative Learning Model (1985). This theory addresses the process by which learners acquire knowledge and then use that knowledge to keep on learning. In a sense it explains how learners acquire and continue to use new deep knowledge to help them generate new knowledge for social, academic, personal, political, and communicative purposes.

The first component, *attention*, relates to what students are attending to on the page or on the screen, because it helps us understand which literacy modalities, symbol systems, skills, strategies & elements students’ use during meaning making. The second component focuses on the nature of students’ affective engagements, social interactions, & cognitive efforts (independent & social) as they go about acquiring *knowledge* from page and screen. The third component considers what new knowledge students acquire, value, and use to *generate* more knowledge from both page and screen (adapted from Osborne & Wittrock, 1985). Generative learning components on computer screens include

- **Attention**: How multiple symbol systems and modalities are highlighted
- **Knowledge Processes**: Assembly of knowledge from various media resources, Critically reading multiple modalities, Getting Immediate Feedback, Using *Mind Tools* (Jonassen, Peck & Wilson, 1999) & on screen thinking spaces
- **Ongoing Applications to Generate New Knowledge**: Interactive & social occasions to gain, value & use deeper knowledge.

**How do computer technologies support students' traditional literacy development?**

Traditional literacies include a basic set of skills and strategies that have
stood the test of time across various types of materials and approaches. In general, a meta-analysis of over forty computer assisted programs (CAI) in basic literacy skills found that those that include game playing, decision making, purposeful interactions, and scaffolding tools, such as intelligent agents, support students' development of phonemic awareness, phonics, spelling, vocabulary, and comprehension. The studies reviewed have a small, positive effect size on early readers. (Blok, Oostdam, Otter & Overman, 2002). For purposes of this paper and because my research occurs in the primary grades, I offer a brief overview of computer technologies that support traditional literacy skills that include writing development, phonological abilities, and independent reading. Research suggests that computer activities may support students' development of these core literacy skills in a generative way.

**Writing development** - Word processing and creativity software support young students' natural explorations with expressive forms of writing. For example in my own work (Labbo, 1996), I noted that kindergarten children working independently recursively wrote onscreen stories that included imported pictures (e.g., clip art, computer generated drawings) and printed text. Computer writing that utilized multimedia scaffolding allowed students to try out symbolic representations and enabled their ability to recognize letters and gain insights into sound-symbol correspondence (Bangert-Drowns, 1989). Cochran-Smith (1991) also notes that word processing overcomes the print production difficulties some youngsters experience when writing with pencils or markers. The ease of revisions onscreen also supports young children's efforts to move from a written draft to a final product (Edinger, 1994). Additionally, word processing
increases the amount of children's metacognitive discourse, organizational cohesiveness, and lexical density (Jones & Pelligrini, 1996).

*Phonological abilities* - Much of the research on how computer technologies may enhance students' awareness and mastery of sound-symbol correspondences focus on the role of audio support for students who are not yet able to decode independently. Studies demonstrate increases in students' phonological awareness when programs utilize synthesized or digitized speech or offer isolated speech sounds that students blend through interactions involving moving the computer cursor (e.g., Roth & Beck, 1987; Barker & Torgensen, 1995). A comprehensive study conducted by Reitsma and Wesseling (1998) offers strong evidence that computer activities develop phonological awareness. The researchers investigated the impact of computer program factors (e.g., blending activities), child factors (e.g., phonological abilities and home factors), teacher factors (e.g., teacher perceptions as presented on questionnaires), and durability of training (e.g., follow-up testing on transfer of learning on tasks that did not use the computer).

*Independent Reading* - Computer programs that present electronic versions of stories utilize various media modalities that include sound, speech, animation, video, and hypertextual links to additional resources. Students can click on a word to hear it pronounced or to read a definition. They can click on illustrations to see objects animate. These types of digital supports remove many barriers some young children experience to independent reading and to comprehension. Electronic forms of text are less difficult for students to read, they are more engaging and interactive, and are more likely to be read completely by young children. Research in the area of electronic texts suggests that
young children successfully interact with various media effects in ways that support their 
acquisition of story schema (Labbo & Kuhn, 2000), vocabulary development, sight word 
acquisition (Reitsma, 1988) , and concepts about print (Lewin, 1995; McKenna, 1998)

The hidden animations or sound effects in electronic stories may lead to students' 
engagement or distraction (see Labbo & Kuhn, 2000). Research suggests that teachers 
need to clearly state expectations and should carefully monitor students' interactions with 
electronic stories (Labbo, Sprague, Montero, & Font, 2000). McKenna (2006) notes that 
effective literacy pedagogy with computers should include “computer-guided word study, 
electronic storybooks with decoding scaffolds, social interaction guided by software 
applications, graphics packages to assist children as they illustrate their work, and 
software designed to reinforce concepts about print” (p. xi).

**Why do new literacies require instructional transformations?**

Teachers and students across many grade levels in Developed/Industrialized 
countries (Wikipedia, Retrieved February 20, 2006 <http://en.wikipedia.org/wiki/Developing_country>) now inhabit classrooms that are 
equipped with computers, Internet connections, desktop publishing capabilities, 
interactive multimedia learning resources, and Computing and Communication 
Technologies (CCT) that include new e-tools and e-genres. New electronic literacy 
genres include the informal (e.g., e-mails, chat rooms, discussion boards, video 
conferences), and the formal (e.g., web site design, power point presentations of an 
assembly of knowledge, multimedia video compilations). The *push forward* of new 
digital literacies involves the critical need for educators to better understand how to help 
students learn how to use new computer technology tools and digital genres.
As briefly mentioned earlier, new digital literacies, being skillfully prepared to use, understand, and control computer-related content and processes to meet communicative, personal, academic, social, and cultural goals (Labbo, 2004) involves many new literacies (Kress & Van Leeuwen, 2001). Literacy use in digital environments subsumes abilities to read and write printed text, but concomitantly diverges considerably from its beginnings in print (Gambrell, 2005; Kress & Van Leeuwen, 2001; Lankshear & Knobel, 2003; Leu, 2000, 2002; Reinking, 1994; Valmont, 2000). For example, reading print on a web page requires the traditional literacy skill of automatic word recognition or the ability to decode an unknown word with relative ease. However, new digital tools now allow readers to access word pronunciations or definitions of words encountered on any website on demand (e.g., Voycabulary, http://www.voycabulary.com/). This compensatory function problematizes conventional notions of readability levels (McKenna, Reinking & Labbo, 1999) and is dependent upon a user's ability to successfully employ a new literacy. Namely, a user must be able to navigate hyperlinks between the online supplemental resource documents and the original online text.

Transformations of literacy instruction occur in classrooms where computer technologies are integrated throughout the day and across the curriculum. For example, research indicates that e-mail has encouraged student information exchanges around the world (Garner and Gillingham, 1998; Tao and Reinking, 2000, Tao et al., 1997). Email exchanges created authentic and motivating reasons to communicate. The instant return of messages overcomes other types of pen pal projects where delays through regular mail could take weeks between idea exchanges. Additionally, students who exchange email messages must learn the conventions of this rather unique genre that requires a little bit of
conversational style mixed with a little bit of recursive writing. For example, students who successfully email make reference to previous content, or they are sure to include in their response other segments of previous, threaded email exchanges that capture and preserve the context of the discussion.

Internet activities invite students' inquiry projects and interdisciplinary work. In these instances students may gain literacy skills, employing all of the language and multimedia arts, while investigating and sharing relevant topically related content. Students are likely to be highly motivated as they go about purposefully assembling knowledge and communicating key insights from various on-line and on-page resources.

Perhaps one of the most important considerations driving the need for transformed, computer-related pedagogy is the fact that reading on screen is vastly different from reading on the page. Visual literacies in electronic environments include the ability to interpret, recognize, critically evaluate, and utilize visual graphics (e.g., icons, clip art, images, animations, video) as tools for thought, as avenues for learning, and as modalities for communication. Students who are adept in using new literacies skills and strategies are able to analyze and interpret complex information that is presented in an ever-changing series of linked modalities of meaning. For example, navigating through a series of websites requires students to quickly read and judge the information that is presented in a nonlinear fashion. When creating electronic text that is posted on the web, students must become aware of how to express their ideas in multimedia formats that are presented simultaneously or nonlinearly on a computer screen. These electronic genres must be crafted with an authentic and global audience in mind. Thus the demands of online reading and authorship require students to orchestrate
a set of complex, new literacies skills (Kress & Van Leeuwen, 2001).

**Closing Thoughts**

Educators are slow to change during this current era when we are experiencing tensions between the pull of new literacies and the push of traditional, print-based literacy. Classrooms where technology is effectively integrated into the literacy curriculum are sometimes scarce and hard to find, especially in the primary grades. As Turbill and Murray (2006) note, "It is our belief that currently most teachers of early literacy view technology as something that their students can ‘play’ with during ‘free time’ or as a ‘reward’ after the real ‘work’ has been completed" (p. 93). In addition, websites that claim to be resources for educators may only offer little more than drill-and-skill activities or printable blackline masters pages to be copied (Turbill & Murray, 2006).

Research suggests that when integrating technology into the literacy curriculum, there is no one approach that is best. Every teacher who lives through technological innovations needs to be prepared to negotiate the multiple realities that shape pedagogical decision-making (Labbo & Reinking, 1999). One effective way to bridge the technology transitional times is to design activities that are based on tried-and-true literacy practices and that also lend themselves to computer enhancement (see Labbo, 2005a, for ideas on Digital Morning Message or Digital K-W-L charts). It is clear that new digital technologies will not automatically transform classrooms if teachers are not comfortable using them for educational purposes. Coiro (2005) notes that teachers actively engage with technology professional staff development under two conditions 1) they are in control of what aspects of technology learning they will focus on, and 2) training occurs
within a community of learners including the school media specialist, the principal, and a university researcher.

Teachers remain accountable for teaching students to be literate in ways that prepare them to do well on high stakes paper & pencil tests (No Child Left Behind, old literacies) but that prepare them to well in their futures (new literacies) no matter what the curriculum or approach being used in a school district. Thus, during this time of transition it is likely that the best computer experiences will support new literacies and simultaneously or alternately enhance traditional literacy. It is critical that educators and policymakers persist in exploring ways to assist students in developing the technological skills that will be required of literate, globally active citizens of the future.

It is important to understand the values bases from which we operate as educators, policymakers and researchers. The pull backward of traditional print-based literacy results from the well-intentioned but short-sighted directives that are frequently imposed upon educators by policymakers who mandate and high stakes testing that focus primarily on students' achievement of discrete literacy skills and strategies related to old or traditional literacy (NCLB Retrieved March 1, 2006, http://www.ed.gov/nclb/landing.jhtml; Rowe, 2005). It is crucial for policymakers to better understand the knowledge base and theoretical perspectives that should drive their directives for teachers' use of computer technologies so they can value the role that new literacies must play in the classroom curriculum. Good or bad policies have intentional and unintentional domino effects that result in a chain of events that may lead to better students' scores on print-based tests but may also lead to students who are not prepared for their literacy futures.
References


No Child Left Behind (Retrieved March 1, 2006), http://www.ed.gov/nclb/landing.jhtml


Shoring up the shifting sands.

Kaye Lowe

Charles Darwin University

Abstract

This paper is about change. Having spent the last six months in the Northern Territory and prior to that, four years in Kentucky as Visiting Professor at the University of Kentucky, I am aware that these two settings are frontiers for change. Both deal with change amidst seemingly insurmountable difficulties of remoteness, isolated communities, poverty, and high rates of illiteracy. Yet, the commitment to improve literacy outcomes for students is undeniable. While this paper makes reference to my “Kentucky experience”, its prime foci are the particular issues and unique context of the Northern Territory.

Change in literacy practices in the Northern Territory must be considered within the context of:

- 52 per cent of schools and nearly 27 per cent of students are located in remote areas with a high proportion of socioeconomic and educational disadvantage
- over one-third of young people between five and 17 years have a language (or languages) other than English as their first language
- nearly 40 per cent of the total student population is Indigenous and many are ESL learners
- the population, including students and teachers, is highly mobile.

The Northern Territory is in a state of transition as it explores the most effective ways to meet the literacy needs of its diverse population.

Introduction

This paper is about change. Having spent the last six months in the Northern Territory and prior to that, four years in Kentucky as Visiting Professor at the University of Kentucky, I am aware that these two settings are frontiers for change. Both deal with change amidst seemingly insurmountable difficulties of remoteness, isolated communities, poverty, and high rates of illiteracy. Yet, the commitment to improve literacy outcomes for students is undeniable. While this paper makes reference to my “Kentucky experience”, its prime foci are the particular issues and unique context of the Northern Territory.

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The times are a changing

Irrespective of country or code, change is unavoidable. However, change for change sake can be extremely destructive. In education reform and the introduction of literacy initiatives, those driving the change process not only create the vision of what should be achieved, they have a vested interest in controlling the process. Cuban (1995) refers to the stakeholder groups in educational change as time zones and “the clocks of school reform”. He identifies five different times zones of curriculum change and how they bring different perspectives to the process. He highlights how each perspective operates out of a different concept of what it means to change and the timeframe in which change should occur. Knowing from whose perspective change is viewed, that is, the time zone, sheds light on how priorities are identified in Kentucky and the Northern Territory.

Media time

Media time is the fastest reform clock. In 2002, a media frenzy surrounded the introduction of the Reading First initiative in the USA with President Bush promising approximately one billion dollars to ensure “No child is left behind.” The initiative was directed at the literacy learning of students in low socio economic areas in grades 1-3. The initiative guaranteed Kentucky $89 million dollars over a six year period. Reading First was making headlines before states were equipped with guidelines and had settled down to write their submissions.

Media attention in the Northern Territory is not driven by the same degree of political clout, nor immense amounts of funding. However, the media in the last few months has been quick to respond to the suggestion that parent welfare benefits be attached to school attendance (Radio National, December 1, 2005). Teachers and researchers for decades have been raising awareness of the fundamental need for students to attend school in order to achieve literacy success. The following table shows levels of attendance for students in the Northern Territory.
Primary School Attendance Rates for 2005

<table>
<thead>
<tr>
<th>Remote/Urban</th>
<th>Indigenous</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial</td>
<td>83%</td>
<td>93%</td>
</tr>
<tr>
<td>Remote</td>
<td>74%</td>
<td>92%</td>
</tr>
<tr>
<td>Very Remote</td>
<td>64%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Official attendance rates in the NT supplied by DEET (December, 2005)

The other issue to be addressed in the recent media is the resurgence of bilingual education in Government schools. The Hon. Syd Stirling, Minister for Employment, Education and Training, outlined the inclusion of bilingual education in the Indigenous Education Strategic Plan and to be discussed through the community engagement plan (http://www.deet.nt.gov.au/education/indigenous_education/indigenous_languages_culture_report).

Policymaker time

Cuban refers to this as the time clock that chimes every two to four years depending on the cycle of local, state and national elections. In policy-makers time, policies and programs are often implemented in haste and opportunities to scrutinize initiatives are overlooked. Public sentiment is a major consideration when it comes to policymaker’s time.

In the USA, policymaker’s time was driven by a vision supported by political clout, ample funding, and adequate infrastructure to ensure success. Reading First was touted as a new, high-quality evidence-based program for the students K-3. A strength of the initiative was that funding was guaranteed for 6 years and this created a sense of security for schools. Accountability was integral to the process and the seventy-four Reading First schools in Kentucky agreed to conduct mandatory testing twice a year. Schools provided evidence to justify student progress. Schools and states were in jeopardy of losing funding if results were not positive.

Compared to Kentucky, the impact of policymaker time on the change process in the NT is less dramatic. The smaller population base, population demographics, and remoteness are factors to be considered. With a Territory population of 187,132, spread over 1,348,000 square km, the population density is 14 persons approximately per 100 square km. 52.3% of
schools and 23.2% of students are located in remote areas with varying degrees of access to education.

The school-age population in the Northern Territory amounts to 24.5% of the total population and is the highest proportion of all states. Approximately 33% of five and seventeen year olds are ESL/EAL students. The two main languages spoken at home (other than English) are Australian Indigenous languages (31,269) and Greek (2,819). Fifty Indigenous languages are spoken and over 60 migrant languages.

<table>
<thead>
<tr>
<th>Student demographics</th>
<th>Northern Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number enrolled K-12:</td>
<td>41,879 (Govt. and Non Govt)</td>
</tr>
<tr>
<td>Number of schools:</td>
<td>186</td>
</tr>
<tr>
<td>Per-pupil expenditures:</td>
<td>$12,557 (primary) $14,304 (secondary)</td>
</tr>
<tr>
<td>Pupil/teacher ratio:</td>
<td>13.9 (Govt. primary schools, 2003); 11.6 (Secondary schools, 2003). *</td>
</tr>
<tr>
<td>Racial/Ethnic Background</td>
<td>Indigenous 43% (primary schools) Indigenous 34% (Secondary)</td>
</tr>
<tr>
<td>Number of FTE teachers:</td>
<td>2792</td>
</tr>
</tbody>
</table>

Building on the work of the previous government of twenty-seven years, the Country Liberal Party, the newly appointed Labor Party continued work on the Northern Territory Curriculum Framework (NCTF). It was piloted and reviewed in 2001. Considerable progress and "awareness raising" around literacy issues occurred. The Framework has an explicit focus on the critical lifelong aspects of learning and improvement in Indigenous and ESL student outcomes.

The fundamental premise of the NTCF, English Learning Area is that learners develop knowledge, skills and understandings about English language and literacy by studying and employing a range of spoken, written, visual and multimedia texts. “This area plays a vital
role in developing learners’ literacy, enhancing their learning in all curriculum areas and providing them with communication skills and critical understanding of the language they need to actively participate in society.” (NTCF, p. 195) The document emphasizes the need to develop functional and critical literacy skills and highlights the use of technology to develop ‘multiple literacies’. The strands within this document are Listening and Speaking, Reading and Viewing, Writing. Outcomes and indicators are organized according to three elements: Texts and Contexts, Language Structures and Features, Strategies.

Three tiers of National English Literacy Benchmarks are identified for reading and writing (including spelling). These are set as minimum standards for the end of years 2, 4 and 6. The ESL component of the Curriculum Framework is to be used for ESL learners.

There are primarily three reading programs/models in use in the Northern Territory. The following information gives only a brief overview and is not intended to be a comparison of programs. The information cited below was made available on the programs’ and/or DEET websites.

Accelerated Literacy (AL)
Accelerated Literacy is a specific English literacy teaching approach, trialed in six Northern Territory schools (http://www.deet.nt.gov.au/education/programs_initiatives/nalp/index.shtml). The program aims to improve literacy levels for all students who are currently not achieving national benchmarks. By the end of the trial in December 2003, the program developers Brian Gray and Wendy Cowey reported that there were demonstrated gains in literacy competence for monitored students identified as being two or more years behind National Benchmark literacy levels prior to the introduction of AL. They claim that the average reading rate in year levels for target students had increased by more than four times the level at which they were developing without intervention. Target students improved from an average reading rate of 0.42 of a reading level per year before the program, to 1.78 reading levels in June 2003 for the duration of the program. According to the DEET website (http://www.deet.nt.gov.au) “This means that students previously deemed ‘at risk’ prior to intervention were now progressing at a rate to allow them to attain mainstream expectations.”
There are currently 20 schools in the NT AL program. Significant government funds have been committed to the trial and expansion phases of the program.

Walking Talking Texts

Fran Murray developed this program and it was first published by the NT Department of Education in 1985, with a revised edition in 1995 (http://www.literacyandnumeracy.gov.au). It has continued to be implemented over the last twenty years, It is a framework for teachers to implement ESL classroom pedagogy for teaching, learning and assessing, encompassing both oracy and literacy outcomes in English. The program has been used extensively in remote schools in the NT, as well as a number of schools in WA and Far Nth QLD.

First Steps

First Steps is an English language resource that claims to help individual teachers, schools and education systems achieve targeted literacy outcomes and standards for their students (http://www.ecurl.com.au/src/firststep-frameset.html). First Steps covers the four areas of Oral Language, Reading, Writing and Spelling.

The First Steps resources provide frameworks, or maps of development, called Developmental Continua, that link the monitoring, assessment and data gathering on student performance to the planning and delivery of the teaching and learning program. Detail maps provide support for all children irrespective of age or ability.

First Steps provides a framework for linking assessment with teaching and learning. It was researched and developed over five years by the Education Department of Western Australia. It was implemented widely throughout the Northern Territory and has since become embedded into classroom practice and NTCF.

Bureaucratic time
This time zone results from the introduction of new rules and changing budgets. The clock ticks in response to the policymakers initiatives and chimes according to the evidence available to support implementation success. On recent observation visits to twenty schools, teachers expressed concern about Northern Territory Government’s commitment to maintain initiatives with ongoing levels of adequate funding and continued support. Teachers reflected unfavorably about their concern for the never-ending array of programs often thrust in their direction with out consultation and forethought.

Uncertainty and insecurity about funding left teachers feeling vulnerable and often reluctant to commit time and energy to new initiatives. As one teacher explained about recent literacy initiatives: “NT government’s attitude... I can see there is a commitment, but financially it is not supported.” Others expressed concern for the future: “Funding has been squeezed.” “We got lots of books for $10K but just about finished with that. What do we do next term?” (Field notes 2005).

Bureaucracies have a vested interest in making policy maker’s visions a reality. Bureaucracies thrive on getting results and this often causes a rift between those implementing the change (namely, teachers and students) and those setting directives. Teachers recognize that the rules of bureaucracies vary according to who is in the position of power. One remote school principal described his dealing with the bureaucracy: “We negotiated a literacy position at the end of 2005 and came up with a suitable model. We were told the model was acceptable but when the new person came, all rules were changed. ... This created a lot of stress. People were forced to make decisions and take on responsibilities they didn’t want.”

Teachers both in the Northern Territory and Kentucky claimed that inconsistent and incoherent messages handed down from bureaucracies impacted negatively on the implementation of new literacy initiatives. In one school, it was explained that “there was a lot of misinformation in last three months. Staff members were upset and angry. Union almost called in to sort it out.”

Practitioner time

While the media, policy makers, and bureaucrats operate weekly and yearly schedules for change, Cuban suggests practitioner’s timeframes are measured in decades. A recurring
theme in the Special Edition of the Australian Journal of Language and Literacy, In
Teachers’ Hands: Effective Literacy Practices in the Early Years of Schooling (October,
2005) is that effective literacy teachers draw on a smorgasbord of strategies and skills built
up over many years. Teachers’ repertoires tend to change and vary according to the
classroom context, purpose, and the needs of their students.

Teachers in Kentucky and the Northern territory often claimed that they were frequently
asked to change teaching methods and literacy programs. “Just when we think we have
this down pat along comes another, more improved reading program’. Teachers expressed
relief that Reading First was guaranteed for six years. In the Northern Territory, the high
rate of teacher turnover makes the sustainability of any literacy initiative even more fragile.
In some instances, after an initiative has been put into place, the entire non Indigenous staff
in the remote school leaves. The school is virtually forced back to square one with the new
influx of teachers leaving students to adjust.

The problem of finding suitable staff is compounded by the lack of insufficient and
inadequate teacher housing and lack of suitable resources in remote areas.

Student learning time

Cuban states that this time is the most difficult to predict and that it varies from student to
student. He strongly suggests that focusing education reform on student and practitioner
time would help eliminate education fads and refocus education on what really matters—
quality classroom instruction. Lasting effects of programs and initiatives are often
overlooked in the short timeframe of policymakers, bureaucrats, and the media. He states
that small incremental steps of practitioners occur during the day to day life of classrooms.

Teachers need ongoing assurance that all students are learning. Mandating assessments in
Reading First schools and equipping all two thousand teachers with palm pilots to collect
student data, ensured teachers had timely access to results. The availability of students’
assessment data made it possible to use assessment data to inform instruction and support
student learning.

In the Northern Territory, monitoring student progress has proved difficult in the past.
Student attendance has made tracking student progress arduous especially in remote,
Indigenous communities. The following table shows the percentage of students completing Multilevel Assessment Program (MAP) testing.

<table>
<thead>
<tr>
<th>Percentage of students completing testing</th>
<th>84% (Yr. 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>86% (Yr.5)</td>
</tr>
<tr>
<td>Non Indigenous students achieving national reading benchmark</td>
<td>Year 3, 87%</td>
</tr>
<tr>
<td></td>
<td>Year 5, 91%</td>
</tr>
<tr>
<td>Urban Indigenous students achieving national reading benchmark</td>
<td>Year 3, 57%</td>
</tr>
<tr>
<td></td>
<td>Year 5, 62%</td>
</tr>
<tr>
<td>Remote indigenous students achieving national reading benchmark</td>
<td>Year 3, 20%</td>
</tr>
<tr>
<td></td>
<td>Year 5, 21%</td>
</tr>
</tbody>
</table>

DEET Annual Report 2004-2005

Why change literacy practices?

Knowing that change is defined differently according to different time zones, the question remains, why bother to change? Simply put, ethically and morally, all stakeholder groups, all time zones, have an obligation to explore better, more effective, literacy opportunities for students.

In Kentucky, radical change was regarded as the only viable option. As the second-most illiterate state, Kentucky has more than 40% (almost one million) of the 2.4-million working-age adults functioning at the two lowest levels of literacy. (most recent - Kentucky Adult Literacy Survey, 1997). In 2000, only 5% of the 996,000 adult Kentuckians functioning at the lowest levels of literacy were participating in adult education programs. (Kentucky Adult Literacy Survey, 1997.) Of those aged over twenty-five, 18.2% of the adults do not have a high school diploma or GED, compared to 14.85% nationally. (2004 Current Population Survey - U.S. Census Bureau http://www.census.gov).
In Kentucky, 21.2% of children live in poverty, compared to the national average of 18.9%. Kentucky has one of the fastest growing Limited English Proficient (LEP) populations in the United States. The students represent approximately 85 different languages. Three out of four students with limited English at all grade levels qualify for free or reduced-price lunches by living near or below the poverty line (Fleischman & Hopstock, 1993).

Change in Kentucky was drastic. In 1989, the Kentucky Supreme Court declared the state public school system unconstitutional on the basis of inequity and inadequacy of funding to schools. The Kentucky Education Reform Act (KERA) resulted and the Kentucky General Assembly was given the responsibility of creating a new system of common schools that would provide quality education to all students regardless of where they lived in Kentucky. This was seen as a profound, far-reaching, and systematic reform act in K-12 education. The Kentucky Reform Act promoted a total revamping of the literacy curriculum. Reading First provided substantial funding that supported the continuation of literacy reform.

Less radical, but just as pertinent are moves to improve literacy opportunities for the Territory’s student population. In the Northern Territory, in Year 3, the percentage of Indigenous students achieving benchmark remains at almost 50% lower than the percentage of non Indigenous students. At Year 5, the percentage of Indigenous students achieving benchmark remains at approximately 50% lower than the percentage of non Indigenous students.

The Fred Hollows Foundation conducted research in 2002 into the literacy and numeracy of students from a community south-east of Katherine. It concluded that not one child had reached the national reading benchmarks for years three and five. The report says nationally only 15 per cent of remote Indigenous students achieved the required literacy levels, compared to about 90 per cent of the broader population. Issues associated with poor health and lack of English are cited as having negative impact on learning.

A Territory in transition

Change in literacy practices in the NT is occurring. The Territory appears to be in a state of transition as it moves towards establishing a number of strategies including:
Creating a data management system to track student achievement.

Establishing systems for accountability to address the concern that adopted literacy programs show measurable improvements in student outcomes. In the NT reasons given for selecting reading programs were varied. The impact of teacher “ownership of a program” and cultural inclusiveness of curriculum and teaching practice are issues to be explored more fully.

Recognizing the crucial need for involving Indigenous communities in educational decision making. The NT Indigenous Education Strategy Plan 2005-2008 (Draft) states that some Indigenous Territorians, particularly people living in remote communities, do not always perceive school education as linked to community expectations or outcomes. The document goes on to cite various reasons such as schools being the only place where standard English is spoken, that there are few Indigenous teachers and staff, that teaching methods are based on Western cultural context, and that the level of education is often not associated with cultural achievement or standing. Greater levels of engagement between communities and schools are required. The document recommends the need to improve the social and economic environment and the need to make the rules for accessing the hidden curriculum more explicit.

Issues of high teacher turnover, student absenteeism, and student mobility contribute to a sense of impermanence. These are pressing issues that cannot be ignored when striving for sustainable curriculum change.

Secrets of success in Kentucky

Kentucky is well on its way to achieving literacy success for its 663,885 student population. The following factors for effective change are evident:

Strong vision – Supported by committed leadership, the goal of the State is to have all students reach benchmark by 2014. Schools were free to adopt a scientifically based reading program that would best address their students’ needs. Fourteen different reading programs were adopted. In addition to core programs, schools chose complementary intervention and supplemental programs. Principals had to sign an assurance that there was 80% “buy-in” by staff for the adopted program.
Skills – Each year, Reading First teachers complete 80 hours of professional development in their school-selected reading program; principals completed twenty. The State appointed ten State Reading First Coaches and each school appointed a School Literacy Coach for the duration of the project.

Incentives - $89 million dollars is a big incentive and 74 schools receive approximately a million dollars in funding over six years. The incentive of observing and monitoring students’ progress over six is a crucial motivating factor.

Resources - Agreeing to be part of the Reading First initiative means that schools could not layer approved reading programs on pre-existing programs. Schools were given ample funding to adequately equip classrooms. Additional support personnel were appointed at school and state levels.

Action Plan – the US Department of Education provided the blueprint for change. It served as a common road map. Non-negotiables were agreed to by each state and included approving only programs justified on the basis of scientifically-based reading research, strong measures of accountability and stringent, professional development requirements. Each state and eligible school formulated a plan according to the guidelines.

According to Thousand and Villa (1995), the absence of anyone of these “secrets” results in confusion, anxiety, resistance, frustration and/or the feeling of being on a treadmill.

A case of timing

Kentucky and the Northern Territory are at different stages in the change process. Transition happens much more slowly than change. Transition is a process, change an event. While the media, politicians and bureaucrats see change as something to be reported, they miss the point that teachers and students operate on different time zones. Transition takes longer. It requires letting go of the past and having the courage to enter a state of “disequilibrium” surrounded by uncertainty, confusion and ambiguity. Only in the final stages of transition can the new be embraced. Change arrives when teachers have the competence and confidence to do things differently.

Conclusion

Two major insights became apparent in the data collected from seventy-four Kentucky schools and 20 remote and urban schools in the NT. One was that every person, whether
they be student or teacher is a change agent. Indigenous students attending school to write song lyrics or teachers deciding to make a difference in remote isolated communities can, and do, change the face of education and our understanding of what it means to be literate.

Change is about relationships and people. Scott (2004) in “Fierce Conversations - Achieving Success at Work & in Life” points out change only comes about one conversation at a time. These conversations may seem small in the grand scheme of education reform, but they have the potential to change the way we do leaning.

The other insight is that change cannot be mandated. Despite the best efforts of all stakeholders, the ultimate change rests in the hands of teachers who ultimately decide whether or not the change is warranted. Teachers with many years of experience in Kentucky often had ingrained notions of what literacy teaching and learning should look like and they elected to change. What was their motivation? Fear of letting their schools down because accountability was integral to the change model? They recognized the benefits of the program? They were coerced by their peers? Dissatisfaction with what they were doing? Their motivations may have been diverse but the outcome was change.

In the Northern Territory, when headlines in the daily newspaper scream “Report shames NT education results” (Northern Territory News, February 1, 2006), educators cringe. The paper describes the daunting challenge of overcoming “the worst scores in almost every category” according to the most recent government services report. “Reading, writing, and numeracy results are the worst in the country, but they have been edging up in the past few years.” (p.3) The need is for an innovative solution that “ensures buy-in” by all time zones. Sustaining the change, despite the ebb and flow of teachers, administrators and students is not going to happen according to media time. A vision and strong leadership are just two essential criteria that need to be firmly in place.

We have to step up to the plate because Scott (2002) reminds us that “While no single conversation is guaranteed to change the trajectory of a career, a company, a relationship, or a life – any single conversation can” (p. 5). We need to lead by example. Walk the talk, and begin the conversations at whatever level we are at.
References


Developing higher-order thinking through explicit teaching: Guiding students through a personal and critical reading of texts

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Australian Catholic University

Abstract
The paper will demonstrate ways of developing higher order thinking through building deep understanding and significance for students as they read literary texts. Key questions which could guide teachers’ and students’ thinking about texts will be explained, based in the Freebody (2004) ‘Four Roles Model of Reading’, also known as the Resources Model. Participants will examine how patterns of ideas and issues are constructed in the layout, vocabulary, grammar and images present in a selected literary text and the integrative nature of the model will be highlighted. The paper is intended to demonstrate a link between developing students’ thinking and literacy pedagogy which is applicable to all stages of primary and middle school students.

Reading literary texts in classrooms can be a problematic exercise. An ‘ideal’ situation is one where all students are involved in the experiences presented in the text, interested in the characters, appreciative of the language and alert to the values and attitudes represented in the text. A ‘real’ situation may be one where some students are bored by the experiences, indifferent to the characters, do not grasp some of the nuances in the language and are unaware of how the text is positioning them as readers. For students such as these, we need to discover ways for them to find “significance” in their reading of literary texts and we need to ensure their responses show “intellectual quality” (both are dimensions in the NSW model of Quality Pedagogy, 2003). This paper argues that one way these dimensions can be achieved is through developing readings of texts that are personal and critical. A personal reading can evolve when students are guided to connect with the text through their background knowledge. This kind of reflection can lead to analogy and inference. A critical reading will emerge when students analyse and critique the text. These reading processes can be regarded as aspects of higher-order thinking, where students move beyond the obvious and the literal to connect with texts in meaningful and deliberate ways.

Developing higher-order thinking has been part of the teaching literacy landscape across a number of decades. In 1956 Bloom presented his inverted triangle with analysis, synthesis and evaluation placed as higher-order attributes of thinking (http://www.officeport.com/edu/blooms.htm accessed 22/01/06). In 1969 Banton Smith’s work on reading named four levels of reading comprehension as literal,
inferential, critical and creative, with higher-order thinking being present, to a degree, in all but the literal level. Less well-known is Hasan’s (1987) argument that learning how to infer and hypothesize when reading is the essence of learning the “conditions for knowing” (Hasan, 1987, p.61). More recently, Freebody and Luke (1990) and Freebody (2004) have developed a model for reading pedagogy which has higher-order thinking embedded in its different practices and offers ‘repertoires of capability’ to students engaged in reading (Luke and Freebody, 1999). The model is known as the four resources model and a number of educators have explored how the model may be used as an organizing principle for teaching literacy (see Healy and Honan, 2004). This paper uses the model in a similar fashion to demonstrate some ways of reading and talking about a literary text that teachers may take up as they guide their students towards higher-order thinking.

Literary texts have long been integrated into the teaching of literacy and offer a comprehensive resource for teachers to develop higher-order thinking. In classrooms, literature is filtered through the teacher’s talk about the text, where research has shown that the teacher “assumes an interpretive position between the story and child” (Baker and Freebody, 1989, p.267). This interpretive position not only describes the story from a particular (cultural) perspective but also describes how the student reader might respond to the story: “the text is given a particular shape by the nature of the teacher’s questions” (1989, p.270). It is what the teacher produces as knowledge in metatextual comments in any reading event that certifies that knowledge as the acceptable reading of the text. When teachers are able to consider texts from a range of viewpoints they expand the kinds of responses they, and their students, may make. The four resources model offers such a range of reading positions.

The four resources model of reading “is a simple, generic framework for reading and writing” (Freebody, 2004, p.3) which has been explained in a number of places, as noted above. The framework outlines the kinds of resources that students need in order to be literate in the contemporary world. It draws on a range of reading and literacy theories and pedagogies, as can be seen in the model below. The original image in Healy and Honan (2004) represented the model as four interlocking jigsaw pieces, but it was not able to be reprinted clearly for this paper.
An application of the four resources model will be demonstrated in this paper. In summary, the model positions students as text participants who engage in semantic practices with texts; as code breakers who can recognize and interpret graphic symbols through appropriate coding practices; as text analysts who use critical practice to interrogate texts; and text users who are aware of the pragmatic practices or social and cultural functions of texts and can employ that knowledge in their world. To apply these reading positions and practices, I have selected a poem by well-known Australian author Colin Thiele (1989) for scrutiny, as a poem offers the opportunity to explore a complete text in limited time and space. The poem will be used to demonstrate how a rich personal reading can be the foundation for critical reading and how deep understanding and connectedness can be built from background knowledge. These elements are integral to producing higher-order thinking. The following sections will develop ways of developing the resources model, followed by application to the poem. While the poem offers a specific focus for this discussion, the principles outlined below can be applied to any text of fiction or fact.

**TEXT PARTICIPANT / SEMANTIC PRACTICE**

One straightforward way to develop higher-order thinking is to emphasize the collaborative relationship that involves a reader ‘participating’ in the text. But what can this concept of ‘participation’ mean? I suggest that participation occurs when readers connect with texts in personal ways to make meaning (semantic practice) from the experiences the text offers. Semantic reading practice operates on several levels. Participating in a text necessarily means understanding what is literally ‘going on’; it also means comprehending the vocabulary of the text – knowing what words mean - but these are a first level of participation only. A second and higher-order level of
participation is embedded in background (and cultural) knowledge. For example, when reading a literary text at this deeper level the reader will be able to recognise experiences, empathise with characters’ feelings and situations, and draw analogies and inferences about the characterisations, issues and meaning of events in the story. This second level of participation creates connectedness through a personal reading of the text, one that can be greatly enhanced through conversations about the text. As Chambers says:

In essence, talking about literature is a form of shared contemplation. Booktalk is a way of giving form to the thoughts and emotions stimulated by the book and by the meaning(s) we make together out of its text – the imaginatively controlled messages sent from the author that we interpret in whatever way we find useful and delightful.

(Chambers, 1993, p.20)

Building up a personal reading of a literary text with young readers is crucial as an explicit demonstration of how to enter the ‘world’ of the text. This ‘personal response’ reading can be developed by careful and focused questions to create ‘shared contemplation’ and aspects of this are a familiar routine in many classrooms. Based in the reader response work of Iser (1978) teachers can explore different possibilities around a literary text (or any text, in fact), connecting the personal, social and cultural experiences the text offers to the students in the class. In other words, to make clear the significance of the text to the students’ worlds, the teacher deliberately elicits the reader’s experiential and knowledge-based ‘repertoire’ (Iser, 1978). This kind of work provides a scaffold for students to learn how to analogue and infer: a related literacy task might be to consider relevant elements from their experience and knowledge and then to read the text closely to compare the text-based experience with their own.

Another facet of developing higher-order thinking through personal reading occurs when connections to other texts are recognised through the reader’s literary repertoire. This concept has been called ‘intertextuality’ (Barthes, 1977; Nodelman and Reimer, 2003) and it include links made by readers to other texts, which could be factual or fiction, film or print-based stories, as well as the relationships between texts as they allude to each other in overt or covert ways. Further, attention to characterisation can occur when readers can be encouraged to notice the focalizing character, or persona, and learn to ask ‘Whose eyes do we see through? Whose voice do we hear?’ Finally, readers need to be aware that authors leave ‘gaps’ in stories: sometimes the story fills
the ‘gap’ through illustration or further information, but often the gap is left for the
reader to complete. In summary, students can be guided to higher-order thinking by
being scaffolded to carefully consider the text through mediated attention to their
personal repertoire, intertextual links, focalizing persona and textual gaps. All these
features contribute to the construction of a rich personal reading of the text which is
stimulated by the group or class ‘booktalk’ the teacher can initiate and elicit.

The next section is an attempt to demonstrate how participating in a text through a
focus on the meaning or semantic practice can develop higher-order thinking. If you
can take a moment to read and reflect on the Colin Thiele poem below, you might think
about the range of personal experiences presented in the text, see if you can make
connections with other texts, note the focalizing ‘voice’ and ‘eyes’ and observe ‘gaps’
in the text. A discussion of the poem follows with the intention of modelling how a
personal reading can lead students towards higher-order thinking.

Wash the Dog

“Wash the dog,” Mum says,
“He smells like last year’s cheese.”

I’d rather wash the cheese.

Wrestling a hairy earthquake is no joke:
convulsions and contortions in the tub,
and the whole backyard a sea of suds
like coastal foam from a cyclone;
then a Niagara of water to rinse him –
a small flood flowing under the fence
and around the neighbour’s barbeque.
They don’t like standing in dog’s bathwater.

But that’s not the end of it, not with our dog.
He gets inside and shakes himself
like an automatic sprinkler system
in a great final mess -
all over Mum’s new dress. Colin Thiele (1989)

There is a great deal that is familiar in this poem and even if you have never washed a
dog (as I never have), typically, we recognise the scene. Also we are familiar with the
idea of being asked to do something we do not want to do (by a family member/parent
or another authoritative figure such as a teacher) – and young people are especially
attune to this situation. We recognise how dogs behave when washed and know about
care for domestic pets, sprinkler systems and the natural world of earthquakes, cyclones and floods. We might have experienced smelly cheeses and we do understand verbal ripostes and jokes. We appreciate the social world of the neighbourhood and how we usually do not want to upset our neighbours. Niagara Falls would be part of our knowledge of other cultures (though may need explaining to some younger readers). As we apply aspects of repertoire to the text, the connections to common experiences and knowledge Thiele has deployed in the poem become apparent. As teachers the concept of repertoire provides a frame for us to apply to any text: we will recognise what our students will be familiar with and what we may need to explain or confirm.

The concept of intertextuality draws attention to the connections between texts across a range of modes, and highlights to students what practical examples of the text’s experiences they have already met. With “Wash the Dog”, we will have read or viewed other stories about dogs (Lassie and Spot are two well-known canines) and, importantly, we recognise this text as a poem. Our literary repertoire around poetry leads us to appreciate Thiele’s use of alliteration, for example, flood flowing under the fence, and assonance coastal foam from a cyclone, simile, like an automatic sprinkler system, metaphor and hyperbole (exaggeration) in the deployment of the natural world to describe a routine domestic activity, and the final rhyme which stands out in the free verse poem. We accept the shape of the poem on the page and its run-on lines. Further, we may know of Storm Boy (Thiele 1963) - the novel, picture book or film - or other books or poems by Colin Thiele. Awareness of literary repertoire offers teachers multiple ways of foregrounding this concept by introducing relevant texts prior, together with, or after reading.

Responding to the focalizing character in a literary text can overlap with our personal, social and cultural repertoire, but, as well, there are literary understandings to be gained by acknowledgment of the story’s ‘voice’ and ‘eyes’ (who may or may not be the protagonist) or the poem’s ‘persona’. For example, in this poem we know it is a young person’s voice and eyes through the evidence of ‘Mum says’. We know that this persona is obedient, but does complain quietly (we assume), is prone to humorous exaggeration and enjoys jokes. But how old is the persona? We only know mature enough to wash a dog. Is the persona a boy or a girl? We do not know, and should not assume! (Or have you already?) As we make observations about the focalizing
character we often notice ‘gaps’ such as these that the author has left for us to complete from our repertoire. Drawing attention to the focalizing character/persona offers further opportunities for discussion about their trustworthiness, about how their characterization is constructed, about what they reveal about themselves. This kind of focus can be developed with factual texts to observe the ‘voice’ and ‘eyes’ of the text: how does the text relate to its audience? What does it want the reader to pay attention to? What evidence do we have for these inferences? are the kinds of questions which scaffold students’ attention.

Other gaps are evident in the poem. How big is this dog? (I have been told that the size of the dog is irrelevant to the amount of disruption it can make when being washed.) Have the neighbours complained previously? (They don’t like standing in dog’s bathwater)? Did the persona purposely let the dog inside, to take revenge on having to do the chore? (He gets inside and shakes himself ...) Seeing the gaps in texts offers opportunities for valuable conversations and these insights can be extended through other literacy-related tasks such as writing and, especially, drama work. While re-enacting scenes establishes clear understandings, as such interactions embody the written words and ‘stand up the text’ (Cusworth and Simons 1997), depictions and improvisation which complete gaps create new and unique interpretations. Using the gaps for such activities means students must read and reread for evidence from the text, make inferences and hypothesise, thus utilising the ‘conditions for knowing’ (Hasan, 1987) to develop deep understanding.

Gap-filling is an avenue for making the text our own as we ‘speak’ the ‘unsaid’. Participating in the text in ways I have described deeply engages students in the literature. Cairney (1990) argues that as readers become ‘insiders’ they are more able to reflect on their connections to the text. Gap-filling with factual texts can be adapted to readers’ observations about which of their questions has not been answered, or what possible information was not included. I would argue that this reflection provides a pathway to deep understanding and higher-order thinking as readers’ ability to analogize, infer and hypothesize develops through their personal reading of the text. Further, practice in text participation can lead to analysis of the text through critical thinking and offer an entry to a different strand of higher-order thinking.
TEXT ANALYST / CRITICAL PRACTICE

When higher-order thinking is promoted through a rich personal reading of a text, what is being utilized is the power of a literary text to draw the reader into the reading experience. As Kress (1985, p.36) argues, “the text constructs its ideal reader by providing a certain ‘reading position’ from where the text seems unproblematic and ‘natural’”. On the other hand, this naturalization can mean that the precepts the text presents are unquestioned by the reader because they are seen as normal and real. From a personal response position readers comply with and/or accept the values, attitudes and beliefs about the world the text presents. Alternatively, from a critical reading position readers seek to recognise and interrogate the ways of being in the world the text presents. I would argue that readers need to analogise, infer and hypothesize about the possibilities the text offers for participation and meaning making. It is also useful, however, to develop higher-order thinking by taking up alternative reading positions.

Alternative reading positions, or critical practice, are embedded in a socio-cultural model of reading where values, attitudes and beliefs about the world have been named as a way of revealing the context of culture (Martin, 1992) or discourses (Gee 1996, p.127; Foucault, 1977) which are instantiated in social practice. Children’s literature texts are one example of social practice, where teachers’ and students’ access to them “is mediated through discourses of ethnicity, class, gender and generation” (Martin, 1992, p. 495). Other discourses pertaining to the world of children can also be apparent, for example, discourses of parenting, families, schooling and education, religion, marriage, history, amongst others, can be deployed for the ways of being and thinking they evoke. Ross Johnston (2000, p.1) notes that “advocacy … of particular stances on [contemporary] social issues” is a literary tradition that has continued to the present day: in Bakhtin’s words, “the world … creates the text” (1981, p. 261). Alternatively, particular discourses may be silenced, their very absence accentuating the context of culture presented in the text. What is useful to recognise is that participation in the text calls for recognition and acceptance of the text as a discursive practice encouraging the reader to make sense of the rich tapestry of meaning the text offers. The very repertoire we draw on, however, may also be a point of reference for interrogating the text. Such an analysis can be developed from the previous discussion of “Wash the Dog”.

If I take up a critical practice/text analyst position I become alert to the middle class...
suburban westernised world of the poem, where dogs are cared for as pets and there are backyards and barbeques and worry about neighbours. This dog is not a working animal, or one that could be regarded as food. There is sufficient money available for sprinkler systems and new dresses, and, for me at least, the persona and the mother are white Anglo-Celtic Australian Christians, not any of the many other cultural mixes in multicultural Australia. While there is evidence in the poem for the middle class socio-economic status and values named above, I have ‘naturalised’ the mother and child to be of the same ethnic and religious background as myself. I also initially assumed that the child is male, though there is no evidence for this. On the other hand, if the reader did not know of Thiele’s nationality, despite the use of Niagara in the poem, the use of barbeque as a noun and the spelling of mum tell the reader that the setting is not on the North American continent. This kind of higher-order thinking draws attention to what is often seen as natural in the text.

Other points of ‘normality’ for many readers may be the value system the poem asserts. Particular parenting and family discourses are articulated in the parent giving the child responsibility for a chore, the child obeying the parent, the recognition that pets need to be clean for health and aesthetic reasons. Discourses of contemporary childhood tell the reader that the child may complain about the chores and indeed readers may challenge the obedience shown by this persona, as it might not match their own experience. A literary discourse reminds us that poems can be about mundane events, do not have to rhyme and can be humorous. Perhaps this poem can be seen to challenge the discourse of poetry as being ‘high art’ which rhythmically speaks to momentous events, or spiritual or philosophical ideas. A reader who believed this was the role of poetry may resist this poem as a literary artefact and reject it as not worthy of study.

The values presented in the poem are ones that I support, and I suspect, most readers would do so. To return to an earlier point, the teacher’s metatextual commentary produces what counts as an acceptable reading of the text. Introducing a critical practice allows teachers to mediate alternative ways of thinking. When readers become text analysts, it does not mean that they have to spurn the text, but it does mean that they become alert to the naturalization of particular discourses and recognize the text for what it is, rather than its amplification of dominant mores. I would suggest that
higher-order thinking can occur in both semantic and critical practices.

Teachers’ talk about texts, therefore, needs to build on the careful questions which draw out the students’ experiences of the text. They can also include such questions as: what values, attitudes and beliefs about ethnicity and class, gender and generation and other relevant discourses, are being presented here? What are readers positioned to consider? How has the text structure, grammar and vocabulary created this reader position? Who could disagree with these ways of being and thinking? Who/what is silenced? Thinking through alternative positions is one certain move to constructing higher-order thinking.

Previous research has shown that critical practice engages students as they challenge and interrogate the authority of the text. These challenges in turn lead them to recognize instances (connectedness) in their worlds where alternative positions have been taken up (McDonald, 2003). Thus personal response reading can become a pathway to critical reading, and both kinds of reading are highly pertinent to developing higher-order thinking. The resource model, however, offers a further approach to higher-order thinking when the concept of code-breaking is extended beyond the literal level.

CODEBREAKER/CODING PRACTICE

When readers learn to become codebreakers typically they examine the ‘code’ of the text, that is, they learn to inspect and interpret how words are constructed through their graphophonic elements - the simplest level of codebreaking). Codebreaking analysis is also part of recognising what grammatical patterns are used in the text, what visual elements form the images (called a ‘visual grammar’, Kress and van Leeuwen, 1990; Simpson, 2004) and the kinds of relationships that are created between the words and the images. I suggest that this kind of analytical thinking is another facet of higher-order thinking. In essence what the practice of coding demands is that the reader seeks patterns: patterns in letter formation that can be recognised and compared with known patterns, patterns in grammar which underline how meanings are constructed and emphasised, patterns in structure, such as repeated events or scenes in narratives (for example, the repetitive narrative patterns in many fairy and folk tales), patterns in layout and images which can guide the reader’s eye along a visual reading path. The role of codebreaker is important because it positions readers to pay close attention to the print and image on the page or screen. When readers do this they are learning to look at how wordings and meanings are constructed. They learn to look at the text, as
well as looking through it to the meanings, values and attitudes it presents

One straightforward way of thinking about patterns in texts is through the notion of ‘word associations’ (Derewianka, 1998; English K-6 Syllabus, 1998). Based in systemic functional grammar (Halliday 1985/1994), the concept of ‘word associations’ highlights one of the ways textual cohesion is constructed. Halliday states that “the most direct form of cohesion is repetition” (Halliday, 1994, p.330). Depending on the teacher’s purpose, and the age range and stage of the class, young readers can easily explore any text for repeated elements. While this kind of initial recognition does not involve higher-order thinking, it does lay the foundation for more sophisticated ways of looking at and thinking about texts. Students can work at individual word level (the repeated wash, dog and Mum, for example, or the repeated ‘c’ in the alliterative convulsions and contortions, or the ‘silent e’ in cheese, earthquake, joke, like, cyclone etc). They can identify items at the level of grammatical constructions (for example, like coastal foam from a cyclone, like an automatic sprinkler system are both phrases and similes). They can apply the principle to the level of structure where Mum’s presence is reasserted in a humorous way at the end of the poem. When this simple level of patternmaking is established, readers can be guided to consider the constructed nature of the text. They can properly understand the author’s deliberate selection of language to create a particular effect. When readers do this they are making a strategic move into higher-order thinking (McDonald, 1999).

While repetition is the most obvious cohesive element in a text, cohesion is also constructed through other elements, such as the selection for words which are similar (synonyms) or contrasting (antonyms), or classes of words (meronyms). It is important to note that the reader seeks examples of patterns across the text (‘text level grammar’, Derewianka, 1998; English K-6 Syllabus, 1998) rather than focusing on the word or the sentence. Again, once a pattern is discovered, the shift to higher-order thinking can be straightforward as comments on the effect of the patterns, and why those selections may have been made by the author, can be probed and considered. The following discussion demonstrates some ideas for how higher-order thinking can be developed through moves between coding practice and critical practice.

In “Wash the Dog” the most evident form of cohesion is meronomy, or the selection
for classes of items (coding practice) which create the hyperbole and humour in the poem (critical practice). While there are similar words such as convulsions/contortions, suds/foam, the strength of the construction lies in the associations between the more technical nouns of earthquake/cyclone/flood and sea/coastal foam/water contrasted with the everyday and domestic backyard/fence/neighbour/barbeque/sprinkler system and tub/bathwater. While readers might want to group words differently to this attempt, the point is that it is the accumulation of these associations which creates the heart of this poem. Further, the concept of word associations allows more subtle relationships to be explored. For example, the notion of ‘contrast’ offers an opportunity to observe the distinction between the no joke of the fourth line and the practical joke described in the final line all over Mum’s new dress. When moved beyond graphophonic relationships, coding practice provides a scaffold for young readers to justify their personal response to the poem, examine a text as a constructed artefact and to discover and identify the deliberate lexical, grammatical and structural selections made by the author to construct the literary text. All of these analyses involve thinking beyond the literal level of understanding.

Another feature of patterns is the way the verbal and visual text is laid out on the page or screen. In “Wash the Dog” a visual reading path can be discerned, offering possibilities for interpretation. From a codebreaker perspective, the reader sees there are four sections to the poem which mark different stages of the event. Very quickly the coding becomes integrated with meaning making and analysis as we recognise that the sections allow us to shift between voices, starting with Mum’s quoted speech in the opening couplet. The stand alone second section draws attention to itself by its spacing and alerts us to our direct entry to the persona’s thoughts. The longer third section seems to capture the turbulence and time taken to actually wash the dog, while the final section shifts focus to the aftermath – and the practical joke. Observation of the visual layout of the text or image can be guided through layers of complexity, depending on the text itself and the degree of technicality the teacher wishes to introduce. This kind of recognition provides a model for how readers can interpret and infer information from the visual structure of the text and is particularly relevant to reading factual texts both digitally and in print (Walsh, 2006).

With poetry, it is always useful to reflect on how the poem is presented on the page, as
the poem’s form is integral to how the reader is asked to read it and the meaning it projects. In my experience readers enjoy this ‘way of looking’ and gain a deeper understanding as they identify the visual patterns and then explore and critically analyse the effects of this selection of patterns on the construction of meaning. It seems that once readers know what the ‘codes’ or patterns they need to pay attention to are, they can then move onto critically analysing the effect of these patterns in meaning construction. Thus a useful question for developing higher-order thinking and a text analyst reading position from coding practice is ‘What effect do the language, text and layout patterns have on the reader?’ Coding practice can offer an evidence-based entry to critical practice and higher-order thinking.

TEXT USER / PRAGMATIC PRACTICE
I have concluded with text user because of the pragmatism that this practice calls for. In any classroom, pragmatic practice recognizes that texts have a cultural and educational function and they become a springboard for action. Teachers use literary and factual texts to engage students in listening to them read aloud, in talking about them, and in related reading and writing tasks. What is part of this practice is that users understand both the functions of the texts they work with, enjoy, and produce, and the relationships between the texts as social practice and their construction as texts. To this end, all the observations around “Wash the Dog” that have been made in the previous discussion construct us as text users. Understanding the function of the text as constructed through words, through visual patterns, and through discourses can be embedded in the work involved in semantic, coding and critical practices. Each of these offers entry to higher-order thinking.

CONCLUSION
This paper has attempted to unpack what may count as higher-order thinking and how the four resources model may be used to support teachers in explicit teaching of such levels of thinking. The role of the literary text as meaning-maker is particularly important: if “stories structure the meanings by which a culture lives” (Cohan and Shires 1988, p.1) the use of literature in the curriculum becomes a major socialization practice into the dominant ideology. As Candlin states, “... children’s fictional texts are engaged in a struggle for young people’s minds” (Candlin 1992:ix; Stephens 1992).
When presented in an educational discourse, then, children’s literature gains an added power in its inscription of young readers. Teachers need strategies to expand how they mediate literary texts with their students. They can also recognize that the same principles can be adapted for producing higher-order thinking about factual texts.

The four resources model offers several pathways to guiding students to higher-order thinking. Teachers can deeply engage readers with texts through exploring the connections between themselves and the experiences and knowledge to which the text alludes (text participant). Teachers can guide students to examine texts to identify the patterns of language, structure and image that construct meaning (codebreaker). Teachers can subvert their own reading stances by interrogating aloud the discourses they had (possibly) naturalized in earlier conversations and interpretations (text analyst). Teachers can use all these practices to involve students in discovering how texts function at many levels (text user). To conclude, I will give Aidan Chambers the final word:

Helping children engage in the drama of reading, helping them become dramatist (rewriter of the text), director (interpreter of the text), actor (performer of the text), audience (actively responsive recipient of the text) [and] critic (commentator and explicator and scholarly student of the text), is how I think of our work as teachers of reading.

(Chambers, 1993, p.12)

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Effective literacy instruction and culturally and linguistically diverse students: or having the ‘tail’ wag the dog

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Abstract
In this paper I argue that identifying effective teaching for cultural and linguistic diverse students requires a very smart view of what ‘integrated’ literacy instruction means. To become more effective with those groups of students over represented in the ‘tail’ of the distribution (and solve some of the conundrums of reading development) we need a better theory of development and learning than we currently have; one which carries a view of teaching as a form of expertise. I will discuss features of effective teaching with culturally and linguistically diverse students, drawing on recent research into the teaching of reading comprehension.

Introduction
In this paper I argue that identifying effective teaching for cultural and linguistic diversity requires a very smart view of ‘integrated’ literacy instruction; the term employed in the Australian National Inquiry into the Teaching of Literacy’s Teaching Reading Literature Review (TRLR, 2005). In general, I agree with the idea of integrating approaches, the approach of direct and explicit phonics instruction with meaning or language based approaches, as proposed by the Australian National Inquiry into the Teaching of Literacy, (ANI, 2005). But the idea of integration runs the risk that talking about ‘balanced instruction’ runs, of being a matter of putting bits together guided by a straightforward prescription. Rather, the model of effective instruction I want to capture in this paper is something more dynamic and expertly controlled. I will develop the idea of effective instruction as involving intentional, adaptable and judicious selection and deployment of activities with known attributes under the control of the teacher as professional expert. In
discussing this idea I can engage with the arguments and conclusions in the ANI (2005), especially around the general ideas of effective teaching and learning in relationship to children with diverse cultural and linguistic identities.

In its review of teaching reading the Australian National Inquiry focused on students with ‘reading difficulties’ (TRLR, 2005, p.v). The review refers to many underlying ‘causes’ of difficulties citing among other ‘factors’ ... ‘socio-economic, cultural impoverishment (and) indigenous status’ (TRLR, 2005, p.5). The latter group, indigenous students, is particularly over represented in the tail of the distribution of achievement in Australia (p.6). Indigenous students are often included in a wider group termed in the United States ‘minority’ children referring to indigenous students and those culturally and linguistically diverse students in the communities who have less political and economic power than mainstream communities, for whom schools are risky places. In New Zealand as elsewhere children from these several communities are more highly represented in the tail of the distribution of achievement (Alton-Lee, 2004).

Underlying my arguments here is a contrary view to that in the TRLR (2005), that as much as any other group of children these children are resource-full in their cultural, social and cognitive lives and that they don’t suffer from a psychological condition located in themselves called having difficulties; rather they suffer from a condition to be fixed which resides in what we do as educators. A simple way to show this for New Zealand is that irrespective of the socioeconomic status of the community of a school the gap between M _ori children (from the indigenous community) and Pasifika children (from Pacific Island communities), and other children remains at that school (Hattie, 2002). Obviously physical and economic resources are important but the issue is to do with something in the way we teach because if you change the resources, in this instance the income levels and employment levels there is till a gap although overall levels increase for all groups.

There is a challenge for effective instruction in the ubiquitous presence of this (so called) tail, which if solved will mean we have become theoretically and professionally a lot
smarter than we currently are. It will signal a better understanding of the nature of teaching and learning in the complex systems that are schools, school districts and wider educational communities. It will mean that the disciplines which provide structural analyses of schools which act as systems which tend to reproduce inequalities, and those analyses which provide psychological analyses of teaching and learning will be able to be integrated. This is because the challenge is as much about the structure of lived systems and their intersections with communities as it is about the activity of teachers and students; and accounts that concentrate only on one of these are limited. So, in addition to the compelling need to provide better teaching, this is also why it is worth having the tail wag the way we think about effective instruction across the whole distribution.

The challenge for teachers, researchers and policy makers is that irrespective of the system it seems those culturally and linguistically diverse students who are over represented in the tail tend to start school with fewer of the linguistic and literacy resources capitalized on by schools. Specific areas of knowledge of the written symbol system such as phonemic awareness, knowledge of alphabetic symbols and rules and concepts about print are strong predictors of continued development at school across many countries; of the order of $r = 0.5-0.8$ in the United States (Snow Burns & Griffin, 1998) and in New Zealand (eg Clay, 1991). That entry knowledge can remain predictive some years into school, although relationships are mediated by a second strand of development to do with language meanings and use (Whitehurst & Lonigan, 2001). The point is that some groups of children, the ‘minority’ children who find schools risky places, start school with less of this school-related literacy knowledge.

So the general problem, described in many reviews including the TRLR (2005) is that from the entry point the ‘gap’ for these children remains. Or does it? I will point out shortly it turns out that it depends on what you measure. But in general, the entry gap continues in ongoing progress if not widens especially for the language related areas that

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1 Wilkinson (2005) makes a similar argument about structural and psychological analyses of health and inequality
2 But as always in studies of real children and families there are two qualifications (McNaughton, 2005). One is that some minority children have a strong knowledge base in these areas and early progress is not slow. The other is that there is large variation within cultural groups as much or greater than the variation between groups
impact for example on reading comprehension. Within this general finding there is a very important conclusion lost sometimes in the reviews. The gap occurs irrespective of the general literacy programme. There are longitudinal studies in the United States and Canada from a variety different programmes (Snow, Burns & Griffin, 1998; Cunningham & Stanovich, 1999); there are studies referred to in the TRLR (2005), and there are New Zealand examples from a programme generally described as relatively balanced (Hattie, 2002; Flockton & Crooks, 2001); each of which describe the same phenomenon. This is a very important point developmentally because it signals the significance of the attributes of daily teaching rather than the so called programme: and this point comes with a corollary. Studies of highly effective teachers with culturally and linguistically diverse students in the United States have been located in a variety of programmes too. Why? It turns out that at the core of the teachers’ programmes is a wide curriculum within which different types of teaching occur and features of effective teaching such as incorporating children’s backgrounds, high expectations and a focus on meaning and language are present, as well as explicit teaching (McNaughton, 2002).

There is good and bad news from research on effective teaching over the transition to school and its impact on early progress for the components such as item knowledge and their integration to develop fast and accurate decoding of early texts. Evidence from the United States such as Barbara Foorman and her colleagues (Foorman, Francis, Fletcher & Schatschneider, 1998) well reviewed in the TRLR and evidence from New Zealand (Phillips, McNaughton & MacDonald, 2004) suggests children who otherwise fit the low progress pattern have relatively quick acquisition under a generally explicit teaching programme. So what we know here is that unless we do something more deliberately and more explicitly specific to the development of fast and accurate decoding the gap can remain for culturally and linguistically diverse students.

If we are deliberate and explicit about this we can close the gaps. In our ‘Picking up the Pace’ research we showed this reduction (Phillips et. al. 2004). The research was with M ori and Pasifika children typically achieving two stanines below average levels in areas of decoding after a year in what are called decile 1 schools, these are schools
serving the communities with the lowest income levels, the highest unemployment and whose communities are predominantly M_ _ori and Pasifika. With more deliberate and explicit teaching in areas of reading and writing including specific phonics instruction the children’s achievement was close to the national distribution. In some areas their progress was as good as or better than typical progress (alphabet knowledge), in others they closely approximated typical progress (eg progress through text levels), and in one they were still noticeably below average levels (generalized word recognition).

More generally in New Zealand we have evidence from national benchmarking and renorming exercises that children’s progress in decoding in the first four years, including M aori and Pasifika children, has changed on some measures such as text decoding (Clay, 2002; Flockton & Crooks, 2001). This is associated with a national policy shift implemented in the National Literacy and Numeracy strategy which was a response to reports by a Literacy Task Force (1999) and a Literacy Experts Group (1999). The recommendations from those reports influenced the policy and concerted professional development and research-practice developments followed – focused on year 1-4 and M_ _ori and Pacific children especially in decile 1 schools. In this respect the recommendations of the ANI (2005) about the need for deliberate and explicit instruction in decoding components may be particularly beneficial for linguistically and culturally diverse students.

Now for the bad news. Even if we do this it does not mean that the gap reduces further on up the system. National monitoring in New Zealand and our research based interventions show that there is no guaranteed flow on effect with concerted increases in decoding necessarily producing higher progress in reading comprehension (Flockton & Crooks, 2001; M cNaughton, Lai, M acDonald & Farry, 2004). Experimental demonstrations of teaching phonics also tend to show very limited transfer to comprehension (Paris, 2005). This finding sets up some interesting conundrums for us as teachers, researchers, and policy makers; which I will now review and which will lead to my making claims about what effective teaching and integrated instruction should look like.
There are three conundrums to consider here. The first follows directly from the last point about developmental relationships between decoding and comprehension. Logically there are relationships such as the one identified by Tan and Nicholson, (1997), who showed that poor decoding was associated with poor comprehension. It makes perfect sense, if you can’t get the words off the page you can’t comprehend; but then why not longer term outcomes? The reason is that the corollary doesn’t apply - decoding may be a necessary condition but it is not a sufficient condition; so being a better decoder doesn’t make you automatically a better comprehender (TRLR, 2005). The developmental reason for this can be found in Paris’s (2005) multiple components model of literacy development or Whitehurst and Lonigan’s (2001) ‘inside outside’ model of the strands of literacy development, each these explaining that there are different developmental patterns associated with acquisition for components such as items and for language meaning and uses, and they are somewhat independent. This is why the phenomenon of rapid accurate decoders who are not able to comprehend described by professional educators and researchers (McNaughton, Lai, MacDonald & Farry, 2004). There is another developmental reason. Inoculation models don’t apply to most phenomena in teaching and learning; just because you know and can do some stuff this year doesn’t mean that automatically you make gains beyond this next year. It depends on whether you continue to have an effective teacher who enables you to build on to and to extend one’s learning.

A second conundrum comes from the studies of explicit teaching. It is that there are risks with more explicit teaching. I have come across three substantial risks for culturally and linguistically diverse children who find school risky. The research evidence for these risks is well known and based on a long history of experimental studies and applications in classrooms. The first risk is over specification of component knowledge and its teaching which can reduce curriculum focus in other areas and thus access to the very experiences that the children need for the language threads of development. This is the inner workings of the Matthew effects (Cunningham & Stanovich, 1997) in such areas as vocabulary acquisition and the language associated with text based tasks in classrooms. It is after all relatively easy to teach the component items given the knowledge we have, but
over use of tasks and time conspire against children being exposed to the complexities of classroom language (McNaughton, 2002).

The second risk also comes as an over specificity effect; creating a passivity in learning which reduces transfer. The question of transfer has a long history and we seem to forget educational histories so easily. In the heady days of applied behavior analysis we found that generalization, especially involving complex behaviors didn’t happen automatically. Transfer was much more limited than our theories predicted. The principle derived from the frustrations of finding limited transfer by behaviour modifiers was to train for generalization and not just hope that it would happen. At the same time the research evidence on errorless discrimination training, which provided a basis for DISTAR and forms of direct instruction, showed that specificity which reduced errors below rates that enabled children to learn from their mistakes, bred limitations in the learning (McNaughton, 1987).

The third risk is that the more explicit the teaching and especially the more accountable that teaching, the greater the pressure on teachers to teach to the specifications in a formulaic way and the more students come to learn the knowledge or the processes as algorithms to be run off. The over specification of explicit teaching can produce a ‘default to recipes’ thereby turning professional experts (teachers) into technicians. Guaranteeing what is taught may be a good thing but as I will discuss further below there can be problems and these are not limited to teaching phonics, the risk is present in the teaching of reading comprehension too.

Each of these risks is not, and I underline not, an argument against explicit and direct teaching. Rather it is an argument for knowing the conditions under which that explicitness works and the conditions under which being explicit doesn’t work.

The greatest conundrum however is the sum of all these. If we are so sure that teaching can account for such a significant part of the variance in student achievement (TRLR, 2005), why can’t teachers generally make a difference to culturally and linguistically
diverse children (and especially indigenous children)? My answer to this question is both similar and different to the ANI (2005). It is similar in that I would also emphasise the role of effective teaching and the implications of this emphasis in rigorous assessment and theoretically better informed evidence based education for teachers. Where I differ is in the view of cultural and linguistic processes in teaching and learning and the nature of effectiveness.

The answer does not lie in a balance between or integration of phonics and whole language approaches alone. The problem with the ideas of balance or integration is that they can imply that one needs equal parts or equal products of dimensions. In the most trivial form of the idea of balance this is phonics on the one hand and whole language on the other. But I don’t think teaching and learning of most types, and specifically the teaching and learning of literacy, are like a simple balance or like a formulaic integration. At the very least they are more dynamic and fluid, and in the context of cultural and linguistic diversity much more like the continuous realigning of set of balances. We need a better theory of teaching and learning that can cope with these conundrums.

Some features of a developmental model of teaching and learning
Here is an outline of contemporary concepts that enable us to make sense of these issues. These largely come from a particular theoretical framework, one which is derived from socio cultural traditions in developmental psychology (McNaughton, 2002), but reflect current work especially in learning, literacy and language which draws on cognitive and other traditions (eg McVee, Dunsmore, Gavelek, 2005; Siegler, 2005). Once these are laid out I can plot properties of effective instruction using the idea which is contained in the ANI (2005) of an integrated approach to effective instruction. But I will argue that effective instruction for a teacher is best seen as comprised of a set of integrations and their continual realignments used by professional educational experts.

Literacy develops within social and cultural practices.
The first assumption, that is literacy develops within social and cultural practices, is derived from socio cultural theorizing. This is now almost a truism in teacher discourse,
the concepts for which have a status like the simple and problematic uses of constructivist
concepts in teacher education identified in the TRLR (2005). The concepts are that
literacy events (activities) in classrooms and instruction define a set of practices. These
have associated with them beliefs, goals, and ways of participating. Each of the following
developmental features are all tied in some way to this idea because they are so
fundamental.

But have we taken the theoretical implications of this idea for instruction seriously
enough? Beyond scaffolding, zones of proximal development and descriptive analyses of
classroom practices, what does this understanding, especially about the cultural practices
part enable us to do that we were not already able to do? One example is that this view of
activities and practices helps us appreciate how much of children’s learning, especially
early in developmental sequences is highly contextualized; grounded in specific activities
and not automatically generalized from those.

The implications of this ‘situatedness’ are profound; yet not well acted on. A major
implication is that children from culturally and linguistically diverse communities may
have literacy knowledge and skills which are not captured in our standard assessments.
There are many studies demonstrating the literacy knowledge that such children may
have, derived from family and community practices, which are not recognised in our
formal and informal assessments and hence professional knowledge. In Australia there is
long tradition of commentary about and descriptions of in studies such as those by
Barbara Comber, Peter Freebody, Allan Luke and others. The significance of this is that
on the one hand the assessments constrain us so that these children are seen as less
knowledgeable, less proficient or as having deficits in the absence of knowing in some
ecologically or contextually valid way what they actually do know (Luke et. al. 2002).
On the other hand this mean teachers are less able to start ‘where the child is at’, or as I
prefer to put it ‘build on the familiar’. There are some powerful demonstrations of what is
possible given greater knowledge and understanding (see McNaughton (2002) for a
summary).
A further implication of this sort of activity analysis is that it may mean we get a deal smarter about what school activities require of children’s development. Take the case of vocabulary and reading comprehension. It is clear that one of the instructional needs for culturally and linguistically diverse children is to develop larger repertoires of vocabulary of the sort that make a difference to the texts required in classrooms in part because vocabulary size on entry to school is strongly associated with later reading comprehension (Biemiller, 1999; McNaughton, 2002). But the recent history of research in vocabulary development suggest that while communities differ in how language is socialized, communities and families within communities also differ in terms of the sheer amount and complexity of words to which children are exposed and from which their own lexicon is acquired.

So the idea of development being socially and culturally embedded gives us two implications here. One is that the vocabulary acquisition that relates to school progress has origins in family and community ways of talking. Some children come to school with less of that vocabulary, but this is not the same thing as assuming culturally and linguistically children are not active learners and not cognitively resourceful. Hence, the second implication which is that we can begin to identify the classroom activities which can build an extensive vocabulary, fast and in a way that enables children to become more effective at acquiring further vocabulary. Further examples from our work include fine tuning reading to students and guided reading to maximize take up, and to rebuild students acquisition as ‘word detectives’ (McNaughton, Lai, MacDonald & Farry, 2004). Lisa Delpit makes this point in relationship to the rather pessimistic research picture painted by other researchers of the enormous differences in size of vocabulary between different communities of children entering school.

“Only a consciously devised, continuous program that develops vocabulary in the context of real experiences, provides rigorous instruction, connects new information to the cultural frameworks that children bring to school, and assumes that the children are brilliant and capable, and teaches accordingly can (sustain vocabulary development).” (Delpit, 2003, p.17)
The developmental significance of awareness

The second assumption builds on the recent developmental research and theorizing in literacy development about the significance of awareness. Often this is associated with the development of awareness of sound letter relationships or the way oral language can be segmented. But the psychological idea of awareness is a more general one which refers to monitoring and controlling performance (McNaughton, 2002). We know the development of this awareness is very important at different points of acquisition but that it is not a thing that is separate from the system of knowing with which it is associated; for example you can’t build metacognition without having some knowledge to be aware of. A reader’s or writer’s awareness of their reading or writing arises from what they know and can do. It involves the monitoring, and control over that knowledge or way of acting, and understanding how performance relates to being effective or ineffective (Siegler, 2005).

Contemporary research attention has moved from researching the need for awareness relating to the properties and uses of the symbol and sound system to the need for awareness of comprehension strategies (Sweet & Snow, 2003). In addition however, there is a substantial research need to understand how awareness develops of classroom activities with rules and goals and ways of participating. It is in this latter area that culturally and linguistically diverse children may be especially vulnerable to the hidden or assumed nature of teaching and learning in mainstream classrooms. Our research evidence shows that teaching awareness of sound and letter knowledge and uses is relatively straightforward (TRLR, 2005), and that it is somewhat straightforward to teach awareness (monitoring and control) of comprehension strategies (Pressley, 2002). How difficult is it to make classroom practices more obvious, more understandable more controllable? One part of our ‘Picking up the Pace’ research with year 1 teachers involved working out ways for them to be clearer about what was required of children in reading or writing activities. This meant changes to the clarity and consistency of prompting as well as being more explicit about the critical knowledge (Phillips, McNaughton & MacDonal, 2004).
Multiple configurations of teaching and learning

A further assumption relates to concepts of teaching, instruction and guidance and associated ideas of learning. I agree with the TRLR’s (2005) analysis of the problems associated with constructivist concepts as they may be employed currently in educational practices and programmes such as ‘whole language’. For example, the idea of an active learner immersed in written language constructing concepts within a stage like sequence, which may be assumed in a whole language approach, compounds difficulties for children for whom the literacy activities and pedagogy are unfamiliar. Essentially it creates a double whammy because not only is this making learning difficult, but given that they find it difficult it reinforces a deficit view of the children because their construction must be faulty (McNaughton, 2002).

What is an alternative theoretical position? The TRLR (2005) argues that viewing the teacher as facilitator, a view argued to be associated with whole language approaches, is wrong. Rather, a view of the teacher as director is needed. This view provides a basis for seeing the instructional need for deliberate and explicit teaching. Unfortunately this is argued alongside another argument that viewing children as inherently active is not in the best interests of children from ‘disadvantaged’ backgrounds (p.12). This is introducing an odd conceptual problem; either children are inherently active or they are not. If some are not, such as indigenous or ‘disadvantaged children’, is that implying they are somehow inherently different and is that setting up the complementary double whammy to that which occurs in the former view? Treating some children as passive may deny them opportunities to use powerful cognitive processes such as active hypothesis checking, making inferences, and even being actively aware of their reading and writing.

It is both possible and necessary to have a view of all children as able to learn as it were actively and passively, armed with learning strategies which differ in strength and probability of use according to socialization and instructional conditions (McNaughton, 1995; Siegler, 2005). In addition, one can see the role of teachers as being able to co construct teaching and learning events in a variety of ways potentially creating multiple
tutorial configurations. Some of these configurations are more effective for learning some things; for example a direct modeling and imitation configuration is very effective for learning how to form letters in writing. And some are more useful for other things; for example, a more discursive scaffold style for shared reading where the goal is to develop understanding of author’s intent and aspects of narrative structure. But the former can be done in ways that do not reduce the degree of active participation by the child, in the sense of shared intention and deployment of effective strategies by the child. I think this is one reason for the strongest associations in the study of phonemic awareness and word naming with word reading come from the measures that are closest to the act of word attack in text reading (Swanson, Trainin, Necoechea, & Hammill; 2003). Nevertheless, it is possible in any tutorial configuration to increase the degree of passivity thereby reducing incidental and acquisition and running the risks I outlined earlier. So this is why we need a view of children as inherently active but its expression and functions are determined by classroom structures.

The presence of developmental flexibility.
Together the above features provide an explanation for the final feature: the presence of flexibility in literacy development, and more generally multiple pathways of learning in complex domains of knowledge (Siegler, 2005). We can create, within some known limits, different developmental sequences in learning, more so at the early stages of literacy instruction, but even at later stages. We have known for some time that different curriculum channels are associated with different developmental patterns. So in the case of early decoding stages miscue patterns, the role of self corrections, the predilection to analyze unknown words and the strategies employed vary according to the programme emphasis (McNaughton, 1987).

However, there is considerable ‘slippage’ or variance within a curriculum channel. Children can learn things they are not directly taught and also don’t learn some things they are directly taught. The reasons for this have to do with the properties of teaching and learning I have already noted. An important implication follows from this too. It is possible to plot relationships (eg correlational) within classrooms and school systems and
conclude that the developmental pattern associated with high progress is what ought to be optimized for all across schools, districts and larger systems. But the developmental patterns for some children or groups of children can be very different from standard or expected patterns both in the transition to school and learning to decode effectively and at later stages in learning to comprehend effectively.

In our research to boost effective teaching of reading comprehension for years 4-8 in decile 1 schools we have demonstrated the need to gain a contextualized profile of both the learning and teaching in the schools in order to design more effective teaching (McNaughton, Lai, MacDonald & Farry, 2004). Despite the standard correlation the Maori and Pasifika children who were around 2 years behind national averages in reading comprehension nevertheless were adequately fast and accurate decoders for their age levels (apart from a small minority). The assumption that they needed extra decoding skills drawing on standard correlations was not born out in the profiles.

Instructional conditions: being an expert
Now I will turn briefly to the implications of these views of development for effective teaching using the framework and headlines in the ANI (2005) to structure my comments. An overarching implication of these developmental features is that a highly effective teacher could not be like a technician following a largely prescribed set of procedures. Rather, teachers are more like experts, the nature of which is to be deeply knowledgeable about what they do, how they do it, and why they do it. Experts are goal focused and intentional; they are strategic, being able to adapt to circumstances and to modify their tools or even develop new tools and ways of performing. Experts are keenly aware of the effectiveness of their performances in the sense of being in control by being able to monitor, check and modify (McNaughton, 2002). These attributes give experts the twin features of being technically adept as well as innovative and adaptable.

Teachers have expertise in particular practices of literacy and they are professional experts in particular forms of guidance using particular tools in particular settings. The former, the practices of teachers themselves as users and creators of texts, interestingly is
not as often the focus of our research. I think we should spend more time considering the significance of what teachers read and write themselves, what media they might study and enjoy, what patterns of communication both professional and non professional they participate in and how each of these might impact on their teaching of literacy. Arguably we should consider this aspect of their expertise given descriptions of teachers of language and literacy illustrate how motivated and informed they are by their own knowledge of media and texts (eg Dyson, 1997).

My sense is that we will find that teachers’ personal literacy practices provide a major basis for promoting intertextuality with their students. Recently Pappas and Varelas (2004) described how two teachers mediated connections between texts in constructing scientific understandings. The need to connect everyday knowledge to scientific concepts and to elaborate alternative interpretations using both shared and new texts is perhaps more obvious in an area like science topics. But the same argument can be made about the need to mediate textual connections in narratives. This requires knowing about the texts which can be connected. Indeed, our interventions with clusters of schools suggest we have reached a kind of ceiling in the teaching of reading comprehension. After three years the teachers are very good at teaching strategies and we can link aspects of this to substantial gains in achievement, but even further effectiveness is likely to depend on how rich their own content knowledge of texts might be.

The more researched form of expertise is about the procedural and propositional knowledge teachers have about teaching and learning and about the set of practices within which instruction is provided. Teachers’ expertise relates to pedagogy and to school literacy. For the purposes of this commentary on the ANI (2005) we can plot some of the areas of professional expertise crucial to effective teaching with culturally and linguistically students. In keeping with a central theme in the TRLR (2005) we can pose these areas in terms of managing the ‘integrated’ approach argued for by the ANI (2005).

The ANI (2005) focus on integration is very important, especially in relationship to children’s development of integrated knowledge and strategies; that is, a focus on
children’s generalized integration of decoding and comprehension components in the
service of comprehending and critically using texts. But for the teacher mediating that
integration means using approaches in ways that are not static nor some kind of simple
mixture. The idea of the teacher as an expert means intentionally, adaptively and
judiciously deploying activities in which a variety of forms of instruction will occur in
order that children’s use of component knowledge and skills can become integrated

Beyond phonics and whole language: a set of integrations
In addition to this integration in the last part of this paper I will elaborate on what else a
teacher with culturally and linguistically diverse students might need to integrate. This is
hardly an exhaustive list; the point is to illustrate how effective instruction requires a high
level of expertise involving continual realignment of balances. In each of the following I
will briefly give examples from both beginning instruction as well as comprehension
instruction of what I think an effective teacher needs to integrate.

1. Teaching linguistically and culturally diverse students requires use of activities
which are both familiar and unfamiliar to children in their content, form and
structure. This is the central argument in the book ‘Meeting of Minds’
(McNaughton, 2002). In comprehension instruction we know that if we use texts
with familiar content students will be able to comprehend better than when faced
with unfamiliar texts (Pressley, 2002). That is one reason why culturally and
linguistically diverse students are often placed at a disadvantage, because the text
content they interact with often assumes mainstream experiences. This is also true

However, it is also the case that these same students need to be able comprehend
new and unfamiliar content and learn from that content; they need to be able to
apply strategies flexibly and adaptively in new contexts of use. The evidence from
studies of effective teachers is that they are able to juggle these activities in
planned ways, using the familiar content and form of the activity to bridge to
unfamiliar content and forms. There are both descriptive and experimental studies
of teachers able to do this with the students in the 'tail', captured in New Zealand's best evidence synthesis and now seen as a major dimension for our building more effective teaching in New Zealand schools (Alton-Lee, 2004).

2. A second area of expertise is needed in the integrated use of both versatile (or open ended) and highly constrained activities; with both explicit and implicit forms of instruction. The contrast between activities here might be between the close reading of a text and phonics instruction. Ideally and under most conditions the former is a more open activity, its versatility seen in the variety of aspects which students and teachers might focus on and the potential for incidental or contingent learning to occur. The latter under ideal condition often involves explicit teaching under highly constrained conditions.

An example of an open ended, versatile activity expertly controlled by a teacher comes from our research into reading comprehension. The example is from the classroom of a very effective teacher with M_ori and Pasifika children in year 7. We know she was very effective because over two years the children in her class made the greatest gains of 50 teachers across a cluster of 7 schools, of the order of one year of progress additional to that expected for a year at school. The activity was a close analysis of the film ‘Finding Nemo’ (McNaughton, 2005). The goals of the activity included understanding plot structure and exploring themes and characters, the usual goals associated with such an activity.

The versatility afforded by the activity structure is shown dramatically. In the course of one session the focus of the activity shifts, among many other things, between elaborating vocabulary (eg petrified); identifying intention (eg why a character is scared of the shark); identifying the presence of narrative complication and making the intertextual link to existing examples from the children’s writing; introducing idiomatic language (eg ‘light hearted’), identifying homonyms (inflation) and homophones (mourning and morning); and even having a mini lesson, explicit and direct and out of the context of the text at hand,
on hearing the difference between [b] and [p] in ‘mob’ and ‘mop’ because that contrast is hard for some Pasifika children.

An example of a much more constrained activity and its significance comes from teaching phonics from our first year interventions. In an activity setting occurring at least three times a week with small groups, which my colleague Gwenneth Phillips calls ‘word work’ (Phillips, M cNaughton & M acDonald, 2004), the teachers used plastic letters and whiteboards following instructional reading (modified guided reading) to make explicit the new entrant children’s understanding of letters, sounds and their relationships with words encountered in the core texts they were learning to decode. In this highly constrained setting there is very little opportunity for incidental learning, there is almost a singular focus and the constraints on both teacher and student are strong. And rightly so if there is some learning that needs to be guaranteed. The point is that the teacher knows a lot about the need for this explicit disembedded instruction and its use as a complement too and in the integration with text reading. The interventions which used this activity as part of the raft of activities were based on the teachers knowing about what was highly effective in terms of contributing to accurate and fast decoding. This was seen in the significant progress through text levels and the increased scores in writing vocabulary; the effect sizes for both were above 0.6 (Phillips, M cNaughton & M acDonald, 2004).

3. A third area is a set of beliefs and expectations about the resources of children integrated with a clear view of classroom requirements. The TRLR (2005) refers to John Hattie’s concern about the negative effects of us not having high expectations for students. There is a large body of research that shows the general presence of low expectations for culturally and linguistically diverse children (M cNaughton, 2002). In New Zealand we have been shown the significance of these expectations in a number of descriptive and intervention studies such as the impressive research in secondary contexts which involves M_ori educators
challenging teachers’ views using the voices of the students themselves (Bishop, Berryman, Richardson & Tiakiwai; 2004).

We described the presence and significance of expectations in our experimental interventions with teachers of new entrant M_ or M and Pasifika students. We found that the teachers had become convinced that children were not able to make early rapid progress in text levels, they expected the children to be at low levels after a year. Their assessment practices and text selections helped convey and construct these expectations. The teacher could provide a range of rationales, from the non English language backgrounds of the children, through their families’ levels of poverty and parental lack of resources and involvement. Under the intensive professional development using teacher generated evidence those expectations were challenged and changed (Phillips, McNaughton & MacDonald, 2004).

The issue here is one about believing in the psychological resources of children and expecting those resources can be deployed, as well as being realistic about what the children need. The highly effective teacher in the Finding Nemo example above was characterised by her focus on new and complex vocabulary. For example, she directed children to use the thesaurus and complex dictionaries. A telling contrast occurs with another teacher at a similar level whose children made expected gains over two years, less than the gains for the teachers in the cluster as a whole. The latter teacher suggested the children “go to the skinny dictionaries first...(they are ) written in simpler language”. Lisa Delpit’s statement about the need to rapidly expand size of vocabulary size captures this integration nicely.

4. The fourth integration occurs in the use of assessments. There are two dimensions to this. One is having a range of assessments to plot profiles of children at individual and aggregated levels. This is the need for what might be termed broad band profiling, so that in order to make sensible and well informed judgments about teaching and learning we not only examine components such as phonemic
awareness and letter knowledge, but we also examine the complex literacy expertise required for high levels of comprehension or high quality persuasive writing. This sort of integrated assessment balance is self evident when we have a rich model of multiple components and multiple pathways, in which societal expectations around development include all the 4 components identified by Luke and Freebody (1999).

But running alongside this is the dimension of assessments of conventional school literacy and assessments of expertise of out of school literacy expertise I noted earlier. This is the need to know about the resources in literacy and language children actually have and the relationships between these and the requirements of classroom instruction. Some examples of this from our research on reading comprehension include teachers using versatile activities which enable students to reflect on what they know about the language uses by local rap artists and plotting other aspects of their students’ metalinguistic knowledge which relate to texting. The teacher from the Finding Nemo example capitalized on an aspect of her children’s knowledge of Church texts when completing a poem constructed after an analysis of newspaper reporting in which meanings and synonyms for new words such as ‘depression’ fascism’ recession’, ‘greediness’ were explored. The poem went:

Racism is bad. Mourning is sad. Fears give you tears. War has gore. Open the doors, no more horrors and sore

The final line offered by the children with a degree of self mockery was ‘Thanks to the Lord’ (accompanied by much laughter).

5. But now for the reality check. The fifth need for integration arises from the reality of classrooms with culturally and linguistically diverse students. This is a challenge for those of us concerned that we recognise and incorporate the cultural resources of children into classroom activities. What really is possible with 30 odd children?
What isn’t possible for any teacher is to be fully bicultural with 30 odd children, or for that matter with 20 children, or even 5 children. Put more concretely, how much can one teacher know about the literacy and language resources that are part of this M_ ori student’s socialization, this Samoan student’s, this Tongan student’s, or like my nephew’s young son, this M_ ori, Chinese, Scottish and Irish child; and so on. This picture is compounded dramatically with the knowledge that the variation in literacy and language practices within community groups can be as great as or greater than the variation between community groups (McNaughton, 1997).

This problem does have a solution. The solution lies in an integration of personalized and generic knowledge and having the expertise needed to learn about any one child using all available sources (McNaughton, 2002). The core sources are the child themselves and the observations and assessments that are possible with that child; other family members that might be at school; the child’s parents or caregivers; and professional colleagues from the same community. The capability to do this depends very much on generic knowledge about the likely presence of diverse literacy practices and the generic knowledge one might have about the community. Thus, an effective teacher in our schools knows that different children come to school potentially with different socializations of literacy and that children form a particular community groups, let’s say Samoan children in South Auckland are likely (inter alia) to have recitation skills and knowledge of textual practices derived from Church and Family devotions. This would be one reason I would argue alongside the TRLR that we need more complex models of human development in teacher education than currently we have.

6. The final need for integration deals with the risk I described earlier, it is the need to integrate two dimensions in activities. One is the degree of explicitness and the
other is the degree to which the learning is located in text use. These are separable
dimensions. A simple call to be more explicit runs the risk noted earlier of the
performance of the task being the goal. The risk is what we might call the risk of
crystallizing performance.

We have found this has occurred with explicit instruction of comprehension
strategies. Initial baselines of patterns of achievement in studies of comprehension
instruction in the culturally and linguistically diverse groups of students in South
Auckland showed widespread difficulties with paragraph comprehension
(McNaughton, Lai, MacDonald & Farry, 2004). Analyses revealed the difficulties
were in maintaining cohesion within and across sentences, drawing inferences and
other strategic attributes of comprehending on school-based tasks were weak.
Following best practice models these indicated the need for more effective
strategy instruction.

But systematic observations in classrooms revealed that explicit instruction, often
as part of an approach like reciprocal teaching occurring at the beginning of
reading sessions and as orientation to texts, repeated in learning intentions and
repeatedly rehearsed, was frequent. The students could define prediction,
summarising and other identified strategies and had well developed technical
vocabularies such as ‘main points’, or ‘complication’. The problem we detected
through the observations was that these were being identified and applied as
though their description and use were ends in themselves. These processes, which
are components of a well functioning system (Pressley, 2002) had become
crystallized or objectified in a way that had separated them from their function or
the original goals; that is to construct (and deconstruct) text meanings. The
activity had morphed into something like a display activity in which the
performance was the goal.

We have developed an hypothesis for how this had happened, which is presented
in Figure 1. The teachers were focused on the strategies, could identify and check
these with clarity and precision, and the students had control over them. But there were few instances where the results of a prediction for example were checked against the ‘evidence’ in the text. Student attempts at summarizing and questioning were accepted and affirmed with little use of checking for veracity, accuracy or complexity from texts. The activities had become focused on the performance, rather than meaning. It is important to note that this guaranteed highly accurate identification of and reference to strategies and related technical concepts; but not high performance on the measure of paragraph comprehension.

Some years ago I described similar phenomena in the case of the teaching of phonics (McNaughton, 1987). The research evidence suggested to me that if explicit teaching especially in teaching and testing formats which were disembedded from texts, was a continuous focus, the possible effect for some students was that the learning would become fixed on the performance of that knowledge. Note again, students could be knowledgeable and be able to identify and refer to aspects such as consonant blends and diphthongs and other arcane technical knowledge. I noted earlier, that a recent meta analysis reported that the strongest associations in the study of phonemic awareness and word naming with word reading come from the measures that are closest to the act of word attack in text reading (Swanson, Trainin, Necoechea, & Hammill; 2003). I think a reason for this is that making sure the learning is reliably embedded in text reading, and measures which are more like real word attack are more sensitive to that, avoids the phenomenon of crystallized performance.

Concluding comment
The ANI (2005) has engaged in an exercise that other countries have tried too. I think it is extremely important for a system to audit itself. The auditing needs to be evidence based. That is, it needs to be informed by the evidence in the system. A range of sources of evidence and theoretical understandings are important to this process, including the conclusions of other systemic reviews. But part of the argument advanced here is that systems and their tails may have very particular attributes. Contextualizing the evidence
is needed. What are the instructional needs for culturally and linguistically diverse students at risk in the Australian schools? The ANI (2005) provides some answers and directions. I have suggested some elaborations or even reframing of some of these conclusions. All of us need to get this right for ethical, cultural, social, political and economic reasons. The Australian identity is known for its resourcefulness and never say die attitude and in this area perhaps learning as much form the ‘tail’ as possible would add to our educational resourcefulness.
Figure One

Continuous explicit teaching outside of texts
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Literally remote: Identity, Knowledge and Learning

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Abstract

This paper reports on one aspect of a qualitative study (Rennie et al, 2004), which investigated the experiences of seven Indigenous students as they moved from their community primary school to their urban high school. Community and school literacy practices identified through the data are discussed and compared in relation to issues around identity, curriculum and learning.

This paper approaches literacy from a socio-cultural perspective which means that literacy is viewed as variable forms of social practice (Barton & Hamilton, 1998; Gee, 1996; Heath, 1986; Luke & Freebody, 1997). The community data suggest that the students in the study were engaged in a number of different literate practices in their home community. Many of the literate practices identified throughout the community data formed part of the children’s identity. The study suggests that student identities embody different forms of knowledge and skills that are played out in the different school contexts. These qualitatively different identities play key roles in the students’ effectiveness as ‘westernised’ learners. The study also found that schools valued and acknowledged some literate practices more than others and that students were required to learn in particular ways. Further the data suggest that opportunities for learning were often lost as a consequence of this.

The paper is divided into three main sections. The first provides a brief summary of the study. The second discusses and compares the literate practices identified in the community and school data. The final section highlights ways that schools might value and acknowledge community literate practices in ways that are inclusive of all learners’ cultural and social backgrounds and in ways that maximises the potential for learning.

We just chop and leave a mark. We just chop it and look. If nothing we just leave the chop there so we see that’s a mark, and if you go again and you see that log two weeks later you see the log it will be alright. There’ll be something.

Arnie

Make two eggs. Put butter in that big bowl. Mix it all up. Add milk. Put it in the oven.

Kita

About gathering mussels and long bum (points to mussels and long bums on the painting).

Dale

Arnie, Kita and Dale are three of the children who participated in an extensive study that generated detailed case study information about the transition experiences of seven Aboriginal and Torres Strait Islander children as they moved from Year 7 in their community school to Year 8 in their new urban high school (Rennie, Wallace, Falk, & Wignell, 2004). In these vignettes the children discussed aspects of some of the activities they engaged with outside of school. Arnie described how to find mangrove worms in
logs that have fallen after being struck by lightning. Kita gave instructions about making a cake and Dale told the story of one of his Grandmother’s paintings.

This paper reports on some aspects of this study. Community and school literacy practices identified through the data are discussed and compared in relation to issues around identity, knowledge and learning. The community data suggest that the students in the study were engaged in a number of different literate practices in their home community. Many of the literate practices identified throughout the community data constituted part of the children’s identity. The data suggest that children identities embodied different forms of knowledge and skills that were played out in the different contexts investigated - community, community school and urban high school. These qualitatively different identities played key roles in the children’s effectiveness as ‘westernised’ learners. The study also found that the participating schools valued and acknowledged some literate practices more than others and that the children were required to learn in particular ways. Further the data suggest that opportunities for learning were often lost as a consequence of this.

**Setting the scene**

A feature of many rural and remote communities in Northern Australia is the requirement for Indigenous students to leave their home communities in order to access secondary education. In recent years, the curriculum in the Northern Territory has undergone sustained review and reform (Collins, 1999; Ramsay, 2004). The need to improve educational outcomes for Aboriginal and Torres Strait Islander students is echoed strongly in the recommendations from these reviews. They reported significantly lower retention rates for Indigenous children than that of non-Indigenous children (Collins, 1999). The 1998 retention rates of Indigenous and non-Indigenous students showed that between years 8 and 12, only 18% of Indigenous students remained in high school while retention rates for non-Indigenous students was 80%. Further in 2001, the Northern Territory had the largest proportion of students attending schools in remote areas in the country. Forty-four percent of all students attended remote schools compared to the national average of less than 5%. However, in the same year only 21% of these remote students attained the Year 5 reading benchmark (Ramsay, 2004).

Two of the major outcomes for this project were first to find ways to facilitate the transition experiences for students who are required to move from their home communities in order to access secondary education and second to identify issues that may work against students attaining western literacy standards.

**Conceptual considerations**

The study reported on here approached literacy from a socio-cultural perspective, see for example, “New Literacy studies” (Barton & Hamilton, 1998), “social literacies” (Gee, 1996; Street, 1995), or “situated literacies” (Barton, Hamilton, & Ivanich, 2000). This means that literacy is not understood simply as a discrete set of skills but rather as variable forms of social practice. Those who study the social nature of literacy within the framework of the New Literacy Studies distinguish between literacy events and literacy practices. Literacy events are defined as any event involving a written text. Literacy practices are what can be inferred from an observable literacy event as embedded within
broader social and cultural norms (Barton & Hamilton, 1998; Street, 1995). In this study text was viewed in a much broader sense to include written, visual and oral texts.

Work conducted by those who espouse critical social theories of literacy was important to this work (Luke & Freebody, 1997; Street, 2003). In the review of the research foci of the New Literacy Studies, Street (2003) noted that literacy practices involved privileging some forms of literacy over others. Similarly, Luke and Freebody (1997) suggested that literacy is not only socially constructed but that it is also institutionally located. Literacy events in the classroom are not neutral and are unavoidably connected to issues of discipline and power. The pedagogies embraced; the texts used and the rules and procedures employed give access to or deny access to particular “literate markets”. If one particular literacy program or pedagogy in the classroom is embraced there is an assumption that the classroom is "generic" when in fact, classrooms today are characterised by "non-generic, heterogeneous learners, places, conditions and times" (Luke & Freebody, 1997, p. 4).

Studies documenting the literacy practices of home, school and communities were also important (Barton & Hamilton, 1998; Cairney, Lowe, & Sproats, 1994; Cairney & Ruge, 1996; Cairney & Ruge, 1997; Fleer & Williams-Kennedy, 2001; Heath, 1986; Hill, Comber, Louden, & Reid, 2002; Hill, Comber, Louden, Rivalland, & Reid, 1998). These studies found a marked difference in the literacy practices and values of schools and their families and in the ways they used and defined literacy. The data from these studies suggest that literacy practices served to empower some whilst they disempowered others and the students who were most likely to succeed in school came from home backgrounds where 'family literacy practices' most closely resembled those of school.

Finally this study recognised the importance of the interplay between being identified as a member of a particular society, community or family group and being and becoming literate (Bell, 1997; Ferdman, 1991; Godley, 1998). The process of becoming literate and the kinds of literacy practices engaged in demonstrates aspects of the individual, place and cultural, social and community identities (Falk & Balatti, 2004; Ferdman, 1991; Li, 2000). It was an assumption of the research that the literacy practices of the study's participating schools and communities provided a lens to view the continuities and discontinuities in knowledge and identity that students experienced as they moved from their community-based primary school to their urban high school. That is, the literate practices represented the nature of the knowledge required for the different literate events in the different contexts investigated.

**Participants and places**

The seven children who participated in this study lived in two small communities approximately eighty kilometres from each other located on an island north of Darwin, Northern Territory. Children were selected on the basis they were in their final year of primary education and that they were relocating to the urban high school in Darwin that has historically enrolled most of the students from these particular communities.

Each of the communities investigated had around 400 residents and was serviced by a local store, bank, primary school, recreation hall, sporting facilities, social club, police, women's and men's centre, library, post-office, art and health centre. Both
communities were very traditional with the children and their families participating in hunting and ceremonial activities regularly.

Both community primary schools investigated had a student population of approximately eighty students at the time of the study. Most of the classes were multi-aged classrooms, for example, in both schools the Year 7 children were in a class that catered for students from Years four through to seven.

The participating urban high school had a population of about 800 students, the majority of whom were day students. The school provided boarding places for Aboriginal and Torres Strait Islander students from over forty different remote locations in Northern Australia. At the time of this study Year 8 was streamed into three different programmes, which included mainstream, supported secondary and intensive English classes. Students placed in mainstream worked with the mainstream curriculum, those placed in supported secondary were being assisted so they could later be moved into mainstream classes and those in intensive English classes had a strong focus on the teaching and learning of literacy and numeracy. Initially, one student was placed in a mainstream class; three were placed in supported secondary and the remainder in intensive English classes.

Data and design

Data from the study were collected using observations, document analysis and interviews. The children in the study, their parents and other significant community members were interviewed in relation to the nature of the activities the children were involved in on their respective communities. The children, teachers, parents and other significant figures such as boarding parents were interviewed in relation to the activities children were involved with during primary and high school.

Periodic observations of the student’s classrooms occurred during the final term of 2003 in the community primary schools and the first semester, 2004 in the urban high school.

A feature of the research design was the training of local research assistants. They assisted with translation, interviewing, video-recording, taking observation notes and data analysis verification.

There were three distinct phases to the analysis. In the first phase data collected from the home, community school and urban high school were analysed separately. Coding of the data sets occurred which involved identifying themes in the data and marking them (Miles & Huberman, 1994). The second phase of the analysis involved an ethnographically grounded approach to discourse analysis (Gee & Green, 1997). The third phase of the analysis used constant comparative analysis between the data sets to assist in identifying discontinuities between the data (Guba & Lincoln, 1981; Lincoln & Guba, 2000; Lincoln & Guba, 1985). This assisted in identifying the extent to which school literacy and numeracy practices reflected those valued by the community. The final stage involved the research team returning to the different communities to validate the research outcomes and discuss these with the schools and wider community through a full day workshop. NVivo, a qualitative computer software package, facilitated aspects of the different phases of the analysis.
Discussing the data

Children in the study participated in a range of literacy events in the various activities they engaged in both in and outside of school. There were similar literacy events evident in each of the contexts investigated – community, community school and urban high school. There were examples of recounting experiences and stories, asking questions, procedural texts, viewing, reading and writing. For example recounting experiences was a frequent literacy event in both the community and in school. Many of the participants discussed the community hunting experience as a means to share stories with each other. The stories were to entertain, share, maintain cultural knowledge and teach. They were often about previous hunting trips, places of significance and stories of survival.

In one of the primary classrooms students were required to recount a piece of local, national or international news each day. Following the oral news session, the teacher and students jointly constructed sentences related to the news they had discussed. The students were then required to copy these sentences into their workbooks. Similarly in the urban high school context students were required to write in a number of different genres including recounting their own experiences.

The major differences between the school and community literacy events of recounting experiences lay in issues around identity, learning and knowledge. In the school contexts students were required to recount experiences and then transfer these experiences into a written form. The emphasis was ultimately on writing. Students were not required to learn from the retelling but simply talk about something that they could later write about. In the community the literacy event of recounting experiences was a part of the various literacy practices observed, for example, hunting, painting and ceremony. Parents and community members expected their children would learn from the various stories they recounted which served to help them further piece together the puzzle of their individual identities. In the community these experiences and stories were not written down and community members saw it as their responsibility to pass this knowledge on to younger members of the community. In the community the knowledge contained in these experiences and stories was paramount, whereas in the school settings the mode of literacy (writing) as opposed to what children may learn through the retelling was seen as more important. Teaching and learning were important aspects of the various activities investigated. The retelling of stories was one of the literacy events that comprised the literate practice of hunting. Children were expected to learn from the retellings and they were expected to be the teachers of their own children in the future. Expectations in relation to teaching and learning were high. In the remainder of this discussion issues related to identity, knowledge and learning are explored further.

Identity, knowledge and learning in the community

Community-based activities included hunting, ceremony, art, sport and recreation, domestic and work. The children’s involvement with the various community-based activities began at a very early age. Children hunted almost every weekend, ceremonial activity was common, art activities were ongoing and in the case of some participants this was their work. Often there was no time allocated for specific activities. A hunting trip may take two hours or it may take two days. When there were time constraints it was often due to cultural rules and responsibilities.
Parents and community members had high expectations relating to the level of children's involvement in the various community activities as the following data show:

I:  Do you dance at ceremonies?
K:  We have to. Get in trouble

Community members discussed how they learned to paint or carve from a very young age by watching others. One of the children in the study talked about watching his father make pottery when he was five years old. The son of the potter explained how he would be the next famous 'pot man' or potter in the community. In this case the child planned to take on the identity of his late father.

The children built extensive bodies of knowledge through their participation in the activities. For example scientific knowledge was acquired during the hunting experience and cultural knowledge was acquired through hunting, ceremonial and art-related activities. The community believed the sharing of this knowledge to be very important. There was also a feeling that this knowledge was part of who they were. It helped to construct their identity.

During the discussions around the various activities there were frequent references made to particular people, groups of people, places and artefacts. For example when participants talked about how they learned to do a particular activity references were made to 'my grandfather' or 'his uncle' and there were frequent use of 'all the kids', 'family', 'us', 'we', 'all', 'them' and 'together' throughout the interview transcripts.

The community activities also had meanings attached to them. Stories, paintings, carvings and ceremonies all had deep cultural meanings that were associated with the people involved.

There were a number or roles, rules and responsibilities attached to the various community activities described. More knowledgeable elders had the responsibility of teaching the young and different community members played different roles in maintaining and passing on the culture. For example some were responsible for knowing and teaching the songs. These important roles that some of the children would eventually assume in their communities were already mapped out for them from birth.

Parents and community members also voiced strong opinions about their children identifying with both the Tiwi and Western way.

Yeah. It doesn't matter whether you speak English but you always remember your culture. Your culture come always first. But if you in different place you always use English. That's why I always explain to A. Like I always put them both. Tiwi and English. Balance. Then when he come back like holidays. If I'm still breathing he learn my side.

Parents felt strongly about their children having a 'good' education. They believed that it was the schools' responsibility to educate their children in the Western way and it was their responsibility to educate their children in a cultural way.
Learning and teaching was highly valued in the community. The children learned about the various activities by interacting with other members of the community. For example, they learned about hunting by going out with a skilled other. Parents, grandparents and older siblings used the activity of hunting as a means to teach younger siblings. The following data illustrates the importance of learning from an older and knowledgeable other:

P1: Like if the old fella with me he show me around. You have to follow the old person.
I: So that's really important old people teaching younger people?
P1: It's like when you go out hunting looking for buffalo.
P2: Like you're new person you have to go with the older person.
P1: And the person's been there before.
P2: Shows you.

In addition to learning from a knowledgeable other, children in this study learned about hunting, ceremony, dance, painting and the like by participating, watching, talking to others, listening and asking questions. The following excerpt from the data illustrates the high value placed on learning.

I: What would you want for him when he's finished school?
P: I want him to learn more
I: Learning seems very important
P: Yeah learning's very important.. In our own culture we teach our kids to learn things at home. Even at work we show them how to do the carving so when they grow older they know what to do. Same when you go to school you learn different parts. I want to learn about Greek
I: About Greece
P: Cause a friend of mine he was Greek. We grew up you know we went to school together and he wants to learn about my language. So it's like a borrowing

There was a degree of reciprocity attached to the notion of learning as this transcript also illustrates. He learned from his friend and his friend learned from him. The high community expectation in relation to learning transferred to the school context when parents and children discussed their expectations of school. They expected their children to learn at school and they believed that success at school was the key to their children's future.

Identity, knowledge and learning in school

Similar to the community activities, the children in this study spent a great deal of time on what the school valued as literacy activities. Schools and teachers viewed improving students' literacy skills as important. Teachers had similar expectations as community members in relation to students' attendance and engagement in school activities however, in the school context, expectations in relation to learning varied. Some teachers commented that the children would struggle at high school. Expectations in relation to the kinds of learning experiences they 'needed' were lower than that of children in mainstream classes.
In the school data it was uncommon for participants to make reference to particular people. References to places other than locations within the school were rare. References to time in the school data largely revolved around the timetable. There were set days and times for doing particular things. Other references to time were in relation to how much time was given to complete a task.

In both the primary and high school contexts, students had to know about the rules, routines and procedures related to being a student in school. This was particularly important for the children in the high school setting. The children had much to learn about 'doing high school' during their first term. They had moved to a highly organised institution with a structured timetable, different classes, subjects and teachers, dress and behaviour codes, homework and assessments. In addition, students had to learn about the boarding side of their new life, as well as the academic and classroom side.

Students were also required to learn different bodies of knowledge in school. However, this knowledge was not connected to their identity. It was knowledge that was connected to their next school, future employment or to living in a different place. Generally the knowledge was not experiential. Curriculum knowledge and ‘doing school’ knowledge were highly valued in the school setting. There was also an increased emphasis on what we termed ‘text-book’ knowledge in the high school.

Like the community, learning was also highly valued in school. Students were expected to be learners. There was less emphasis on learning by ‘doing’ and the ‘sharing’ of the learning experience and a greater emphasis on becoming an ‘independent’ learner and learning through reading and writing.

Many of the literacy events children engaged with at school were disconnected from their community lives, although some teachers did try to use some of the children’s community experiences as a means to engage the students and teach the different modes of literacy. Despite this there was little acknowledgement of the different community literate practices in which these children were very accomplished. For example in one class students were involved in a learning experience where they were exploring different purposes of writing. Students were asked to make a list of at least ten different forms of writing. The children who participated in this study wrote a fairly comprehensive list. One of the research team was sitting with the children and they asked if they should include painting as a form of writing. The child explained that his grandmother wrote her stories in her paintings. The researcher encouraged the child to include this on their list. The teacher wrote a comprehensive list of all the student’s responses. The teacher then chose five of the forms of writing to explore further. The teacher chose the more traditional written forms such as email, novel and dictionary. Painting was not included in this final list.

Many of the teachers admitted that they had little understanding about where the children in the study came from and yet the previous example described provided an opportunity for the teacher and other students to learn more about the children. An opportunity to value and acknowledge other literate forms was also lost.
Different identities, learners and contexts

The study found there were a number of significant issues for these children as learners in a westernised school system. Discontinuities between the different contexts lay in the fact that much of who the children were and what the children knew, preferred to do and could do was often not valued and acknowledged in the school setting.

Teachers had limited knowledge of these students' backgrounds and they had little knowledge of their lives at home. Schools valued particular learning styles over others and the written mode was the preferred way of demonstrating students' understanding.

We also found discontinuities in the fact that many of the activities in the community were strongly connected to the students' own identity and their community lives. Differently, in the school settings, students could not make the connections between school-based activities and their lives other than knowing that a 'good' education would result in gainful employment, which in the case of the lack of available employment on communities such as these, can in itself be a cruel myth.

There were also discontinuities between the two school settings and between teachers in each of these settings. For example, some teachers strictly enforced routines and rules, others focussed on using Standard Australian English whilst others favoured worksheets and board work. These discontinuities are not viewed as the central issue because ultimately all teachers are different and students are going to have to work with different teachers throughout their schooling. Rather, the issue lay in what is valued in schools in relation to knowledge, identities, different literate and numerate practices and modes of learning and the consequences of these for engaging and retaining children in effective learning.

Many of the literate practices students engaged with in the community were conducted in the oral mode and children learned about these activities in particular ways. Learning was a shared responsibility whereas schools worked towards developing 'independent' learners. In schools, finding information in books and other text forms was valued over asking questions. Schools required students to demonstrate their understanding of what they had learned whereas in the communities it did not matter how many times children needed to practise and refine their skills. In addition children were often required to demonstrate their understanding in the written mode. Time to do activities was also an issue for these children. There were no time restrictions placed on learning in the community whereas schools had set times for learning experiences and a set progression of tasks to learn before children left school.

The children in this study engaged in a number of community activities that contained elements of school literate practices. Effective learning that results in improved performance on literacy will be facilitated through a better utilisation of the dimensions of identity, knowledge and experiences that all children bring from home to school. Further the experiences should be acknowledged and valued in meaningful ways. Teachers should then make connections between what children can do and what they need to be able to do within the school curriculum. Teachers can only do this if they have a good understanding of what children already know rather than assuming they are an open slate.
Whilst there were common ways of learning identified both in the community and school contexts, schools need to acknowledge that children do learn in different ways and students should be afforded opportunities to demonstrate their knowledge and understanding in a variety of ways.

The children in this study were required to take on very different identities as learners in the school setting. The irony of this is that learning was already a strong part of their identities in their home communities. If these children are to become successful in our school setting we need to be more flexible in the kinds of literate practices, learner identities and learning experiences that we value and acknowledge in school.


Falk, I., & Balatti, J. (2004). Identities of place: Their power and consequence for VET. Paper presented at the Learner and practitioner: The heart of the matter, Canberra, ACT.


Literacy and equality in the classroom
David Rose
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Abstract

This contribution argues that unequal outcomes of education flow from two key factors. The first is the failure of schools to explicitly teach reading skills required at each stage of education, so that some students are able to tacitly acquire these skills themselves while others remain disadvantaged. A hidden curriculum of reading development is described that underlies the overt curriculum at each stage of schooling. The second factor is the patterns of classroom interactions that create and maintain unequal learner identities on the basis of differing experiences in learning from reading. These patterns are illustrated with classroom interactions, and contrasted with learning interactions outside the school. Finally an alternative approach is described that places reading at the centre of classroom teaching, and redesigns classroom interactions to ensure that all students successfully acquire the skills they need.

Educational outcomes

_Biases in the form, content, access and opportunities of education have consequences not only for the economy; these biases can reach down to drain the very springs of affirmation, motivation and imagination._

Basil Bernstein 1996:5

The arguments presented in this paper distil findings of a long term action research project with schools and universities across Australia and internationally, known as _Learning to Read: Reading to Learn_. This program trains teachers in strategies for scaffolding reading and writing as an integral part of normal classroom practice, across the curriculum at all levels of education (Martin & Rose 2005, Rose 2004a, 2005a, Rose, Lui-Chivizhe, McKnight & Smith 2004). The strategies have been developed in partnership with teachers, and are grounded in research in social learning theory (Painter 1984, 1998, Vygotsky 1981, Wells 1999), sociology of education (Bernstein 1971-1996), educational linguistics (Halliday 1993, Martin 1999), and discourse analysis (Martin & Rose 2003). They have been repeatedly evaluated as improving the literacy learning of all students at an average of twice expected rates of development, and up to four times the expected rate (Carbines, Wyatt & Robb 2005, Culican 2005, 2006, McRae et al 2000, Rose 2006a). Extensive in-class work and workshop discussions with many hundreds of teachers participating in the program have provided rich opportunities for observing, discussing and analysing teachers’ practices, assumptions, expectations, experiences and training.

Underpinning the program is the view that literacy is more than merely an add-on to the core business of teaching, it is the key to successful learning in school and beyond. Reading in particular becomes the primary medium for learning as we progress from primary through high school to university, as writing is the primary medium for demonstrating what we have learnt. Reading in school becomes, in the words of Bernstein 1990:53, “the crucial pedagogic medium and social relation”. As access to academic literacy is the key to success in school, so it is also the key to opportunities beyond school. The abilities to learn from reading and to demonstrate our learning in writing, largely determine whether we get access to university or vocational training, or receive no further education after school. Unequal access to further education then shapes our opportunities
in the hierarchy of occupations that make up contemporary societies. These inequalities are graphically illustrated in Figure 1, showing the proportions of school leavers in Australia who have received university, vocational or no further education. Over the past twenty years, these inequalities have narrowed only marginally: university numbers have risen from about 7 to 17% of the population, vocational training has been steady at about 30%, while the majority receiving no further education has fallen from above 60% to above 50%.

Figure 1: Australian education outcomes 1984-2004 (ABS 1994, 2004)

While the proportions may vary, these inequalities in education outcomes reflect the hierarchy of success and failure within the school, and within each classroom in the school. Differences between the successful few, and the average or unsuccessful many are usually attributed to something known as ‘ability’, which is assumed to originate either in learners’ biology, or in their family or cultural backgrounds. To Bernstein 1996:7 attributing failure to ‘inborn facilities’ or to ‘cultural deficits relayed by the family’ are myths used by the school to ‘individualize failure and legitimize inequalities’. With respect to biology Howe, Davidson & Sloboda 1998:407 find “no evidence of innate attributes operating in the predictable and specific manner implied by the talent account” and that “categorising some children as innately talented is discriminatory…unfair and wasteful”. On the other hand there is a very large body of research linking differences in school achievement to family differences, including Bernstein’s own research on coding orientations and social class (1971-1990), and research inspired by his models (Cloran 2000, Hasan 2001, Morais, Baillie & Thomas 2001, Muller, Davies & Morais 2004, Williams 2001). But what do we mean by differences in ability, and how are they related to differences in families?

I am going to argue here that differences in educational success flow not from biological differences in children but from their varying abilities to learn from reading, that these variations originate in different orientations to reading in the home, and that the school, far from seriously attempting to bridge these differences, in fact exploits them to widen the gap between learners from different social backgrounds. Like many of us, I consider this function of schooling to be an entirely unnecessary injustice, as teaching reading is straightforward for teachers who are appropriately trained, as the Learning to Read: Reading to Learn program has demonstrated, and that reading can and should be a central component of teaching practice at all levels of education across the curriculum.
The reading development curriculum

As reading is a fundamental mode of learning in formal education, one might expect that it would be a core focus of classroom teaching. Yet after the early primary years, as reading becomes more and more important for learning, it becomes less and less a part of teaching. Almost all secondary teachers and many of the primary teachers participating in the Learning to Read: Reading to Learn program have reported that they had received no previous training in teaching reading. Furthermore few teachers reported that they had been provided with sufficient guidance, by either their training or state syllabi, to integrate reading with their classroom practice. Even in the early years, where teachers do have training in teaching reading, the evidence of state testing (e.g. ACER 1997, MCEETYA 2003) has revealed that the literacy gaps between children from literate middle class families, who may have spent 1000 hours or more reading with their parents before starting school (Bergin 2001), and those who come from less literary family backgrounds, are not effectively addressed by current early years teacher training.

As a result those children who are well prepared by their homes rapidly learn to be independent readers in the early years, and are thus well prepared to start learning from reading in the upper primary years, whereas children without this level of home preparation are less well prepared for upper primary, and may be severely disadvantaged (Rose, Gray & Cowey 1999). By the time they start high school the better prepared students have learnt how to independently read for homework, and so to succeed both in their assignments and in the classroom. Six years of practising independent reading and writing across the curriculum then prepares them for independent academic study at university.

Each stage of this reading development curriculum prepares successful students with the skills they will need for the next stage, but after the early years the reading skills they need are not explicitly taught, but are learnt tacitly by those students who are adequately prepared to do so. The skills needed at each stage are learnt in the preceding stage: skills for independent reading needed in upper primary are not taught in those years, but depend on learning in the early years; skills for reading across the curriculum are not taught in high school but depend on preparation in primary years; and because they are tacitly learnt rather than explicitly taught, skills for academic study require six years of continual practice in high school for successful students to acquire. As each stage prepares successful students for the next stage, what students are evaluated on is the skills they have acquired in the preceding stage. So early years teachers are trained to evaluate children on differences in learning ‘abilities’ that originate in the home; in the upper primary they are evaluated on reading skills acquired in the early years; and high school students are evaluated on reading and writing skills acquired in primary. This sequence of preparation forward and evaluation back is schematised in Figure 2.
Figure 2: Reading development sequence in schooling

The reading development curriculum underlies the overt content-based curriculum of schooling, and thus achieves two general outcomes. On the one hand it prepares successful students for matriculation and university study, and on the other, its tacit mode of transmission ensures that the majority of less well prepared students will not progress successfully to university entrance. In my view this hidden curriculum is one of two key strategies by which education maintains its internal hierarchy of failure and success, from early primary to school leaving. The other key strategy is the dominant mode of interaction between teachers and students in the classroom, which continually evaluates learners as successful or failing, whether the educational philosophy informing the interaction is ostensibly ‘progressive’ or ‘traditional’. Together, the failure to teach all students the reading skills that are required at each stage of schooling, and the continual evaluation of students on their abilities to read and write and so successfully participate in class, both construct the ‘ability’ hierarchy in the school, and socialise children into their positions in the hierarchy.

Classroom interaction as a recontextualised discourse

Bernstein regards education as a ‘recontextualised discourse’, that is the discourse of the classroom and its curriculum are translated from other contexts into the context of schooling. So for example, woodwork in school is different from the economic activity of carpentry - it is recontextualised as a school subject with very different practices and outcomes. The same may be said for science, maths, languages, literature and so on. But the pedagogic discourse of the school is not only concerned with teaching these recontextualised curriculum subjects; underlying the instructional function of teaching curriculum content is the school’s regulative function to create a social order, social relations and learner identities. The regulative is the dominant function in Bernstein’s 1996 model; we might say the regulative function is the underlying message that is articulated or projected through the instructional discourse of the classroom (Christie 2002, Martin 1999, Martin & Rose 2005), as schematised in Figure 2. The social order of the classroom reflects the social order of the society, which is of course an unequal order; relations
between groups of students are unequal, as are relations between groups in the society; and the learner identities it produces are similarly stratified from successful to failing.

**Figure 2: Instructional projected by regulative functions of education**

Like the curriculum subjects, the discourse of the classroom is also recontextualised, from contexts of social interaction outside the school. The dominant principle that structures how social interaction becomes classroom discourse is the regulative function of creating and maintaining order, relations and identities. To this end classroom discourse continually evaluates students, indeed according to Bernstein 1996:42 “the key to pedagogic practice is continual evaluation”. The pervasive pattern of classroom discourse, described by a string of researchers (Lemke 1990, Mercer 2000, Nassaji & Wells 2000, Sinclair & Coulthard 1975, Wells 1999), is known as the ‘IRF’ cycle, or ‘Initiate-Respond-Feedback’, illustrated in Figure 3.

**Figure 3: IRF cycle**

Overwhelmingly the teacher’s initiating move in the IRF cycle is a question, that monitors students’ understanding, asks them to infer connections, or elicits their own experience. Teachers use students’ responses as stepping stones in lesson sequences, to get students to think actively about the subject, and to check that they understand what the teacher is saying. These are the instructional functions of the IRF cycle. But in every classroom in every school, every teacher knows that it is only a minority of students who regularly respond successfully to our questions, that other students sometimes do, and that some students rarely if ever respond successfully. The principal function of the teacher’s feedback move in the IRF cycle is an evaluation of students’ responses, and for this reason it is also often known as the ‘IRE’ cycle. The teacher’s feedback may also have an instructional function, using successful responses as a step forward in the lesson, and this function is often advocated to promote ‘higher order’ learning, inspired by Vygotsky’s social learning theory (Gibbons 2002, Mercer 2000, Wells 1999); but its underlying regulative function is always evaluative (Lemke 1990). This pattern of micro-interactions in
the classroom relentlessly evaluates students on their abilities to answer teacher questions successfully. Successful students are continually affirmed for their responses, but failing students are continually negated, no matter how hard some teachers work to soften the impact of failure. While successful learner identities are shaped by continual teacher affirmations, few options are available to failing students other than to withdraw from active participation as far as they are permitted, or to challenge the teacher’s authority.

All teachers participating in Learning to Read: Reading to Learn report that they have not been trained at this level of micro-interactions, except in discussions of ‘questioning techniques’. These may distinguish categories of questions such as ‘closed’ (yes/no) or ‘open’ (wh-), but the efficacy of classroom questioning itself is not questioned (Lemke 1990). Rather than being explicitly trained in it, each of us learns this mode of interaction tacitly in our own years of experience as learners in classrooms. As its regulative function is not adequately recognised in teacher training and its prevailing theories, non-participative or disruptive behaviour may be disconnected from its cause, and attributed instead to students’ abilities, their personalities or their environments beyond the classroom.

These problems are not attributable to simplistic dichotomies between ‘teacher-centred’ and ‘learner-centred’ approaches, that are often drawn by progressivist/constructivist theories (Bernstein 1996, Muller 2000, Rose 1999). In reality all teachers struggle to engage with the wide range of ‘ability levels’ in a class. Techniques to engage diverse students, that teachers usually develop through experience rather than training, may be more or less supportive, but even the most effective strategies are necessarily realised through the fundamental interactive template of ‘IRF’.

From where does this template originate? It is of course a recontextualised discourse that has evolved with the history of schooling, from the medieval monastic schools and universities, through private colleges and the governess system, to mass education in the nineteenth century. It may have originated in pedagogic interactions in the family, but has been recontextualised over many generations with a different regulative function. While families attempt to raise their children with roughly equivalent competences, schools have evolved with a very different social goal, to produce unequal competences between learners, and pedagogic interactions have been recontextualised into the school to serve that regulative goal.

**Scaffolding interactions in the family**

In the family the primary instructional function of pedagogic interactions is perhaps teaching language. In cultures as diverse as metropolitan Europe and remote central Australia, families continually model their language for young children, for up to two years before they begin to speak their mother tongue, and continue to do so for years after that, as children gradually acquire the complex resources of the adult language system (Halliday 1993, Kearins 1981, Painter 1984, 1986, 1998, 2004, Rose 2001). A common interaction pattern in such familial pedagogic contexts resembles the IRF pattern, but differs in three significant dimensions. Firstly its function is not to demand a response for evaluation, but to support children to build new communicative skills. Secondly the initiating move is rarely just a question, i.e. demand for information, but rather gives the child information that prepares them to respond successfully. And thirdly the follow-up move is almost always affirming, but also frequently elaborates on the child’s response, building on what they have learnt. I have called this type of pattern the *scaffolding interaction cycle* (Rose 2004a, 2005a), as the teacher ‘scaffolds’ learners into doing a task
that is typically well beyond their independent competence. Most generally it includes the 
three moves Prepare-Task-Elaborate, illustrated in Figure 4.

**Figure 4: Scaffolding interaction cycle**

![Scaffolding interaction cycle diagram]

The scaffolding interaction cycle is a common pattern in parent-child reading before 
school, although research has shown significant variation between families in its 
application (Williams 2001). In an ideal scaffolding interaction cycle, a parent's preparation 
move supports the child, either to identify an element in the story they are reading, or to 
select what to read, or a reaction to the story. The elaboration move then extends the 
child's understanding, in relation either to features of the story or to features of language. 
These patterns are well illustrated in the following transcript of a mother reading with her 
18 month old child.

**Exchange 1: Parent-child reading**

<table>
<thead>
<tr>
<th>Child</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Brings the book, sits on her mother's lap, and turns the book so the cover is facing right-side-up.]</td>
<td>The three little pigs [points to each of the pigs on the cover of the book].</td>
</tr>
<tr>
<td>[Opens the book and turns several pages while her mother is talking] points to picture of a tree] Tee [looks up at mother].</td>
<td>Identify</td>
</tr>
<tr>
<td>Yes It's a tree.</td>
<td>Prepare</td>
</tr>
<tr>
<td>[points to another tree in the picture] Tee [looks up at mother again].</td>
<td>Identify</td>
</tr>
<tr>
<td>Um, um [Points to each of the little pigs in the illustrations]. Here are the little pigs. Bye bye mama [waves her hand]. We're going to build a house.</td>
<td>Identify</td>
</tr>
<tr>
<td>[laughs, waves at the mama pig in the illustration and turns the page]</td>
<td>Identify</td>
</tr>
<tr>
<td>Look, the first pig...</td>
<td>Prepare</td>
</tr>
<tr>
<td>[Turns the page].</td>
<td>Select</td>
</tr>
<tr>
<td>Oh, oh, I see that wolf [points to the wolf, eyes get larger as if in fright].</td>
<td>Prepare</td>
</tr>
<tr>
<td>[turns page and points to wolf] Oh, oh.</td>
<td>Identify</td>
</tr>
<tr>
<td>He huffed and puffed [blowing on child] and he blewww that pig away.</td>
<td>Affirm</td>
</tr>
<tr>
<td>Very bad, isn't he? [in different tone directed toward child as an</td>
<td>Elaborate</td>
</tr>
</tbody>
</table>
At 18 months the child is already thoroughly familiar and engaged in the activity of reading, as she selects the book, and the pages to read, and identifies elements of the text, following her mother's lead in pointing and naming them. Her motivation is clear as she looks to the mother for affirmation, and repeats the activity when she is affirmed. However her mother not only affirms her first response ‘Tee’, but elaborates it with a complete sentence and pronunciation, using the child’s response as an opportunity to extend her experience of language. In the next cycle the mother is able to direct the child’s attention to the story, by relating it to her own experience ‘Bye bye mama [waves her hand]’, so that the child recognises its meaning and responds by laughing and waving. In the last cycle, the mother directs the child’s attention to a higher level meaning, the expectation of a problem in the story, by again framing it in terms of a familiar emotional reaction, ‘Oh, oh’ with widening eyes. Again this enables the child to recognise the meaning of expectancy in a story, and so to turn the page and repeat the emotional reaction ‘Oh, oh’. This time the mother affirms and elaborates by first reading the words on the page, and then commenting on the wolf’s character, introducing the child to the judgement implicit in the story, a high level meaning indeed for one so young. At no point does the mother ask a question, rather the child responds to her preparations, both here and in the innumerable story readings that they have previously shared. Of course parents do ask questions of their children in such pedagogic contexts, but they are typically asking for information that the child already knows. For example parents commonly ask their children to repeat a task, such as naming something, that the child has already performed successfully. The motivation for both parent and child is the pleasure in the successful mastering of a task (Painter 2004).

Evaluative interactions in the school

The affectionate motivations for parent-child interactions contrast with those for questioning in classroom discourse. A common motivation is the widespread assumption that students will not learn by ‘spoon feeding’, but only by actively inferring logical connections for themselves. This assumption informs the early primary teacher’s questioning in the following lesson transcript, of a Year 1 class ‘reading’ a wordless picture book about a snowman. The teacher indicates the snowman’s nose and asks one student

**Exchange 2: Year 1 reading class**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>What’s that he’s got, Ben?</th>
<th>Query</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna &amp; Jody</td>
<td>Carrot!</td>
<td>Identify</td>
</tr>
<tr>
<td>Teacher</td>
<td>[makes circular motion on round object in illustration]</td>
<td>Rephrase</td>
</tr>
<tr>
<td>Bobby</td>
<td>Meatball! Meatball!</td>
<td>Identify</td>
</tr>
<tr>
<td>Kris</td>
<td>Oranges!</td>
<td>Identify</td>
</tr>
<tr>
<td>Teacher</td>
<td>Yes, Kris, I think you... That’s right!</td>
<td>Affirm</td>
</tr>
<tr>
<td>Other child</td>
<td>Meatball! Meatball!</td>
<td>Identify</td>
</tr>
<tr>
<td>Anna</td>
<td>They’re oranges!</td>
<td>Identify</td>
</tr>
<tr>
<td>Jody</td>
<td>Oranges!</td>
<td>Identify</td>
</tr>
<tr>
<td>Other child</td>
<td>Tangerine!</td>
<td>Identify</td>
</tr>
<tr>
<td>Teacher</td>
<td>Well, it’s kind of oval like a tangerine. [makes oval shape with hands]</td>
<td>Qualify</td>
</tr>
</tbody>
</table>

Perhaps in an effort to engage him in the activity, the teacher asks Ben to infer the answer to her question, but unlike the mother above she gives him no preparation to do so, and he
remains silent. Anna and Jody then enthusiastically respond but the teacher rejects their response by rephrasing her question, wordlessly adding more criteria. Bobby enthusiastically proposes ‘meatball’, which the teacher rejects by ignoring it, but then affirms Kris’ choice of ‘oranges’. Another child who repeats Bobby’s unsuccessful response is also ignored, as are Anna and Jody, who recognise and repeat the successful answer, and the last response is rejected by qualifying it, i.e. it is not affirmed.

Exchanges 1 and 2 are reproduced from McGee 1998, who considers them equivalent reading activities, as they both ostensibly encourage children to infer meanings in texts. This view derives from a popular theory that we learn to read by inferring meanings from our existing experience, so that ‘good’ teaching practice encourages inferencing. What is invisible in this view is the regulative function of the class reading activity, which is clearly demonstrated here: of those children in the class who do respond to the teacher’s initiating question, all but one are rejected; its regulative function is to differentiate students on the correctness of their responses. From this perspective the assumption that students learn by inferring answers to teacher questions has evolved to serve this differentiating function, and the instructional practice of demanding inferences is merely a vehicle for this.

Early years activities like Exchange 1 depend on children bringing their expectations of affirmation from their home experience. It takes time for some children to recognise that they are less likely to be affirmed than others in the classroom, and so begin withdrawing from the IRF game. As years go by and the ‘ability gap’ widens between students, it becomes harder to engage failing students with IRF questioning. This is illustrated in the following transcript of a Year 5 maths lesson, in which a teacher asks a weaker student to infer a logical connection in a diagram.

**Exchange 3: Year 5 maths class - unsuccessful IRF cycle**

**Teacher** [pointing to the centre of the Venn Diagram in the textbook] Identify

So B will go right in the middle there, won’t it Hasan? B.

Do you see why it will go in the middle there? Query

Hasan [no response] Repeat

Teacher Do you see why it will go in there? Rephrase

Hasan It’s got five faces. Select

Teacher Pardon? Query

Hasan [louder] It’s got five faces. Select

Teacher Good, it’s got five faces. Affirm

What else? Query

Hasan [no response] [Top pupils have their hands up] Prepare

Teacher That’s one reason why, that’s not the only reason why it can go in Identify

the middle, is it? Prepare

[points to one circle in the Venn Diagram] What’s that say there? Prepare

Hasan [reading from textbook] Red. Identify

Teacher [points to another circle in the Venn Diagram] What does that say Identify

there? Prepare

Hasan [reading from textbook] Has at least one square face. Identify

Teacher And that has got a square bottom hasn’t it? Elaborate

Hasan Yeh. Concur

Teacher An’ it’s red and it’s also got five faces, so that’s the only shape that Elaborate

will go in the middle, the rest you’re gonna have to decide, some might go in between red and has a square face or might go in between red and has five faces, it might not belong in any of them,
in which case you put the letter outside the Venn diagram.

The teacher twice rephrases her question before Hasan can murmur a response, which she is asked to repeat before it is affirmed. Hasan's small success then encourages the teacher to demand another inference which Hasan cannot supply, while other students have their hands up. The teacher's reaction is not to offer Hasan further support, but to simplify the demand to just reading out words in the text. The teacher then uses Hasan's correct responses as a stepping stone to give information to the whole class, information that may have helped Hasan to respond successfully if it had been given initially as a preparation. While the teacher may believe Hasan has benefited from learning to make inferences, to Hasan it has merely confirmed her identity at the bottom of the ability hierarchy. While the IRF pattern is thus dysfunctional for weaker students, it is perpetuated because it works for the successful few, and so for the teacher. This is illustrated in the next transcription, from the same Year 5 maths class.

**Exchange 4: Year 5 maths class - successful IRF cycle**

**Teacher**  How would we represent that sort of information? All that information on one graph.

**Phillip**  You could put them...like the Monday underneath it like that.

**Teacher**  You could.

**Query**

**Phillip**  You could put Monday, Tuesday, Wednesday, Thursday, Friday at the bottom of your graph.

**Select**

**Teacher**  That's true.

**Affirm**

**Elaborate**

**Teacher**  So let's assume it's going to be just like most graphs – it has a vertical and a horizontal axis and at certain points it has little bits of information.

**Affirm**

**Phillip**  And at the bottom Phillip you're suggesting in these boxes at the bottom we put Monday, Tuesday, Wednesday, Thursday, Friday [drawing it on the board].

**Affirm**

Here the IRF strategy works ideally as the teacher uses a successful student's response to move to the next step in the lesson. In the process Phillip is continually affirmed and re-affirmed, as Hasan was continually negated in the preceding interaction. The IRF pattern is not dysfunctional in this respect, rather it perpetuates because it works in most classrooms most of the time. It works because there are usually enough Phillips in each class that can provide the successful responses to teacher questions, that enable us to move from one step to the next in a lesson, confident that we are engaging at least some of our students.

Exchanges 3 and 4 are reproduced from Black 2004, who explains the inequality between the students using Bourdieu’s concept of ‘cultural capital’, of which Phillip is said to have more and Hasan to have less. But where does this cultural capital come from? Bourdieu offers only very general suggestions about ‘fields of practices’ that differ between social groups. But I want to suggest that, with respect to the cultural capital of schooling, the answer is very simple, concrete, easily defined and easily remedied. It comes from reading. Phillip can make a successful suggestion for placing information in the graph because he has sufficient experience in reading such graphs, to recognise their elements and where to place them. Hasan struggles to explain why the elements of the Venn diagram are placed as they are because she has insufficient experience in reading them. Whereas the nature of this problem is invisible to educational theories that are informed by cognitive psychology (or Parisian cultural theory), the teacher perhaps recognises it intuitively, as she attempts to repair the interaction by getting Hasan to simply read the
words she points to, and then explains their significance. Unfortunately the educational
theories in which the teacher has been trained give her few tools to systematically support Hasan.

**Scaffolding interactions in the classroom**

What we need in place of such theories is a model for teaching that purposefully and systematically recontextualises both the instructional and regulative functions of education in new ways (Rose 2005b). Instead of leaving it for successful students to acquire tacitly, learning from reading must be placed at the centre of instructional practice, explicitly integrating reading with classroom teaching at each level of schooling across the curriculum. And instead of ignoring the regulative function of IRF discourse, to create and maintain inequalities between students, micro-interactions in the classroom must be explicitly designed to ensure that all students are continually successful in acquiring the skills they need.

Strategies to achieve these goals have been developed in the *Learning to Read: Reading to Learn* program. They do so by building classroom learning around texts that students need to be reading at their particular stage and curriculum area, and supporting all students to read the texts with high level critical understanding. And what students learn about the fields and language patterns of their reading texts is then used to practise successful writing.

*Learning to Read: Reading to Learn* applies the scaffolding interaction cycle at various levels of a text, to prepare students to read it with comprehension, and to raise their critical understanding of its contents and language patterns through the elaboration moves. The first level of preparation enables students to follow a text or passage as it is read aloud, by first giving a synopsis of how it will unfold. The next level of preparation enables them to recognise patterns at the level of paragraphs, or phases of meaning in the text. The third level then enables them to read the text themselves with critical understanding, by giving sufficient support for them to read each sentence, or part of a sentence, and then by elaborating on its meaning.

These strategies are briefly illustrated in the following transcript of a history lesson on WWI, with a group of failing Year 8 students. The text has already been read aloud and discussed in general terms. The lesson is now half way through, and the teacher has just briefly explained and read the highly abstract sentence *The romance and heroism associated with cavalry charges and lightning strikes by infantry disappeared with the onslaught of a new kind of warfare*. The teacher starts by preparing the students to read the beginning of the sentence for themselves, by telling them where to look, ‘it starts’, and what to look for, ‘two things that people used to think about war’. This preparation enables all the students to read and understand these abstract words, which two students voice, and the teacher then affirms and elaborates by defining ‘heroism’. Its meaning in the context of WWI is then further elaborated in a discussion, in which the teacher prepares the students to critically evaluate its implications.

**Exchange 5: Year 8 - scaffolded reading lesson**

Teacher: So it starts off by saying two things that people used to think about war. Can you see those two things they used to think?

All: [look at text]

Robert: Romance

Steven: Heroism

Prepare

Identify

Identify

Teacher: Do you think these people are heroes for going off and getting killed?

Adam: Only if they serve their country.

Robert: Only if they stayed alive.

Teacher: Why wouldn’t you call the dead ones heroes?

Robert: I don’t know.

Steven: Yeh they helped too.

Charles: They shoot enemies too.

Steven: They also fight for their country and died for their country.

Teacher: That’s one of the ways that people, the government gets you to go off and get killed, is to say if you die you’re going to be a hero.

Steven: Uh hm.

The teacher’s preparation moves enable all students first to read the words, and then to reason about them critically. The time devoted to supporting all students does not disadvantage more successful students, as they benefit equally from the close reading of the text and the elaboration of its meanings. This brief extract cannot do justice to the potential of these scaffolding strategies for engaging, affirming and extending all students in a class, as they learn to read the curriculum. They are more fully described in Martin & Rose 2005, Rose 2004a, 2005a and demonstrated in teacher training DVDs, Rose 2004b,c&d, and the language model applied in them is described in Martin & Rose 2003, Rose 2006b. The point is that the inequities that currently result from not explicitly teaching reading, and not preparing all students to participate successfully in class interactions, can be easily overcome by placing reading at the centre of classroom learning, and careful planning of interactions to support all students.

Conclusion

I have argued that unequal outcomes of education are created and perpetuated by two interrelated factors. The first is the failure to teach reading skills required at each stage of schooling, so that students who are not well-prepared by the home for tacitly acquiring these skills are disadvantaged throughout their school careers. The second is the role of ordinary classroom interactions in creating and maintaining unequal learner identities on the basis of differing experiences in learning from reading. The dominant mode of classroom discourse, known as the IRF cycle or Initiate-Respond-Feedback, recontextualises cycles of pedagogic interaction from outside the school that I have termed the scaffolding interaction cycle, or Prepare-Task-Elaborate. Whereas scaffolding interactions prepare learners to perform each task successfully, the IRF cycle has evolved to evaluate rather than prepare learners’ responses, and so functions to continually differentiate students on their ‘ability’ to respond appropriately. I have argued that so-called ‘ability levels’ in schooling originate in students’ differing experiences with reading in the home, and that these differences widen through each stage of schooling, as the demands for learning from reading grow. Underlying the overt content curriculum of schooling is a hidden curriculum of reading development that successful students acquire tacitly, while other students cannot, ensuring their eventual exclusion from further education. Continual affirmation in teacher-class interactions from Year 1 builds positive learner identities for successful students, while lack of affirmation socialises others into identities as average or failing learners.
These inequitable and inefficient practices are historical relics of the rigid class hierarchies in which our education system first evolved, and have remained largely unaddressed by prevailing education theories. As they condemn large sections of our communities to unskilled drudgery or long term unemployment, they have serious consequences not only for the competitiveness of our national economies, but for the personal and social well being of the children we are charged with educating, particularly Indigenous children (Rose 1999, 2004a). There is no longer any need for this waste of human potential, if we put learning from reading at the centre of classroom practice where it belongs, and we learn to redesign our classroom interactions to engage, affirm and extend all our students equally.
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Teaching grammar in context – across the K L A s
Kathleen Rushton

Abstract
All primary school teachers in N S.W. are expected to explicitly and systematically teach the grammar of a range of genres or text types. This has proved to be a challenge for many teachers, who have themselves never been explicitly taught grammar in their own schooling or in their pre-service training. Using the NSW Department of Education’s documents and the Board of Studies’ English K-6 Syllabus as the framework for teaching grammar in context, I will outline how teachers can begin to address this aspect of teaching. The focus will be on developing a pedagogy which is appropriate for a wide range of different students including those who may be identified as being at risk educationally. Therefore a brief overview of what constitutes difference has been included but the focus is on a pedagogical approach and practical strategies, which teachers can employ in the classroom in teaching both literary and factual texts.

Dealing with difference - what constitutes “difference”? 

The use of the word “difference” implicitly infers that there is a standard or benchmark to differ from. In Look again longitudinal studies of children’s literacy learning Barbara Comber & Jenny Barnett (2003) have defined it this way.

“Looking again at these nine case studies, we can readily pick out the key factors that made a difference in the children’s literacy learning, for better or for worse. Some of these are social and biographical factors outside the control of teachers, including mobility, poverty, institutional racism in the education system, English as an additional language, disjunction between home and school literacy practices, and health issues. However, there are other at-school factors, which are well with the province of the teacher...” (Comber & Barnett, 2003, p.15).

The health issues referred to, of course include mental health issues, and there are also students with genuine learning difficulties and disabilities. However the six at-school factors, which have been defined as within the province of the teacher are:

1. Recognition factor “the extent to which what children can do counts”
2. Curriculum factor “the quality, scope and depth of what is made available in literacy instruction”
3. Pedagogical factor “the quality of teacher instructional talk, teacher-student relationships and assessment practices.”
4. Resources factor “the extent to which schools have the human and material resources they need”
5. Take-up factor “the extent to which the students appropriated literate practices and school-authorised discourses”
6. Translation factor “the extent to which children can make use of and assemble repertoires of practice that they can use in new situations.” (Comber & Barnett 2003, pp.15 -18).

If this framework is used to look at what differentiates one student from another the most obvious conclusion is that the difference itself is a secondary issue, it is the teacher’s practice, which makes the most difference to student outcomes. (Darling-Hammond, 2002) While there is not time in this paper to address all the aspects of teaching, which this framework proposes I will attempt to address those aspects which relate to the teaching of language and literacy.

What approach to language will help teachers meet these challenges?

By looking at closely at the linguistic resources individual students bring to the educational context and with a clear understanding of the linguistic demands of the curriculum teachers are able to make pedagogical choices which will support students’ learning. The basis of this understanding must be an understanding of the relationship between spoken and written language. The differences have been clearly articulated in the work of Halliday (1985).

- Identify the differences between spoken and written language

“The written language presents a SYNOPTIC view. It defines its universe as product rather than as process. Whether we are talking about a triangle, the layout of a house, or the organization of a society; the written language encodes it as a
structure or, alternatively, as a chaos – but either way, as a thing that exists. In principle we can freeze it, attend to it, and take it in as a whole. The cost of this perspective may be some simplifying of the relationship among its parts, and a lesser interest in how it got the way it is, or in where it is going next.

The spoken language presents a DYNAMIC view. It defines its universe primarily as process, encoding it not as a structure but as constructing – or demolishing. In the spoken language, phenomena do not exist; they happen. They are seen as coming into being, changing, moving in and out of focus, and as interacting in a continuous onward flow. The cost of this perspective is that we may have less awareness of how things actually are, at a real or imaginary point in time; and a lessened sense of how they stay that way.” (Halliday, 1985, p.97).

The fact that we present phenomena as a continuous flow in oral language is very apparent when young students write. If unsupported by reference to the features of written texts, students will often produce unpunctuated texts which recount a series of events, featuring material (went, played) and relational processes (was, has) and joined by simple conjunctions like and then. Oral language can be differentiated from written language by the differences in lexical density and grammatical intricacy. As Halliday has shown it is by analyzing the grammatical choices a speaker or writer makes which can help to differentiate texts.

“Lexical items are often called ‘content words’. Technically, they are items (i.e. constituents of variable length) rather than words in the usual sense, because they may consist of more than one word: for example, stand up, take over, call off, and other phrasal verbs all function as single lexical items. They are lexical because they function in lexical sets not grammatical systems: that is to say, they enter into open not closed contrasts (Halliday, 1985, p.63).

When teaching writing we must use the students’ oral language as a starting point and help them to understand the differences between oral and spoken language, so that they can produce the more formal written texts that are appropriate to the
school. However it is important that students as well as teachers can understand and talk about the differences. Oral language is the major resource young students have to support their writing, especially in the case of students who do not read widely.

Students’ use of oral language, especially if it is not standard Australian English, must therefore be mediated by reading and deconstructing and writing and jointly constructing written texts so that students are able to identify the differences and make the appropriate choices. Students can be supported to understand the different audiences and purposes of texts and how they differ in a variety of contexts, especially how the context, audience and purpose of spoken texts differ from written texts, by thinking of language use as a continuum from spoken to written.

The mode continuum is an idea, which Jones (1996) says was adapted from the work of Martin (1985). It describes the purposes for oral language, which range from language, which accompanies action to language as reflection. The continuum shows how language changes when the context supports meaning; from a face to face chat to a formal speech (Jones, 1996, p.13). At the level of the clause Lexical Density and Grammatical Intricacy demonstrate one of the differences between the two types of language. For instance most emails would tend to be less lexically dense than most written texts, and more likely to demonstrate the features of oral language.

The K-6 English syllabus, published by the Board of Studies NSW (BOS 1998), clearly shows the links between reading, writing and talking and listening. The links should be demonstrated by an understanding of the grammatical features of texts and these are exemplified in the Learning about outcomes. When students participate in Modeled Reading or Guided Writing they are using oral language as a process to learn.
Jointly construct and deconstruct written texts

When the role of oral language in the learning process has been identified it can be seen that leaving students to use their own resources in independent reading and writing will provide practice but will not provide an opportunity to teach. Students are teaching themselves yes, but to learn from others, including the teacher they must be engaged in pair or group activities, which allow discussion.

Jointly constructing text is usually referred to as guided writing and deconstructing texts is addressed in modeled reading or writing and to an extent in guided reading. (DSE, 1997) Reading and writing across stages and Key Learning Areas (KLA) is by definition reading and writing a range of texts. The social, or functional view of language, which underpins the K-6 English syllabus (BOS, 1998), identifies reading as a socio cultural practice and recognizes that the contexts of culture and situation define the meanings that individual students will make when reading any text. The different types of texts which students will most often read and write are outlined in the syllabus and found in different subject areas. The reading and writing in Science is different from History or English; the differences being realized in the structure and grammatical features of the text. It is therefore very important to allow students the opportunity to read and write the type of texts, which exemplify the subject matter they are studying. It is not simply a matter of making information available in a key learning area, but explicitly and systematically, showing students how to read and write the genres appropriate to that subject. Furthermore as Healy (2004) says:

“There is no question that print literacy repertoires continue to be important but the ways in which print now integrates with other media at the digital interface means that literacy education can no longer be restricted to the controlled and controlling domain of print. ... Thus, classrooms urgently need to take up a multiliteracies framework for preparing students for communicative scholarship
and to address uneven patterns of access to the texts of power, locally and globally.” (Healy, 2004, p.20).

**What practical strategies can be used?**

- Implement a daily literacy session

Learning to be literate is a socio cultural practice and if students are going to be able to interact with each other and with a range of texts the practice should be part of a student’s normal daily routine in an educational setting. To support the explicit teaching of literacy many schools have provided support to classroom teachers at particular times of the day to implement guided reading, but the subject matter of this practice is not always clearly related to other learning experiences. As a literacy session will take up over a quarter of the school day and is often in the morning when students are at their freshest, it is important that students are able to relate their learning experiences in the literacy session to at least some other experiences they will have during that day.

The literacy session should be a daily session, which takes from an hour to an hour and a half. As outlined in *Teaching Reading: A K-6 Framework* published by the Department of School Education NSW (1997), daily modeled reading (deconstructing text to illustrate grammatical features and structure) should be linked to guided writing (the joint construction of a text with an explicit audience and purpose).

In the daily literacy session the best way to develop students’ understandings about literacy is to choose texts for modeled reading which link directly to the KLA and serve as models for guided writing. It is therefore very important that texts are not chosen just for their subject matter. In this session all students should participate in modeled and guided reading, guided writing and independent reading activities, independent reading and independent writing. The literacy session should not only focus on literary genres like narrative which exemplify
the KLA English but should include genres found in all the KLA’s and outlined in the K-6 English syllabus (BOS, 1998).

The range of texts students need to read and write should encompass those produced using all types of technology with a wide range of visual images and diagrams reflecting the types of texts found in all the KLA’s. Students should develop understandings about text through oral language. By discussing how texts are constructed, using metalanguage appropriate to that task, and being supported to use their own oral language resources to participate in jointly creating texts, students will be able to make appropriate choices when writing independently.

- Scaffold rather than simplify
The texts students will need to read will encompass a range of modalities as well as a developing grammatical complexity and yet some students will be reading well below the stage appropriate outcomes. Margaret Meek (1988) says:

“The reading experts, for all their understanding about ‘the reading process’ treat all text as the neutral substance on which the process works. As if the reader did the same things with a poem, a timetable, a warning notice. They know this isn’t the case, but somehow the differentiation between reading a threatening letter, a file, or ‘the mind’s construction in the face’ isn’t regarded as part of what the reader does.”(Meek, 1988, p.5).

For students learning English as a second language, or those experiencing difficulty with literacy it is therefore of great importance to support them to read the full range of texts appropriate to their stage and the subject matter of the KLA. Hammond (2001) outlines this process of scaffolding:

“... knowledge is collaboratively constructed rather than simply passed on, or handed from teacher to learner. That is knowledge is constructed in and through
joint participation in activities where all participants are actively involved in negotiating meaning."

That is to say activities, which are centred around reading and writing, like modeled reading and guided writing, but where students participate mainly by talking and listening to each other. The teacher’s role in these activities is to have selected appropriate texts and teaching points and to provide opportunities for the type of talk, which will facilitate learning.

- Carefully consider the selection of texts
Selecting texts for the classroom will of course be guided by the demands of the curriculum, the material resources available and the needs of the students who will engage with them. Teachers will almost always have to make some choices for their students no matter what the school context, if the teacher is preparing to deconstruct texts with the students. Freebody (2004) outlines some of the issues that must be considered:

“Reading can be thought of as a way of updating our thinking on a topic and reconnecting ourselves with events and characters, and with understanding these through our always-developing engagement with always-changing patterns of cultural order. Ways of taking part in the three great inquiries in which human beings have traditionally been involved – conversations about” ‘what is true?’ , ‘what is right?’ , ‘what is beautiful?’ . When good readers are reading, they seem to me to be engaged in thinking-under-supervision. If we consider being able to read in this expanded sense, over and above simply the ‘seeing-through’ activities that get us to seeing language as the signs on the page or the screen, then we can see the social, economic and cultural significance of being fully apprenticed into a literate society.” (Freebody, 2004, p.11).

If students are to be able to understand what texts are really “saying’ they need to be engaged in all of the four roles of the reader that the DET NSW has outlined in Teaching Reading: A K-6 Framework published by the Department of School
Education, NSW. These roles were first identified by Freebody and Luke (2000). Freebody states:

“we attempted an accessible outline of the kinds of resources that any theory of literacy education and any pedagogy or assessment regime aimed at that education should address, precisely because it is those categories of literacy resources that contemporary societies require of their members.” (Freebody, 2004, p.6).

The roles are text decoder, participant, user and analyst. Freebody (2004) is explicit when he states that if students engage in all of these roles they are learning about ideology and culture as well as other aspects of reading like the relationship of sound to symbol or the structure of text (Freebody, 2004, p.7).

It is therefore necessary to look at texts on several levels aside from the subject matter, the information or story, which might be the focus of the lesson in the KLA. All texts include levels, which range from word to group, clause, sentence, paragraph and finally text level (Derewianka, 1998, p.11). In many classrooms attention is paid to the text and word level but often the levels of text which show the grammatical choices that the author has made at group, clause, sentence or paragraph level are left aside. This has implications for the development of literacy, of reading and writing, if these processes come to be viewed as a set of skills. Developing literacy involves the reader or writer in deconstructing or constructing a range of texts with specific audiences and purposes. That is reading and writing in the key learning areas.

Looking at literary texts
-Identify features
Maurice Saxby (1993) has identified several aspects of literary texts, which readers and writers need to pay attention to. These include plot, the action or conflict, both internal and external; character which includes looking at the
diversity of characters or the challenge to stereotypes, opportunities to empathise, 
and multiculturalism; theme, the interaction of plot setting and character; and 
humour.

He has also identified techniques like: irony; satire; point of view; narrative 
stance, for instance inverting a traditional point of view; person for example third 
person or stream of consciousness. Journals; letters; diaries; the tone of the work; 
the implied reader, who is established by the choice of vocabulary or the 
complexity of the plot; all contribute to the making of a literary text. When texts 
are examined in this way it is easy to see how levels of the text can be examined 
while looking for meaning.

For instance the implied reader can be established by looking at all levels of text 
from word to group, clause, sentence, paragraph and finally text level 
(Derewianka, 1998, p.11). A s students are supported to analyse a text in this way 
they are able to see both how the author has constructed the text as they identify 
shades of meaning in the text. For instance the choice of a word like “devour” 
rather than “eat” infers a meaning about the participant. These meanings are built 
up across a text and are reflected in the grammatical features of the text. Students 
can be supported to analyse texts to make sense of these meanings. A student in 
upper primary, who had been taught about the grammatical features of narrative, 
was asked to write a narrative independently (Rushton, 1996).

“Even though Cynthia was aware of the narrative genre and its structure, she had 
produced an ‘event by event’ recount. It lacked many of the features we had been 
observing in effective models of narrative, such as the establishing of characters 
and settings and the movement from complication through successive tension-
building events to a resolution and coda... Cynthia was familiar with some of the 
different linguistic features which realize these aspects of text structure. So, as 
part of conferencing, she was asked to list the processes she had used. ... It was 
now clear to Cynthia that there was a predominance of material processes (event
after event) and not a single mental process related to feelings. Realising that readers with scant information about the characters’ motives or feeling were unlikely to engage with them or with the storyline, she now redrafted the text...” (Rushton, 1996, p.94).

-Ask the right questions

Aidan Chambers (1994) has provided a range of questions for teachers to use when working with young students and literary texts. Some students might be too young to have developed the confident use of metalanguage when discussing texts but the youngest of students is able to answer questions about their favourite parts of the text. More sophisticated questions about the time taken for events to unfold, or questions about the narrator’s voice “Who said that?”, are still viable for young learners if the texts chosen are supported with pictures and not too long. Some “simple” picture books are very complex and sophisticated but even little children can make sense of most of the meanings by using picture cues if the questions they are asked support a deeper understanding of the text. For older students a framework like Rowan’s (2001) transformative analysis can provide a very useful framework for critical analysis of a literary text. Like Chambers (1994) she provides questions to help students analyse the text:

- Who/What is included?
- Who/what is excluded?
- What are various individuals associated with? Who gets to do what?
- What is represented as natural and normal?
- Who/What is valued? How is this communicated?
- How does the text reproduce or challenge mythical norms?”

(Rowan, 2001, p.47).

Looking at factual texts
- Talking to learn in a specific subject area

Lemke (1989) makes talking as a process for learning, explicit. He says that students,

“must become familiar with speaking the more formal language of the subject and must integrate it into their own ways of speaking.” (Lemke, 1989, 136-141)

This recasting of language means that the teacher follows the student’s lead. For instance Gibbons (2002) discusses the contribution of a student, Hannah, in a science lesson stating that the teacher,

“accepts as a valid contribution the information the child gives, she also recasts or reformulates what Hannah says, modeling alternative forms of language that are more appropriate in the context of talking about science.” (Gibbons, 2002, P47)

While Gibbons is focused on second language learners, this is the exact process Lemke identifies and it is the process, which supports a joint construction. Teaching grammar along with spelling and composition of texts is part of the process, so to successfully construct texts with students teachers need to be explicit about the features of the text being constructed.

- Link modeled reading to guided writing

While there is quite a lot of support relating to identifying the features of the simple text types outlined in the K-6 syllabus, many teachers find it difficult to deconstruct the more complex texts found in the real world, including the classroom. It is therefore helpful to think of the domains of learning and the differences between the everyday responses and the critical responses that are required by the school. These are outlined by Droga & Humphrey (2003) and are a starting point of analysis for the teacher to begin to link deconstruction of modeled texts to the joint construction of written texts in the daily literacy session.
A joint construction however, does not necessitate the writing of a whole text in one session, nor of a focus on all aspects of the writing process, some aspects like spelling and handwriting can be left to the independent editing stage. It is therefore essential that writing is able to be kept for a following session. Using an overhead or butcher’s paper is therefore an essential part of developing guided writing.

Also essential is the teacher’s decision, based on assessment of the students in the class, on which features of a text students need to focus. A typical session for a factual text would be a modeled reading session, then the joint construction of a concept/mind map, which summarises the main points. Another guided writing session perhaps constructing the first paragraph or the topic sentences for each paragraph, followed by a pair or small group construction of further paragraphs and finally followed by independent writing of the whole text.

References


THE PARADOXES OF LITERACY AND HOW THESE IMPACT ON OUR CURRENT AND FUTURE TEACHING OF LITERACY.

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Paulo Freire (1976, 1998) writings demonstrate that literacy is life empowering for individuals, their families and their communities. I saw a wonderful example of how this might happen some years back in Indonesia. The Ministry for Education had developed pamphlets that were a mix of print text and cartoon characters aimed at the women in small villages. This pamphlet demonstrated that if the women penned their chooks they could then confine the accumulation of chook poo. This meant that the chooks were not polluting the play areas, paths and homes in the villages and also that the chook poo was not being washed into the creeks where the villagers washed and drew their water. In addition the women could use the accumulated chook poo for their gardens and grow fresh healthy vegetables for their children. There were many pamphlets such as this all aimed at women because the powers-that-be knew that women would change things for the health and benefits of their children. In order that women could learn to read the pamphlets small classes were set up in the villages. The pamphlets were a means to an end – the women were willing to spare the time to come to the class because they wanted to learn to read the pamphlets and to learn to write letters and notes and in doing so they slowly became more and more literate. Here was an important purpose for literacy. Here was literacy as life empowering for individuals, their families and their communities. This view of literacy is more than not an economic globalisation purpose – a purpose that seems to driving the literacy agenda today in this country.

The statement ‘literacy is life empowering for individuals, their families and their communities’ for me is a basic truth – or what my friend and colleague Brian Cambourne would call a self-evident truth. Other ‘basic truths’ include – the sun will rise, the tide will come in, time will pass, we will grow older each day. These basic truths and the many others we simply accept and let those interested in them get on and research them, teach them or whatever. We recognise that we usually can’t change a ‘basic truth’.
There are other basic truths that we have come to accept:

- Smoking causes cancer
- Drinking alcohol impairs our ability to drive
- Breastfeeding makes for healthy babies

John Howard would want us to hold as a basic truth that detention centres are necessary to deter illegal immigration.

George W Bush wants us to hold the basic truth that the war in Iraq is about democracy.

Brendon Nelson when Federal Minister for Education, held as a basic truth that 1 in 4 children cannot read. He wanted us all to believe this and by using the 1 in 4 frame he conjured the image for us. When speaking to the 70 Grade 2 children at the National Literacy Numeracy Week Launch last year, Nelson looked at the children sitting in front of him and said something like, ‘One in four children – kids just like you – can’t read. Isn’t that terrible? Just think – think about 4 of your friends – look around you and count four of your friends – now imagine if 1 of them couldn’t read like you – if they couldn’t enjoy this book, Wombat Stew? How would they know what to do, what is on TV? How would they feel in class when the rest of you are all reading and they can’t do it. Your friend would feel bad. We don’t want this do we? – We want all children like to be able to read ……” And so he went on. We had all just heard a basic truth – one in four children can’t read. It is such a basic truth that the media uses this ‘truth’ without question.

But let me return to my basic truth because I want to change it slightly: literacy is life-empowering and a basic right of all. I think that we would all agree that this is as basic a truth as the sun will rise. And if we asked the Brendon Nelsons, the Julie Bishops, state Ministers of Education, educators, parents, even the media, I doubt that we would get anyone who would not agree that:

‘Literacy is life-empowering and a basic right of all’ is a basic truth.
So if we - all of us - at all levels of the system - agree that this is a basic truth then why is it so hard to achieve? Why is literacy constantly attacked? What gets in the way? Why is it that we keep being told that we are failing in the teaching of literacy.

I believe that there are so many existing paradoxes in the literacy domain with others constantly being created and that these block us moving forward.

I thought after suggesting the title of this talk that I should check my meaning of the word ‘paradox’ so I looked it up – where else but in my thesaurus on my computer.

It came up with the synonyms: Illogical, absurdity, contradiction, inconsistency. I felt comfortable with my choice of title – the paradoxes of literacy and how these impact on our current and future teaching of literacy.

Life is full of paradoxes. I am sure we would all agree. It is probably another basic truth. However it seems in the area of education we have more than our fair share. And for those of us who have been very involved in literacy education it seems that there are so many paradoxes that it all begins to verge on the ridiculous. When I began teaching back in the 60s there were no national benchmarks, no state tests and I think it fair to say that the National government didn’t really care much about an education portfolio. That was the states’ and territories’ responsibilities. The Syllabus was devised and delivered by the Department of Education and we were told what to teach and when to teach it – right down to the number of minutes. When I refer back to the syllabus written by the Department of Education in the 1960’s, commonly known as the ‘blue Bible’, the word literacy is not even used. We were ‘trained’ to teach reading, composition, spelling, grammar ..., in much the same way as I trained my dog. We were expected to be do-ers. We were practitioners. We did what those who knew the research (what might now be called ‘evidence based research’) as well as the ‘best ways’ to teach told us to do.
Five year Gary introduced me to my first awareness of the contradiction or paradox in my professional world. Let me share this in a form of a cameo as it was a key point in my professional career.

It was week six of school back in the 60s I was a young teacher in charge of my first class - 45 Kindergarten children. My teacher training had focussed on teaching grades 3-6 so I had no idea of how to teach Kindergarten to read, to write or anything for that matter. I had survived the first six weeks of the term by playing my guitar, using all three chords I had learned in Music, and teaching the children lots of folksongs of the times (Remember Peter Paul and Mary, Joan Baez and Tom Paxton).

For 'reading activities' the teacher in the next room supplied me with a bundle of worksheets. One set involved the children tracing over a 'letter for the week'. A nother set required them to do something called 'visual discrimination'. The children were asked to match shapes or images that are visually the same. Since the school had little money to buy books we, the teachers, prepared the worksheets ourselves, so a typical sheet might look like this:
My drawing has never been my strong point so it might be difficult to see that these are all 'trees'. The top row are 'gum trees', the others are 'Christmas trees'. The children had the task of looking at the shape in the box in the left corner of the row. They were told to pass their eyes along the row from left to right and choose the 'one that was the same. The language used went something like this:

'Everyone put your finger on the first gum tree in the left box in the top row [I teaching the children directionality - to 'read' the top line first and move from left to right]. I would then walk around all 45 children to make sure each had his/her little grubby finger on the appropriate tree. [Can you imagine how bored they must have been?]

'Now children move your finger along the row and take your eyes for a walk to find the tree that is the same as the one in the box. Everyone take their eyes for a walk now'. [By this time many children had done all three rows and would be swinging on their chairs or doing other things that were considered 'naughty'.]
We did at least one of these worksheets each day – sometimes with trees, but always with shapes that my colleague and I could draw. This was the time when I was 'teaching reading', I thought. I did a similar sheet where the children had to match the sounds.

You can get hundreds of these now of the internet. But in my day I had to draw them!

On this particular day, young Gary was swinging on his chair having finished his worksheet long before I had directed him to. I reached his desk and began to berate him for not waiting for the rest of the instructions (even though he had everything correctly circled). To this day I can still see his impish brown eyes looking at me as he asked, 'Why we doing this?' I started to reply, 'Because this is reading time', however before I finished my sentence, Gary added, 'Reading is books. Why don’t we read them books?' and he pointed to the few little books I had on the shelf. Gary pointed at his worksheet and asked again, 'Why we doing this? This is not reading.'

Gary asked a question that day which I could not answer – not right then anyway. I told him he had asked me a very hard question, and I would find out the answer. I didn’t realise it would take me the rest of my professional life and that I would still not have THE answer (although some like to think that they do). However, in that year I began my search to find out how children learn to read. It became obvious to me that day that there was more to learning to read than 'visual
discrimination’ and ‘matching sounds’. There was more to it than what I had been told to do by the experts. I needed to be a thinker not just a do-er of others’ thinking and research.

Dr Brendan Nelson when Minister of Education (2002) commented at a conference on Teacher Standards and Professionalism that, ‘Teacher professional development needs to be a priority for us all … ([it] should be the product of collaboration not something that is nationally mandated’ (p. 24). Nelson went on to cite research by the Australian Council of Educational Research that concluded, ‘quality teaching supported by strategic professional development had a 60% effect on educational outcomes of students’. Nelson also urged teachers to be reflective and innovative and draw on the information (data) that the children in their care were constantly providing. Kennedy (2002) speaking at the same conference agreed that ‘our colleagues throughout the teaching profession have much to share’ (p.46). Linda Darling-Hammond (1997) argues that ‘teachers need to be able to analyze and reflect on their practice, to assess the effects of their teaching and then refine and improve their instruction’ (p.297, original emphasis).

How do these comments (all of which I would strongly agree with) sit with the Recommendations from the National Inquiry into the Teaching of Literacy? Recommendation #16 in the Teaching Report clearly calls for ‘… a series of evidence based teacher professional learning programs focussed on effective classroom teaching … (p22)’. My reading of this is that if Nelson had still been at the helm it was very likely that there would be mandatory national professional development based on ‘evidence-based research’ (and of course Julie Bishop may indeed enact this recommendation). This means that ‘data’ gathered from observations and listening to children are, to quote Ken Rowe (2006), no more than ‘an amorphous mass of anecdotal clap-trap (4).’

The paradox created here is indeed confusing, inconsistent and indeed absurd. This paradox has the potential to downgrade all the well known research into the concepts of ‘teacher-as-researcher’ and ‘reflective practitioners’. Arguing for teacher professional development that is not nationally mandatory and urging teachers to reflect on their practice in response to the data they are collecting as they teach, is NOT basing their
‘quality teaching’ on ‘evidence-based research’ – if one is guided by the definition of ‘evidence based research’ in the Report’s glossary.

But I don’t want to use this forum to simply critique the Report. Although I have to say it is full of paradoxes!

Let’s explore some other paradoxes as I see them in literacy education today.

Let me discuss the National Inquiry into the teaching of literacy as a process. Note that it was an inquiry into the teaching of literacy. Yet once we get past the title, it is clear that this was an inquiry into ‘reading’. This is indeed a paradox – an absurdity, an inconsistency. In his opening speech at the Read Aloud Summit last September, Dr Nelson commented on the Inquiry and why he called it. He said and I quote, ‘I called the inquiry because I want to know how children are learning to read and what they are being taught. It is not just about phonics or whole language methods but the range of reading approaches that are out there and that teachers need to know about’.

Many people spent many hours in preparing submissions to the Inquiry and pointing out that an inquiry into literacy is not just an inquiry into reading and in particular those struggling with learning to read. The danger in this paradox is that now the final report is revealed it will become a report on literacy in spite of the fact that the report is titled Teaching Reading. While some may argue that it is a matter of semantics – it is more than that. Throughout the report and within the twenty recommendations there is a constant move between the words ‘reading’ and ‘literacy’ as if they were one and the same. My fears are that such outcomes will reframe what we have come to understand as ‘literacy as life empowering and a right for all’. Such reframing will lead to a much narrower and simplistic view and pedagogy of literacy. And the teaching of writing will be delegated to the back-bench. The report therefore is so full of contradictions, of paradoxes, that it is difficult to trust any of it.
I have been involved in the National Literacy and Numeracy Awards over the past few years in my role as President of ALEA. It is a wonderful privilege to meet through the submissions so many amazing educators. And then meeting the finalists in person is indeed a humbling experience. I don’t want to take anything away from these worthy recipients. But I can’t help but think about the many teachers and principals (people like yourselves) that I have worked with and wonder why they are not there receiving awards. This has puzzled me for some time until I realised the paradox that exists. I should note that Schools where things are happening – where literacy is highly valued and students succeed, can nominate themselves for a school award. However I am aware of individual principals and teachers who do an amazing job with respect to literacy – not just reading but literacy - in their school and classrooms. When I have suggested to such people that I nominate them, they tell me that they can’t be nominated and even say they won’t be nominated. They quickly remind me that they are ‘team players’. They are part of a community of learners; that the school culture is one that supports and values collaboration, mentoring, and teamwork. Here is the paradox – the inconsistency of paradigms between the rationale for the awards and the rationale for quality literacy learning and teaching in schools. What can we do about it? I suggest change the existing award from ‘recognise outstanding contributions made by individuals’ to include ‘or small teams, groups, communities of learners’. This is something our University has done after the inconsistency in the Vice Chancellor’s Award for Outstanding Teaching was made explicit.

Outcome based education has been operating in most of Australian states for some time now. It is underpinned by a philosophy that argues that all children can learn, that all children can succeed, and that all children can reach their potential. In literacy education teachers have been working with stage related outcomes, using them to both plan their teaching and to assess students’ progress. Admittedly some us may have tried too hard developing thick portfolios that demonstrate a child’s progression over the year. I use here as an example my brother who on receiving his third son’s portfolio in Kindergarten, sent it to me with the question: should I be pleased with this? I was. Because I have the background knowledge, I could see that Sam had made great progress and was above the
standard (had achieved all outcomes) for ES1. So I can understand Dr Nelson’s
comments last year that parents want to know how well their child is going without all
the ‘jargon’. They want what he called a plain English Report Card. However when I
heard about the directive that all states were to provide reporting systems to parents that
placed children in quartiles I couldn’t believe my ears!! Paradox: here I can use all my
synonyms - Illogical, absurdity, contradiction, inconsistency. I will add an analogy too -
it is like trying to fit a nut on a bolt with the wrong thread. I wondered how someone who
obviously had such intellect - after all he is a Dr - he had to get a high UAI for entry to
medical school – how could he make such a decision and to then threaten to withhold
funding from states if they didn’t agree. People get gaoled for such threats – isn’t that a
form of intimidation or bullying? A nother paradox – (read the National Framework for
Values Education in Australian Schools on the governments views of bullying. Nelson
and Howard were very pleased with this document and in particular Simpson and his
donkey on the front cover.)

But I digress. The report card paradox has the potential to do great harm to children. In a
discussion with a Kindergarten teacher when the announcement was made, she
commented that if she has to report in quartiles then half her class must ‘fail’. I am just
putting the Bell Curve over them’, she lamented. ‘That goes against everything we say
and do – it goes against the principles that underpin our syllabus’ she added. She then
shared with me her concerns about one little girl who had recently come from another
school. Comments on the card that came with this child indicated that she was learning to
read and attempting to write, knew her letters and many of her sounds. In the class she
came from she had been placed in the top quartile. In the class she came into she could
only be placed in the 3rd quartile. ‘’How would such knowledge help the child or the
parent?’ this teacher asked. “Her parents would say I am a bad teacher!”

Several teachers joined in the conversation and pointed out that this type of directive was
likely to lead to more testing – and this type of testing required only a right/wrong answer
in order for a numerical grade to be assigned. ‘Like when I was at school back in the
60s’, one teacher commented. The teachers were quite confused and even angry by what
they were being asked to do. It just didn’t make sense. It was indeed a paradox- an absurdity.

There are many more examples I could give including the recent absurdity around critical literacy. But let’s move on as I hope I have made my point.

We need to ask so what happens as a result of these paradoxes in literacy education? While there may have paradoxes in the past they seem to be coming at us now fast and furious from every direction and at all levels of the system and impacting on educators in all systems.

I want to suggest that these paradoxes have the potential to be extremely debilitating and a barrier to future professional learning in literacy and therefore impact greatly on our students. Such an outcome is very serious and already I am aware that this is beginning to happen.

I believe these paradoxes lead to teachers feeling confused, suspicious and even paranoiac. They develop a lack of trust of new policies, of new ideas and particularly ANY research. This in itself has major ramifications for associations such as ALEA, AATE and PETA. Why join a professional association when you feel so de-valued and confused?

Teachers in particular feel ‘let down’ by their leaders and by their systems. For instance, the Kindergarten teacher I referred to earlier in this paper was very frustrated with her ‘leaders’. ‘Why didn’t they simply refuse to do this? If it is so wrong to us then surely they too know it is wrong!’ she said to me in sheer frustration. Some feel overwhelmed (I often suffer from a syndrome called overwhelmment syndrome). Others feel threatened and seek safer grounds. So they (we) pull our heads in and seek the sanctity of our classrooms. Like the snail we pull ourselves into our little shells. We don’t dare even put our little antennaeas out to see if there are new ideas or research out there that we could
try. Literacy education in these classrooms becomes narrow and safe. This is a real
danger for the future of literacy education.

This all sounds very pessimistic. What can we do about all this? The eternal optimist in
me says there must be something we can do.

I want to suggest two possible ways forward.

Let’s return to my basic literacy truth: literacy is life-empowering and a right for all. I
want to argue that we need to reframe the notion of ‘basic literacy’ and not think of ‘basic
literacy’ as functional but as literacy that includes all the basics that are needed to be
highly literate in this 21st century. This would mean that we include ‘the four resources a
la Luke and Freebody (1999), multi-literacies a la Kalantzis and Cope, critical literacy (a
la postmodernism) – I will come back to this. These are all basics for today’s and our
future generation’s literacy education. I do want to suggest one other ‘basic’ that we need
to teach.

I call this ‘spin literacy’. We need to explicitly teach: What is spin? Why do we use spin?
How is spin developed? How negatives can be turned into apparent positives through
spin? How lies can become truths and why? We could have great fun teaching this basic.
Some may argue that this is what critical literacy is all about. However I would respond
‘spin literacy’ is so important that it should be made an explicit literacy in its own right.
The word ‘critical’ has negative connotations in the community and media – as for
poststructureism and postmodernism – we need to avoid such terms. They are jargonistic
and easily denigrated by people such as Ken Rowe ‘The people from A LEA and so forth
are stomping around in postmodern clap-trap or as Brendon Nelson used to refer to as
sociological fiefdoms (p4)’.

Spin is a much easier basic to understand and play with!! The term ‘spin’ is understood
by the media and community. It therefore should be included in a reframed ‘basic
literacy’.
My second suggestion is one that includes the first, and is one that I have championed for many years. However it is more important than ever before that we – teachers, educators of all types – need to be able to articulate clearly and concisely not only what we do in the name of literacy education but why we do it. We need to make conscious our own basic truths so we can hold these high and not lose sight of what is important to us (regardless of any so called ‘evidence based’ professional development programs, guides, or teaching practices). If we do this our basic truths then frame all our current and future literacy teaching.

We are the literacy profession. We KNOW what is best for the literacy education of our future generations. Let’s identify the paradoxes for what they are, not let them get in the way of our basic truths and then simply get on with the job!
References
Describing meaning-making at the intersection of language and image: Towards a metalanguage for multi-modal literacy pedagogy

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Abstract
The increasingly integrative use of images with language in many different types of texts in electronic and paper media has created an urgent need to go beyond logocentric accounts of literacy and literacy pedagogy. Correspondingly there is a need to augment the genre, grammar and discourse descriptions of verbal text as resources for literacy pedagogy to include descriptions of the meaning-making resources of images. Some augmentation along these lines has involved the articulation of Hallidayan systemic functional descriptions of language, mainly focussed on verbal grammar, with the social semiotic descriptions of the meaning-making resources of images described in a grammar of visual design proposed by Kress and van Leeuwen (1996). However, current research indicates that articulating discrete visual and verbal grammars does not account for meanings made at the intersection of language and image. This session will outline a range of different types of such meanings in different kinds of electronic and paper media texts, drawing attention to the significance of such meanings in comprehending and composing contemporary multimodal texts.

Introduction
It is no longer viable to think of literacy and literacy pedagogy in terms of language alone. In the multimedia world of the early twenty first century, literacy and literacy education need to be reconceptualized to incorporate at least the role of images in an increasing range of different types of texts. Support for this viewpoint among researchers and educators is also reflected in English syllabi for in most Australian States and Territories and in the implementation of the National Curriculum in the United Kingdom. These syllabi require students to interpret images in comprehending texts and, to a lesser extent, to deploy images in composing texts. However, while many such syllabi require students to learn how language constructs meanings through the grammatical forms that are available (Education, 1995; New South Wales Board of Studies, 1998), there is no such comparable requirement for students to learn a metalanguage describing the use of visual meaning-making systems. In an attempt to fill this void, some teachers have drawn on Kress and van Leeuwen’s (1996) grammar of visual design. This ‘visual grammar’, extrapolated from the systemic functional linguistic (SFL) descriptions of language, principally developed by Michael Halliday and his colleagues (M.A.K. Halliday & Matthiessen, 2004; Martin, 1992; Martin & Rose, 2003), readily articulates with an approach to English grammar informed by the underlying
theoretical basis of SFL. While this articulation of visual and verbal grammar has been productive in theorizing the nature of multimodal texts and in advancing a pedagogy of multiliteracies, current research indicates that significant aspects of meanings are constructed at the intersection of language and image. This paper provides examples of this meaning-making through image-language interaction and indicates current research towards developing a systematic account of such resources and an associated metalanguage to facilitate their discussion and explicit teaching.

To contextualize this work, in the next section I will briefly outline current views about re-conceptualising literacy in terms image/text relations. In section three I will briefly outline recent views of the significance of metalanguage in enhancing various forms of multimodal literacy learning. Section four addresses the articulation of SFL-derived functional accounts of visual and verbal grammar and the need for these to be expanded to include image-language interaction. The fifth section describes examples of meanings constructed at the intersection of image and language, and the final section indicates the nature of current work towards a metalanguage of image-language interaction.

Beyond a logocentric view of literacy: The joint role of images in texts

The affordances of information and communication technologies (ICT) today enable most computer users to very effectively integrate images and language in electronic texts and print high quality paper copies if desired. This has challenged the traditional hegemony of language in literacy practices (Warshauer, 1999). The role of images is assuming greater prominence in many different types of electronic and paper media texts. While we tend to think of contemporary novels as being generally ‘pictureless’, there appear to be a growing number of popular exceptions such as Terry Pratchett’s Discworld Fable The Last Hero illustrated by Paul Kidby (Pratchett & Kidby, 2001), the edition of Tolkien’s Lord of the Rings illustrated by Alan Lee (Tolkien & Lee, 2002), and the illustrated version of The Da Vinci Code (Brown, 2004), as well as illustrated novels for young readers such as Isobelle Carmody’s Dreamwalker (Carmody & Woolman, 2001). There is also the enduring popularity of comics and graphic novels (McCloud, 2000; Saraceni, 2003) and the co-opting of this form in recent versions of literary works such as Maus (Spiegelman, c1986) and a graphic re-telling of Kafka’s The Metamorphosis (Kafka & Kuper, 2003). The increasing frequency and prominence of images in newspapers and in school science textbooks has been demonstrated by Kress and van Leeuwen (Kress, 1997; Kress & van Leeuwen, 1996; Kress & van Leeuwen, 1995).
While advances in ICT have focused attention on the need to reconceptualize literacy to include images (Richards, 2001), the increasing significance of the joint role of images and language is also evident in contemporary paper media texts (Henderson, 1999; Royce, 1998; Russell, 2000). In fact Kress has argued that it

... is now impossible to make sense of texts, even their linguistic parts alone, without having a clear idea of what these other features might be contributing to the meaning of a text (Kress, 2000:337).

The Handbook of Reading Research, noted as ‘particularly important’ that research be undertaken ‘in the comprehension of graphics and text and the study of whether (and how) referential connections between visuals and text can be explicitly taught’ (Kamil et al., 2000). Writing about Books for youth in a digital age, Dresang (1999) noted that ...

In the graphically oriented, digital, multimedia world, the distinction between pictures and words has become less and less certain (1999:21).

and that ...

In order to understand the role of print in the digital age, it is essential to have a solid grasp of the growing integrative relationship of print and graphics (1999:22)

In both electronic and paper media environments then, although the fundamental principles of reading and writing have not changed, the process has shifted from the serial cognitive processing of linear print text to parallel processing of multimodal text-image information (Luke, 2003:399).

Andrews (2004) has explicitly noted the importance of the visual/verbal interface in both computer and hard copy texts:

... it is the visual/verbal interface that is at the heart of literacy learning and development for both computer-users and those without access to computers (Andrews, 2004:63)
Metalanguage as a resource for multiliteracies development
The importance of developing a metalanguage that takes account of increasing multimodality in texts, although intensified recently, has been pursued by certain scholars for some time. For example, Eliza Dresang (1999), in her book, Radical Change: Books for Youth in a Digital Age, reports a relevant quote from McLuhan:

McLuhan spoke of one of the concepts of Radical Change, the interaction between print and electronic media, when he said ‘Our job is not to wreck the book but save it by teaching grammars of new media’ quoted in Neill, S. (1971) ‘Books and Marshall McLuhan’ Library Quarterly 41(4)p.311. (Dresang, 1999:12)

Perry Nodelman (1988) believed the narrative art of children’s picturebooks might be better explicated if there were

... the possibility of a system underlying visual communication that is something like a grammar - something like the system of relationships and contexts that makes verbal communication possible (Nodelman, 1988:ix).

More recently Gee (2003) notes that in multimodal texts the images often communicate different meanings from the words and that the combination of the two modes communicates things that neither of the modes does separately. But he also notes that for learning to be critical as well as active...

The learner needs to learn not only how to understand and produce meanings in a particular semiotic domain that are recognizable to those affiliated with the domain, but, in addition, how to think about the domain at a “meta” level as a complex system of interrelated parts (Gee, 2003:23)

Gee goes on to indicate the need for a metalanguage to facilitate this kind of meta activity, which he outlines in terms of internal and external design grammars. Internal design grammars allow individuals to recognize what is acceptable or typical content in a semiotic domain, while external design grammars enable one to recognize what is acceptable or typical social practice and identity in regard to the affinity group associated with the semiotic domain. The specification of these grammars is limited to illustrative exemplars of some principles, but what is strongly emphasized is their pedagogic role:

For active learning, the learner must, at least unconsciously, understand and operate within the internal and external design grammars of the semiotic domain he or she is learning. But for critical learning, the learner must be able consciously to attend to, reflect on, critique, and manipulate those design grammars at a metalevel (Gee, 2003:40).

Such a role for metalanguage has been strongly argued as essential to the critical negotiation of ‘new texts’ involving language-image interaction, since the acquisition of metalanguage through
which to talk about texts puts learners in a position ‘to say – and think – even more’ (Bearne, 2000:148).

**Extending metalanguage as a resource for learning: Verbal and visual grammar**

In order to develop the critical literacies required to negotiate contemporary multimodal texts, students need to understand how the resources of language and image can be deployed independently and interactively to construct different kinds of meanings (Cope & Kalantzis, 2000; Unsworth, 2001). This means developing knowledge about linguistic and visual meaning-making systems and the capacity to use these systems to interpret texts through analytical reading and to compose texts through strategic deployment of the resources of language and image.

The New London Group (2000) emphasized the need for metalanguage to support sophisticated critical analysis and deployment of language and other semiotic systems. They argued that primarily, this metalanguage needed to derive from a theoretical account that links the meaning-making elements of semiotic systems like language and image to their use in social contexts.

... the primary purpose of the metalanguage should be to identify and explain differences between texts, and relate these to the contexts of culture and situation in which they seem to work (New London Group, 2000:24).

This aligns with SFL, which posits the complete interconnectedness of the linguistic and the social (M.A.K. Halliday, 1973, 1978, 1994; M.A.K. Halliday & Hasan, 1985; Hasan, 1995; Martin, 1991, 1992). There is clear evidence of the efficacy of the metalanguage of SFL in literacy development and learning in primary/elementary and secondary/high school contexts (Collerson, 1997; Hamilton, 1998; Macken-Horarik, 1998; Quinn, 2004; Rose et al., 1999; Schleppegrell, 2004; Schleppegrell et al., 2004; Torr & Harman, 1997; G. Williams, 1999, 2000; M. Williams, 2002). In these studies knowledge about language and the analysis of texts using this knowledge enhanced students' engagement with various dimensions of literacy learning as well as the quality of the literacy outcomes they achieved. It has been similarly suggested that, far from lessening students' enjoyment, analysing the means by which images make meanings helps them feel they are getting closer to the texts and what it is they enjoy about them (Doonan, 1993:8; Missen, 1998:108; Nodelman, 1988:37).

Following Nodelman's anticipation of the advantages of the development of a grammar of images to enhance educational work with picture books (Nodelman, 1988), a number of researchers, extrapolating from SFL descriptions of language, developed corresponding functional accounts of...
'visual grammar' (Kress & van Leeuwen, 1990, 1996; Lemke, 1998; O'Toole, 1994). This work recognises that images, like language, realize not only representations of material reality but also the interpersonal interaction of social reality (such as relations between viewers and what is viewed). The work also recognises that images cohere into textual compositions in different ways and so realize semiotic reality. More technically, functional semiotic accounts of images adopt from SFL the metafunctional organization of meaning-making resources:

- **representational/ideational** structures verbally and visually construct the nature of events, the objects and participants involved, and the circumstances in which they occur.
- **interactive/interpersonal** verbal and visual resources construct the nature of relationships among speakers/listeners, writers/readers, and visuals/viewers.
- **Compositional/textual** meanings are concerned with the distribution of the information value or relative emphasis among elements of the text and image.

A key pedagogic advantage in using SFL and Kress and van Leeuwen's (1996) grammar of visual design, is the common theoretical proposition that three kinds of meanings are always being made simultaneously in language and in images. This means that the analyses of language and images can be articulated in terms of their contribution to the construction of the different kinds of meanings. Recent work in the UK has advanced the proposal of using a grammar of visual design for teaching and learning in the English classroom (Goodman & Graddol, 1996; Jewitt, 2002; Lewis, 2001). In Australia, related publications have been oriented to using visual grammar in the primary school (Callow, 1999; Callow & Zammit, 2002; Howley, 1996) and articulating visual and verbal grammar as a resource for extending literacy development in the primary and junior secondary school (Unsworth, 2001; Unsworth & Wheeler, 2002), with more recent emphasis on the role of these resources in working with literature in both electronic and paper media (Unsworth, 2006; Unsworth et al., 2005).

Little classroom research appears to have been done on the pedagogic use of visual grammar either separately or in combination with verbal grammar, although there is some evidence that young children can learn and productively use aspects of Kress and van Loeuwen's (1996) visual grammar in work with picturebooks and with multimedia CD ROMs (Callow, 1999; Callow & Zammit, 2002; Howley, 1996). This is interesting in the light of the earlier quotation from Kamil and his colleagues (Kamil et al., 2000) in the Handbook of Reading Research who drew attention to the urgency of researching not only “the comprehension of graphics and text” but also “whether (and how) referential connections between visuals and text can be explicitly taught”. The role of an appropriate metalanguage in such explicit teaching would seem to be a crucial element of such
research. This and related advocacy of a reconceptualization of literacy, emphasises the need for a metalanguage of language/image interaction. The New London Group indicated that what is needed is

... an educationally accessible functional grammar; that is, a metalanguage that describes meaning in various realms. These include the textual and the visual, as well as the multimodal relations between different meaning-making processes that are now so critical in media texts and the texts of electronic multimedia (New London Group, 2000:24)

We do not yet have such an integrative, intermodal grammar, and the task of formulating a metalanguage premised on such a grammar is formidable to say the least. A first step is to seek to understand more clearly the ways in which meanings are made at the intersection of language and image. The following section provides some examples from such an exploration.

The construction of meaning through image-language interaction
This section discusses language-image interaction from the perspective of the three different kinds of meaning-making which SFL describes as always occurring simultaneously in all texts: Compositional/Textual meaning; Interpersonal/Interactive meaning; and Ideational/Representational meaning. For each of the three categories I shall provide examples from texts students might encounter in school and also from media/newspaper texts.

Compositional Meaning: Framing and image-language interaction
Clearly, framing can be deployed to promote image/text interaction or to minimize such interaction. Elements or groups of elements within a layout may be disconnected and marked off from each other or connected, joined together. Where elements are completely marked off, they are strongly framed. Where the elements are more integrated, they are weakly framed. Framing can be achieved by the use of frame lines or borders around elements, by discontinuities of colour or shape, or by white space. Connectedness can be achieved by vectors from within images and by devices such as overlapping or superimposition of images. The more strongly framed an element is, the more it is emphasised as a separate piece of information.

I have previously discussed two double page spreads in two information books for children which demonstrated the different effects of strong and weak framing (Unsworth, 2001). The double page spread entitled ‘Wasting our rivers and lakes’(Simon, 1987:22-23) is strongly framed. The image of the flamingos extending from about one third of the bottom half of the left hand page to the full
extent of the bottom half of the right hand page, clearly links the two pages. However, apart from this, the elements of the double page spread are not visually connected. On the other hand, the double page spread entitled ‘The whalers’ (Bright, 1987:12-13) is not as strongly framed and is integrally connected. Firstly we note the photograph of the man preparing the harpoon has no framing and is linked to the diagram showing how the harpoon explodes, which also has no frame. The shaft of the harpoon in the diagram passes behind the man’s legs in the photograph, but the yellow ‘blast’ of the explosion extends over the front of the deck on which the man in the photograph is standing, so the images are ‘intertwined’. The next thing to notice is that the yellow ‘star blast’ of the harpoon exploding extends to the right-hand page. Here the end of the photograph of the front deck of the whaling boat firing a harpoon at a whale, is superimposed on the yellow ‘star blast’ of the diagram, powerfully linking the diagram to both photographs. Then the typed quote from Sir Peter Scott is superimposed on the photograph showing the whaling boat. The elements of this spatial composition are closely connected. What is very effectively linked here is the individual work of the man preparing the harpoon, the violence of the harpoon blast, the distant whale about to be shot and the personal involvement of the reader provoked by the superimposed quoted challenge:

“Consider how you would react if you watched someone go into a field and harpoon a cow which then took ten minutes to die.”

The use of framing was discussed from a number of perspectives in the study of the children overboard affair as reported in Australian newspapers in 2001 (Macken-Horarik, 2003) [The notorious incident, in which government ministers wrongly claimed that the asylum seekers threw their children overboard in an effort to coerce the Navy to offer them sanctuary.] In the verbal texts of these newspaper stories asylum seekers are agentive in processes seen to be hostile (‘heading for Australian territory’ and ‘throwing their children into the sea’). One aspect of this is demonstrated by comparison of two images of the same event. The first shows four indistinct figures viewed from above and surrounded by the sea. There is a wide expanse of sea around the figures so the image is not closely cropped. There is nothing within the frame to show why these people are in the sea. This is the image released by the navy, which appeared in the newspaper reports. There is no indication of the origin of the photo, but it was captioned in the newspaper with ‘A female sailor from HMAS A delaide helps the woman and the child from the people smuggling boat.’ Immediately above this image is the upper case screamer headline ‘THE CRUEL SEA’ and to the right of the image the smaller headline ‘Proof that people threw children overboard’. There is nothing in the image to suggest the veracity of the screamer headline since the sea appears to be
quite calm, so the implication is one of displacement of the cruelty. At the same time the grammar of the smaller headline presents a claim that is both unattributable and unarguable, with no indication of ‘who said?’ or ‘who proved’. The original framing in the taking of the photograph and its re-framing by the verbiage of the headlines constructs the propagandist perspective on the incident which aligned with comments by government ministers.

The second image of the same incident was released after the Australian Federal Government elections. This shows the same event with a widened visual frame and a very long distance view. The four figures can be seen in the water, but in the foreground there is also a rescue boat and in the background can be seen another boat partially submerged. Including the sinking boat within the frame of the image changes the significance of the women and children in the water. Macken-Horarik (2003) also analysed the ‘voicing’ of the interpretive and evaluative comments included in the newspaper report, suggesting an analogous relationship between the voicing and the framing of the images. Both voicing and framing can specify or obfuscate the saying or imaging of representations of events into being. According to Macken-Horarik the interactivity of image and verbiage is crucial to our analysis of framing in multisemiotic texts:

Analysis of framing in this sense takes us beyond consideration of visual devices that connect or disconnect one part of an image with another (Kress and van Leeuwen, 1996, 1998). We need a notion of framing that allows us to analyse both images in isolation (visual framing) and images in interaction with other semiotic modes (multisemiotic framing) (Macken-Horarik, 2003:288)

Interpersonal Resonance: Interactive and evaluative meaning through image-language interaction
Interpersonal meaning in SFL (M.A.K. Halliday & Matthiessen, 2004; Martin, 1992; Martin & Rose, 2003) and interactive meaning in the grammar of visual design by Kress and van Leeuwen (1996) concern the nature of the pseudo relationships constructed by the language and image respectively with the interlocutor/reader and viewer. In the picture book, the baby who wouldn’t go to bed (Cooper, 1996), for example, Gill (2002) found that the images consistently depict the other participants as looking down on the baby from a high vertical angle, positioning them as having power over her. This resonates with the mood structure of the text, where the other participants make statements that serve as indirect disciplinary comments about the baby’s behaviour. Such interpersonal resonance, to use Gill’s term, can also be seen in terms of affect in the first chapter of Dreamwalker (Carmody & Woolman, 2001) on page three where the text begins with ‘He (Ken) woke with a violent start’, and the image on which the text is superimposed shows a close-up view of Ken’s face with his eyes wide open, eyebrows raised and mouth slightly open, indicating shock.
The Economist magazine advertisement analysed by Royce (1998) shows a monochrome photograph with a medium to close-up, eye level view of a young woman whose gaze is directed at the viewer, and whose frontal plane is parallel with that of the viewer. These visual features realize a pseudo interpersonal relation of direct involvement at a personal level with a demand for a response. Positioned immediately above this image is the following question in the largest font on the page: ‘Does your environmental policy meet your granddaughter’s expectations?’ Royce points out that this question, with its second person address and similar features in the subsequent text, effects a joint image/text initiation of interaction, which he refers to as ‘Reinforcement of Address’. Similar work by Cheong (2004) shows how the medium to close-up, eye-level demand image of a smiling young woman whose frontal plane parallels that of the viewer is juxtaposed with the written text positively evaluating the products of the M1 telecommunications company, so that she appears to be the speaker of the quotation: ‘I get the feeling that M1 wants me to enjoy value – and enjoy life. Everything they offer is brighter, nicer and more fun!’ In texts of this kind the image/text relations are jointly constructing evaluative stance as well as interaction.

The construction of ideational/representational meaning through image-language interaction
A very clear example of meaning constructed at the intersection of image and language is provided in Anthony Browne’s picturebook, Zoo (Browne, 1994). In the story segment discussed here, the image on the left hand side shows a very low angle, medium close view of Dad from the waist up with two white clouds in the sky positioned to suggest they are horns protruding from each side of Dad’s head. In the text below the image, Harry, the narrator, asks if they can eat the chocolate that Mum packed. Dad refuses, and when asked why, simply says, ‘Because I say so.’ The image on the right hand side shows the giraffes with no text. On the subsequent left hand page we see a rear distance view of Dad and the boys leaning over a fence. The text below concerns the tiger they are looking at and makes no mention of the chocolate or eating. However, in the image on the ground at Dad’s feet it is possible to discern what looks like a discarded chocolate wrapper. After reading these pages the reader is in a position to suggest why Dad did not allow the boys to have the chocolate, but to do so s/he must make the inference on the basis of converging information from the image (showing the discarded chocolate wrapper) and the text that occurred two pages earlier.

Recent work has highlighted some problematic aspects of image-language interaction in school science books (Roth et al., 2005). In some information books for primary school children it is difficult to see how the caption text relates to the image. For example, in a book about sight (Woodward, 2005) the
Many people like to wear contact lenses instead of glasses. Contact lenses are small pieces of plastic that are placed on the surface of each eye (Woodward, 2005:15).

The caption underneath the image reads: ‘Contact lenses need to be kept very clean.’ Perhaps the image is related to the caption by exemplification, if you consider the image of the contact lens on the person’s fingertip as an instance of the superordinate ‘contact lenses’ in the caption. The image would relate to the main text in the same way. However, the caption also provides new information that is not mentioned in the main text, and is certainly doing much more than simply labelling the image. Roth et al. (2005:83) point out that ‘the function of photographs and their relation to captions and texts have not been the topic of much research work’ and that generally students do not receive instruction in how to read these relationships nor are they given opportunities for participating in the practices involved, yet the interpretive possibilities of many kinds of texts including news media texts are constructed through these image-language relations.

The Sunday Telegraph earlier this year (August 28, 2005, p43) published a story about an Iraqi woman who enlisted in the new Iraqi army. The headline for the news story “Iraq’s lone ranger” makes reference to the hero of the American TV series ‘The Lone Ranger’. He was a cowboy involved in defending “good” against “evil” by fighting against evil-doers who were mostly people of his own cultural background. By using this familiar American cultural terminology, it would appear that the author implies support for the US government’s ‘War against terror’ in Iraq. By labeling the female Iraqi solider as ‘The Lone Ranger’, the writer seems to be declaring that “we”, as a member of the coalition forces, have a cultural ally within the Iraqi community.

The most salient image in the article is that of a female soldier passing a female, Iraqi civilian in the street. It consumes the largest area in the text. The caption below the image reads:

“Insulted: Sgt Jabar passes a traditionally-dressed woman in the street.”

The meaning of the term “insulted” in this caption is ambiguous, as it does not indicate whether it is the female soldier or the civilian who is offended. However, Sergeant Jabar’s platoon commander elaborates this further in his quote -

“We are in a poor neighbourhood. People don’t like it [women in the army]. The women are insulted”

Since there is only one woman in the Iraqi Army unit in the Kharkh district, then the “women” he refers to must be the female civilians. ” The “traditionally dressed” woman depicted in the image, is not
looking at the female Iraqi soldier nor is she using any non-verbal gestures to show her alleged “disgust”, however the caption appears to read that the woman is insulted by Sergeant Jabar’s appearance and choice of profession. This is a foreshadowing of what to expect in the body of the written text, which states

“A s Jabar patrols the street, she draws sniggers from traditionally-dressed women.”

Note that the author accuses all “traditionally dressed” women of a lack of respect, as s/he doesn’t specify “some”, “many” or “a few”. The female soldier may be seen to represent the Occupying Forces. Of course, the female soldier’s membership of the military and her typical western uniform may not necessarily reflect her preference for western modes of dress or ways of thinking. Indeed, it states at the very end of the text, that her husband is unemployed and her family needs her salary. However, it seems that the author attributes the soldier’s choice of employment and appearance as evidence of the deliberate adoption of a western orientation, as implied in the appellation “The Lone Ranger”. The reference to the “traditionally-dressed” women being insulted, could work to provoke the viewer to be appalled at the way these women deride tokens of western cultural practices by “sniggering” at a woman who has adopted a vocational role and associated clothing that is typically western.

The significance of the interpretive possibilities constructed by the compositional dimension of the ‘children overboard’ text, the interpersonal dimension of the magazine advertisements for environmental policy and for the telecommunications company, and the ideational dimension of the Iraqi soldier news story are all due to the construal of meanings at the intersection of image and language. The further examples from texts children typically encounter in schooling indicate that learning contexts abound for developing children’s text comprehension and composition in ways that address image-language interaction. What is needed is systematic account of the meaning-making options and a metalanguage to facilitate discussion and explicit teaching.

Conclusion
A number of studies by researchers adopting approaches aligned with SFL have revealed useful insights into the nature of image-language interaction although this has not been their primary focus. Further work is exploring the development of more comprehensive frameworks showing the meaning making options of image-language interaction (Martinec & Salway, 2005; Unsworth, in press, in progress). A crucial issue for teachers needing to deal with the pedagogic implications of the changing nature and role of image/language interaction in new forms of texts, is the essential role of teachers as participants in the collaborative researching, theorising and re-formulating of our ‘metasemiotic’ understanding of emergent multimodal text forms and the concomitant derivation of an evolving metalanguage of multimodality to enhance practical pedagogy. It is hoped that this
paper will assist teachers in considering this kind of role orientation, stimulating critically constructive responses to, and envisioning beyond, what is presented here to further explicate inter-modal meaning-making as a central aspect of literacy learning and teaching.
NOTE: I am indebted to Robyn Bush for the discussion of the female Iraqi soldier news story.

References


Abstract
How do students construct meaning with multimodal texts? What types of learning are apparent in their interaction with these texts? Answers to these questions are critical to our emerging understanding of the pedagogical changes that are required in classrooms. This presentation reports on some of the findings of a study in Sydney schools in 2004 that examined how students in Primary and Junior Secondary School grades read and interacted with multimodal texts in different curriculum areas. The majority of these students were from language backgrounds other than English. Findings indicate that when students were engaged in tasks with multimodal texts there was a synthesis of literacy and learning, learning was collaborative, students articulated their own learning and there was opportunity for both teachers and peers to scaffold learning.

Introduction
“The young person who watches digital TV, downloads MP3 music onto a personal player, checks email on a personal organiser and sends symbolised messages to a mobile phone of a friend will not be satisfied with a 500-word revision guide for [HSC] physics” (Abbott in Snyder, 2003:45).

There is now an acceptance of the textual shift that has occurred for today’s students whose environment is filled with visual, electronic and digital texts where the world of communication for children is entirely different from what school offers and prepares them for (Kress, 2003; Gee, 2003; Lankshear & Noble, 2003). The terms multiliteracies (Cope & Kalantzis, 2000; Unsworth, 2001), multimodal texts, multimodal discourse and multimodality (Kress & van Leeuwen, 1996; 2001) represent attempts to describe the textual shift and to conceptualise the changed learning paradigm that is fundamental for literacy and learning in an age of sophisticated digital communication.

While we may acknowledge this changed paradigm we are a long way from understanding how these changes can be realised pedagogically. We need to investigate the way meaning is constructed through multimodal texts. The synchronous functioning of the modes of image, movement, colour, gesture, 3D objects, music and sound on a digital screen require a different type of ‘reading’ and literacy that entails non-linear and simultaneous processing. In addition, we need to understand how multiple modes of communication are influencing students’ motivation and learning.
Several studies in recent years have been investigating specific aspects of this complex area emphasising the importance of teachers knowing how to use multimodal texts and multimodal learning environments in classrooms to enhance student learning. Kress et al. (2001) have looked at the multimodal environments of Science classrooms while Jewitt (2002) has examined these environments in English classrooms. Bearne (2003) has examined students’ production of their own multimodal texts, demonstrating how they need to be incorporated in literacy assessment. Callow & Zammitt. (2002), Unsworth (2003) and Walsh (2006) have examined the different types of reading needed for multimodal texts. Several ongoing studies are providing insight into the way the literacy curriculum needs be reframed for new modes of communication. For example, Unsworth, Thomas & Bush (2004) have investigated the way images are used in standardized literacy test while Simpson (2005) has been investigating the pedagogy of online communication through Book Raps. All of these studies demonstrate the potential for classroom teaching and assessment to be reframed within new domains of learning.

This paper discusses some of the data from a recent study that aimed to investigate the research question: What specific aspects of literacy or learning are evident when students are reading multimodal texts? The underlying aim of this question was to examine any identifiable differences between reading multimodal texts compared with print-based texts and to consider the pedagogical implications of such differences. The study involved fourteen teachers and three curriculum advisers from schools within both the Catholic Education Office Sydney and the Catholic Education Office Parramatta. These all worked with the researcher to examine the types of literacy and learning that were occurring when students of Primary and Secondary school age read and interacted with multimodal texts.

The Study
The research undertaken was field research in classrooms with a case study focus, qualitative data collection and analysis. The research was conducted in Infants classes, Years 3-4, Years 5-6 and one Year 8 Secondary class. Most of the classes had high ESL populations. Student questionnaires, videotapes and audiotapes of students’ oral and written responses to visual and multimodal texts were analysed. There were eleven case studies developed with some teachers working together in the one class. The case studies involved lessons where a teacher with either a whole class, several groups or one group of students were engaged with one or more...
types of multimodal texts. These lessons were either videotaped or audiotaped. In a few situations where taping was not suitable, the teacher made detailed notes and submitted samples of students’ work.

The study entailed progressive stages that involved meetings between partners, selection of teachers, initial and subsequent meetings with teachers, implementation of the research with groups of students, collation and analysis of data. Teachers selected tasks that would easily integrate into their current program, in some cases these were specific English/literacy lessons while in other cases they were part of an integrated program with Science or HSIE. Teachers developed a rich range of tasks such as web quests, comparison of a CD-ROM with a book, construction of visual and digital texts within a Book Rap, construction of web pages, animated advertisements, power point presentations and i-movies. Many of the tasks involved multiple stages so that students were not engaged in one task or one lesson but a sequence of interrelated activities that were developed over several days or weeks. The result was that students were highly motivated as they engaged in multidisciplinary and integrated tasks with continuity, variety, collaborative group work and peer learning.

In the following section data from two of the case studies is described and analysed. Data was analysed to identify evidence of literacy, specifically aspects of reading using Luke and Freebody’s reading practices model (2002) as a guide. Students’ responses, from classroom observations and from videos of lessons, were coded according to whether they were using coding, semantic, pragmatic or critical practice. While these reading practices do not occur separately, and pragmatic practice would be part of all reading events, they provide a useful framework for identifying what aspects of reading and understanding are occurring. At the same time we considered, for example, whether the decoding incorporated visual or digital elements and whether such elements triggered different levels of comprehension or semantic practice.

Since several tasks involved different curriculum areas, evidence of learning was recorded by considering students’ understanding of specific content knowledge or aspects such as problem solving. Continual consideration was given to the interactive processes that occurred when students used or responded to visual or digital texts. While criteria were identified separately it
is important to acknowledge that they do not occur separately but rather as part of the integrated process that involves reading, responding to, talking about, interacting with and learning from texts.

Description of the case studies

The two case studies discussed here are exemplars that demonstrate the learning contexts that developed around multimodal texts and tasks, with Case Study 1 being an example of students using a narrative text while Case Study 2 shows students using information texts. A summary of each case study is presented in Table form with a description of the procedures and stages of the task development shown in the left hand column. The right hand column provides a summary of evidence related to criteria for aspects of literacy, learning or visual/digital literacy with significant aspects in italics to demonstrate aspects of coding used. It should be noted that all the tasks involve a great deal of listening and talking as students worked in pairs or groups. Further comments are presented after each Table.

Case Study 1 – Year 2

The teacher led two groups of students to read and to compare the print and CD-ROM version of the picture story book Just Grandma and Me (Mayer, 1983). In this story a fantasy animal, “Little Critter”, and his Grandma spend a day at the beach, where Little Critter has different adventures such as riding an umbrella, going snorkeling and battling with a nasty crab.

Table 1 Summary of stages of tasks with story - evidence of literacy and learning

<table>
<thead>
<tr>
<th>Development of task</th>
<th>Evidence of student engagement in literacy and/or learning</th>
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<tr>
<td>Students were given a teacher-made book with the words of the story printed on each page by the teacher with the rest of the page blank for the children to illustrate their version of the story after they had listened to the words and talked about each other’s interpretations of the words of the story.</td>
<td>Students’ attention was on the teacher in teacher led discussion of students’ background experience, prediction of the story. e.g ‘What would Grandma look like?’, what would they be doing at the beach?’ Understanding of narrative. Coding, semantic, practice.</td>
</tr>
</tbody>
</table>
Students completed their illustrations of the print-based text.
Students discussed their choice of illustrations, showing how they had interpreted the text.

Students encouraged to visualise what they thought was happening as they read the story together as they would be completing their own illustrations - Significance is established for students.
Students imagining, inferring creating. Semantic, pragmatic practice.

Students watched the CD-ROM version of story
Students played the 'game' part of the CD-ROM

Decoding of words and visuals occurring for all in collaborative group with oral discussion. Some students confirmed their prediction of the text with comments such as ‘...I knew it would be...because...’.
Coding, semantic practice..

Viewing of movement on screen, illustrations, words and sound. Visual representation of characters & events and of the continuous narrative.

Group collaboration on task – peer learning.
Coding, semantic, pragmatic practice.

Ss are interviewed by T about the differences they found between hearing the print-based text and the electronic version.

- Ss representation of meaning through illustration/design - pragmatic practice
- Ss articulate the differences - comparing, contrasting - metatextual awareness.

Comments on Case Study 1
Reading print and digital forms of the story
When reading both the print and the digital forms of the story the students were enthusiastically engaged in learning, particularly in linking previous experience to new knowledge, predicting outcomes of the narrative, understanding the narrative at different levels, articulating their learning in discussion with teachers and peers, comparing and contrasting. Coding practice, semantic practice and pragmatic practice thus were integral to their reading and response to the different texts. Examples of student predictions are shown in their discussion with the Teacher in Table 2.

Table 2 Students’ prediction of the story’s illustrations
Teacher reads the title “Just Grandma and Me” and questions the students:

T: Just before we start, there’s missing from this page. What is it?
S1: A picture
T: Yes. If you had to draw a picture for this story what would you draw?
S2: A grandma.
T: What would she look like?
S1: Old... wrinkly.
S3: Maybe she’d have a walking stick.
S2: Wrinkles
S4: You could have a boy or a girl.
T: Does it have to be a person?
S1: You could have a dog.

The students’ responses are typical of the types of prediction students make when a new book is introduced. The difference here is that the teacher is deliberately not showing the students the illustrations so that they will use their imaginations to visualise the events, and attempt their own illustrations. As the students were reading the story with the teachers they were asked to “Put that picture in your mind because you’re going to draw it later”. Here the teacher was developing metatextual awareness. The teacher’s final question “Does it have to be a person?” was preparing them for other alternatives such as the fantasy characters that appear in the illustrations of the book and the CD-ROM.

Differences observed in students’ reactions while reading the CD-ROM were those that would commonly occur when students are using electronic or digital texts, but are interesting to consider in relation to the reading process. While students using the CD-ROM story showed similar processes for decoding and comprehending, they were clearly attracted by the visual images, movement and sound on the CD-ROM. There were visual, tactual and kinaesthetic perceptions occurring as students viewed and used the mouse or pointed to the screen. Several times when animated music occurred students would move or sway to the rhythm of the music. Clearly these sensory reactions may have been contributing to the students’ response to the story although we do not know to what extent the digital features were contributing to students’ understanding and whether their understanding of the story on the CD-ROM was different from their understanding of the print version of the story. These are crucial aspects that require further research.

Students’ illustrations of the print form of the story
Students’ illustrations of the story demonstrated their interpretation of the story as they drew on their background knowledge of grandmothers, transport and the activities that might take place at the beach. The illustrations showed understanding of narrative structure, as well as literal and inferential comprehension. Several illustrations showed students were attempting to show movement and interaction between participants. Several students presented the main character to the viewer at the beginning or end of the story. Some students added speech bubbles to aid the representation of characters or emotions. As Bearne has shown (2003), students’ writing and illustrations are attempting to use characteristics that occur in digital texts. Bearne has developed a strong case for using students’ illustrations in the assessment of writing.

Students’ comments on the differences between the book and CD-ROM versions
Students participated in a group discussion with the teacher who asked them about the differences they experienced in reading the book compared with the print version of the story. Some of their responses are shown in Table 3.

Table 3 Discussing the differences between the book and the CD-ROM story

<table>
<thead>
<tr>
<th>T : What are some of the differences you noticed between story on paper and the story on the computer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1: The computer story didn’t have speech marks</td>
</tr>
<tr>
<td>S2: The words always flashed - to show where you were up to.</td>
</tr>
<tr>
<td>T : Can you do that with a paper book?</td>
</tr>
<tr>
<td>S3: No... you could highlight it.</td>
</tr>
<tr>
<td>T : What other ways could you keep track?</td>
</tr>
<tr>
<td>S2: Use your finger</td>
</tr>
<tr>
<td>T : Do you think the story on the computer would help children to learn to read?</td>
</tr>
<tr>
<td>[Students all nod or say ‘yes’] ... what type of children.</td>
</tr>
<tr>
<td>S4: Little children.</td>
</tr>
<tr>
<td>T : How do you think it would help them?</td>
</tr>
<tr>
<td>S3: It highlights it.</td>
</tr>
<tr>
<td>S2: It helps them keep up</td>
</tr>
<tr>
<td>S1: They hear it ... the computer says the words and they can say them after it.</td>
</tr>
<tr>
<td>T : Can you think of any other differences between the story on paper and the story on the computer?</td>
</tr>
<tr>
<td>S2: The computer is ‘automatic’. In the book these pages have been drawn or someone can take a photograph. You don’t have to draw it.</td>
</tr>
<tr>
<td>S3: It has movement &amp; sound... you don’t need to read it.</td>
</tr>
</tbody>
</table>
These comments from the students themselves provided evidence of their metatextual awareness, specifically their awareness of how texts are constructed, thus moving towards critical practice. This move from personal response through to critical reading has been shown by Mc Donald (2006) to be a component of higher order thinking. The students were aware that the most appropriate audience for the CD-ROM would be “little children” and they provided insightful comments on the features that would assist children who were learning to read, for example the provision for words to be highlighted, sounded out and repeated. The last comment that “you don’t need to read it”, referring to the CD-ROM version of the story, showed the students’ understanding that a different and more passive process was possible for the CD-ROM compared with the cognitive effort required for reading a book version of the story. These comments show these young students’ awareness of both the advantages and disadvantages of digital texts, and in fact reflect findings by researchers into this area.

Recent research has shown both the advantages and disadvantages of digital texts for students’ reading. Studies have shown that visuals, graphics and sound effects assist prediction, comprehension & vocabulary knowledge (e.g. Doty et al, 2001) or that children engage in richer storytelling after reading CD-ROM stories (Mathews, 1996). Lefever-Davis & Pearman (2005) found that digital texts aided decoding, students could self-select & control own learning and that using pronunciation as a model assisted self-confidence. Alternatively, Lefever-Davis & Pearman (2005) found that students became dependent on electronic features for decoding, they were distracted by hot spots not linked to storyline, they were distracted if they saw the story as game to be played and with some text they became frustrated with electronic features if animations were slow or the electronic pages took a long time to change. These studies reveal the complexities in researching the reading of digital texts as findings are often related to the researchers’ perception of reading and the purpose of the specific task.

The comments of the students in Table 3, combined with observations by the researcher, showed that students were well able to interchange between reading either the print and digital forms of the text and clearly understood the different purposes of each. The discussion of Case Study 2 shows similar responses from students using print and digital information texts.

Case Study 2
Teacher assigned some Year 3 students, in pairs, to work through a Web Quest on Gallipoli and Anzac Day for HSIE. Some students used information books to find information and a final outcome was for each pair of students to produce a Power Point of their learning and present this to the whole class.

Table 4 Summary of stages of tasks for Web Quest - evidence of literacy and learning

<table>
<thead>
<tr>
<th>Development of tasks</th>
<th>Evidence of student engagement in literacy and/or learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students read Teacher-prepared information report on Gallipoli. Then were given questions for searching for information to complete a Web Quest.</td>
<td>Students gaining insight on the information they would need to search for in web quest task. Learning of content related to World War 1, battle of Gallipoli, commemoration of Anzac Day. Coding, pragmatic and semantic practice. Content area knowledge.</td>
</tr>
<tr>
<td>In pairs Students completed a web quest on ‘Gallipoli’ and Anzac Day. Some students used information books.</td>
<td>Reading and interpreting questions, clicking on links &amp; following links, locating information, discriminating between relevant/less relevant information - summary skills, analysing information. Comprehending content vocabulary. Responding in own words concisely. Problem solving, content area learning. Coding, pragmatic, semantic and critical practice.</td>
</tr>
<tr>
<td>Students presented their Power Point to whole class and responded to questions and comments from other students</td>
<td>Some students were analytical and critical as well as positive, constructive in their responses and questions to Student presenters. Other Students learnt from presentation and independently then developed own PowerPoint presentations. Semantic, pragmatic, critical practice.</td>
</tr>
<tr>
<td>Students commented on their learning [some on video and some written down].</td>
<td>Students’ articulation of their learning and their thinking about their learning process, revealed metacognitive processing.</td>
</tr>
</tbody>
</table>

Comments on Case Study 2

This task required students to use skills of reading for information while learning new information related to World War 1, Australia’s involvement in the battle of Gallipoli and the reason for commemorating this event through Anzac Day. As students completed the Web Quest peer support and collaboration was essential. They were supporting each other through
the search using strategies such as deciding on key words, confirming their understanding of new vocabulary, locating relevant information and discarding less relevant information, summarizing, understanding cause and effect and synthesizing information into their own words and production. ICT skills such as navigating menu board, scrolling, clicking on and following links were essential as were the range of skills required to create a Power Point presentation.

Students discussed information and talked through the process as they interpreted questions, located information and recorded information in their own words. Some students initially lacked confidence and became frustrated at not being able to locate information but their confidence improved through the task. A significant aspect of student motivation and learning was enhanced when they realised they needed to critically analyse information rather than obtain a quick answer to the questions. As with the younger students in Case Study 1, these students discussed some differences between finding information on a digital text compared with books, as shown in Table 5.

**Table 5 Discussing the differences between information books and websites**

<table>
<thead>
<tr>
<th>T</th>
<th>to students: Did you enjoy doing the Web Quest and using the computer to find information, or would you rather find information from a book?</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5</td>
<td>Well probably 50-50 with both because with a book maybe you find some parts but not all and with the computer it’s the same.</td>
</tr>
<tr>
<td>T</td>
<td>What do you like about using the computer?</td>
</tr>
<tr>
<td>S5</td>
<td>Well mainly I like doing Maths problems on the internet or reading about things on the internet or reading emails my friends send me.</td>
</tr>
<tr>
<td>T</td>
<td>Would you rather use the internet or an information book to find information?</td>
</tr>
<tr>
<td>S5</td>
<td>Last time I said I’d rather use computers but now I’ve swapped my mind because now books to me are really important.</td>
</tr>
<tr>
<td>T</td>
<td>[to S6] What did you find about using the computer? Was it challenging or easy?</td>
</tr>
<tr>
<td>S6</td>
<td>I found it OK because I’ve done this sort of work before and I love working on the computer. I think it’s easier to find information and things like that on the internet because with a book you have to turn the pages and you might not find the information on that page, or it might be in another chapter.</td>
</tr>
<tr>
<td>T</td>
<td>Did you find that the questions were hard or easy?</td>
</tr>
<tr>
<td>S6</td>
<td>I found most of the questions were easy. The hard part was putting all the information into sentences. It was hard because there was so much information to choose from and you had to only give one answer.</td>
</tr>
</tbody>
</table>

These comments from the students revealed their metatextual awareness of the different constructedness of texts and the different purpose of each type of text. The comments showed
that they were able to use both types of texts although the preference of each student was the
opposite of each other. They were conscious of their own metacognitive processes. Student
articulation of their learning through the tasks was further evidenced in part of the discussion
two students had with the whole class when they were presenting their powerpoint. This is
shown in Table 6. S7 and S8 are used to indicate the students presenting the powerpoint, while
S9 and S10 indicate students from the class audience.

<table>
<thead>
<tr>
<th>T : What was the first thing you had to do to develop this Power Point?</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7: We went on to the Web Quest website to find the information for our presentation.</td>
</tr>
<tr>
<td>S9: How long did it take?</td>
</tr>
<tr>
<td>S7: About five lessons.</td>
</tr>
<tr>
<td>S9: Why did you choose that colour [background colour on the slide was a dull red]?</td>
</tr>
</tbody>
</table>
| S8: We didn’t want to do green or yellow or a bright colour because it was sort of like a
  sad day. They were having a war so bright colours would have made it seem happy. |
| S10: Was it hard or easy? |
| S7: It was sort of hard but ok. We didn’t know how to do it and we were just
  learning it all... like in steps. |

As with Case Study 1, it was insightful to see the confidence such young students displayed
when asked to articulate aspects of their learning as they explained the process they went
through. Students within the whole class audience asked many sensible questions and this was
a model for them as they all were to develop a Power Point presentation.

Discussion
Glimpses of different episodes have been presented from two of the eleven case studies. While
they do not represent all of the data from the research project they are typical of the trends that
were occurring with regard to classroom use of multimodal texts. The significance of all the
case studies was that, like Case Study 1 and 2, multimodal texts were integrated within a
program that involved use of books as well as digital texts, a range of progressive activities to
challenge students, and student production of multimodal texts.

Literacy was not a separate process but was embedded within integrated learning tasks. Apart
from the Kindergarten students, who were beginning readers, there was little evidence of
students having problems with decoding although in some instances students helped each other
by reading together. Tasks provided opportunities for comprehension or semantic practice to be developed at literal and inferential levels and students were clearly motivated to understand material in order to complete the tasks. Vocabulary development occurred, particularly content area vocabulary. As shown in some students’ comments, they had the most difficulty when required to transfer information into their own words for their written/digital responses to the tasks. Several tasks engaged students in critical literacy although it was evident that this had to be consciously planned by teachers and explicitly demonstrated to students.

Students were clearly engaged in learning throughout these tasks. There was evidence of problem solving, reflection, metacognition and creative thinking. The collaborative nature of the tasks fostered peer learning and assisted students’ motivation and engagement in tasks. Learning was relevant and cohesive for students when their work incorporated a range of tasks that required interchange with others in pairs or groups working with or producing texts that combined the modes of speech, print, image, graphics, movement, gesture and sound.

Conclusion

While we may acknowledge that a print-based pedagogy is no longer sufficient for the literacy practices needed in our society where much essential information is communicated through images, electronic and digital communication, we are a long way from knowing how to develop classroom learning experiences that will assist students to manage multiple literacy and learning practices. The two exemplars presented in this paper demonstrate that student literacy and learning can be enhanced through working with multimodal texts in integrated, relevant tasks. However there are many aspects that need further investigation to assist the development of relevant pedagogy. Further classroom based research is needed to determine the literacy strategies students need for reading, using and producing multimodal texts. We need ongoing investigation to develop the relevant, explicit pedagogy appropriate for integrating multimodal literacies with conventional literacy practices.

Acknowledgement

I wish to acknowledge and express my appreciation to the Teachers and Education Officers who participated in this project, and to thank the Catholic Education Office, Sydney and the Catholic Education Office, Parramatta for their ongoing commitment to this research.
References


ALL ARTISTS ARE LEFT HANDED: IMPLICATIONS OF HANDEDNESS WITHIN THE CONTEXT OF ARTISTIC EXPRESSION

Bruce Whatley

Abstract

Research in the relationship between the left and right sides of the brain indicate separation of function in the two hemispheres. The left hemisphere, which controls the right side of the body is specialized for language functions, a consequence of the left hemisphere’s superior analytical skills. It is estimated that up to 95% of humans have language specialization in the left hemisphere. Which is possibly why approximately 90% of humans are right handed as defined by writing.

The right hemisphere, which controls the left side of the body, has superior visuospatial performance derived from its synthetic, holistic manner of dealing with information. It is more important for the processing of emotional information and the production of emotional expression ‘as required to apprehend art’. Drawing and face recognition are also functions of the right hemisphere.

If the production of art is mainly a right brain activity could the use of the left hand trigger the more emotive responses associated with the holistic right hemisphere of the brain in a way that the right hand cannot?

Are images of self-expression best accessed and expressed with the left hand?

And what role might this play in the early development and education of children?

Could it have an effect on areas other than the creation of visual imagery?

Introduction

I have been active for 30 years as an artist who earns his living from commercial, either advertising or publishing based, illustration. I am ambidextrous in that I draw and produce images with my left hand as well as my dominant right hand.

There is a marked difference in the quality and intensity of images I create with my left and right hand that goes beyond the motor skills and dexterity of each hand. While images produced with my left hand are less controlled they are more emotive and have elements of self-expression associated with art that my right hand images do not.

Ninety percent of the human population are right-handed as defined by the hand used for writing. Research in the relationship between the left and right sides of the brain, left brain/right brain neuroscience, indicate separation of function in the two hemispheres. The conceptual differences suggest that the left hemisphere is associated with verbal skills while the right hemisphere is dedicated to spatial understanding. The left hemisphere which controls the right side of the body is specialized for language functions, a consequence of the left hemisphere’s superior analytical
skills. The right hemisphere’s superior visuospatial performance is derived from its synthetic, holistic manner of dealing with information controls the left side of the body.

What is the relationship between these different hemispheric functions and handedness? And how does it effect the production of artistic image making?

Please note though this research was not carried out with the education of children in mind, I believe it may be relevant to unlocking pathways of creativity and problem solving in children that may otherwise be locked.

**Dexterity of the Other Hand**

It is not unusual for artists to explore the dexterity of their other hand:

Dieter Roth (1930-1998) produced a series of pencil drawings - the Schnellzeichnungen (Fast Drawings) of 1978 using both hands separately and simultaneously which led to a related series of prints (Doloke & Walker 2003). In 1880 Pierre-August Renoir (1841-1919) broke his right arm falling off a bicycle and for some time painted with his left hand. According to a letter he wrote to Theodore Duret (Feb 13, 1980) it was a very positive experience.

> “I amused myself working left-handed, it’s great fun and the result is even better than I did with the right. I think I did well to have broken my arm, it has caused me to make some progress...”

(Wadley 1987, pp 132)

Adolf von Menzel (1815-1905) on the other hand was graphically ambidextrous.

> “When I paint in oils, (I do so) always with the right; drawing, watercolour and gouache always with my left” (Bambach, 2003, line 26).

Though the skills of my one hand are not mirrored by the skills of the other they have the function of drawing in common that extend the basic asymmetries of function normally associated with handedness. Unlike Menzel whose work has a consistency that suggest single handedness, it is as if the ability of each of my hands comes from a different source.
Illustration versus Art

With my right hand I create images that are illustrative in nature. There is considerable argument as to the definition and even value of arguing the difference between art and illustration. There are considerable grey areas and areas where art becomes illustration and illustration becomes art. While I don’t want to argue the differences here it is important to note there is a difference, perceived or otherwise.

An illustrator tells a story, and although through telling it he may suggest how he feels - that is not his objective. The narrative is the objective. Regardless of whether the work is to satisfy a third party such as a client or publisher, or pieces that are self-motivated, standing alone as opposed to complimenting a text, my right handed images are anecdotes or narratives driven by technique and precision. Whether I paint for a gallery or a picture book, regardless of size, technique or subject matter they are visual representations that give the impression they were ‘intended for elucidation or adornment.’ Illustrations. (Macquarie ABC Dictionary 2003)

LEFT: SMUDGE, 2001, drawn with the left hand. RIGHT: SMUDGE, 2001 as he appears in ‘Little White Dogs Can’t Jump’ illustrated with my right hand. (© Bruce Whatley)
There is a marked difference in the quality and intensity of images I create with my left and right hand that goes beyond the motor skills and dexterity of each hand. While images produced with my left hand are less controlled they are more emotive and have elements of self-expression, associated with art that my right hand images do not.

‘A work of art that did not begin with emotion is not art.’ Paul Cezanne (Artquotes)

My left hand appears to be my outlet for a more direct form of self-expression, a willingness to let accident rule over programmed logic, a priority to what feels instinctive instead of to what is expected. It is responsible to and satisfying only the self as opposed to a third party and exhibits an enhanced quality of line. Lines drawn with my left hand fall within the definition of art - they have value in themselves ‘for its own sake’ where expression is very important. They can be seen as exercises in the act of drawing and tell me about mark-making itself.

*LEFT HAND RIGHT HAND, 2004, Oils on canvas, 40 x 60.5 cm. The left canvas is painted with the left hand and the right canvas with the right hand. Both from photographs. © Bruce Whatley*
The value in the lines drawn with my right hand lie in what they represent. They are responding to commercial imperatives, dictated by external narratives with techniques resulting from habit, and design a result of graphic solutions predictable from previous practices. Even when I consciously challenge the standard repertoire of the right hand the results appear mannered, artificial and forced. I become too self-conscious even when trying to accommodate the accidental.

If “Art is the marriage of the conscious and the unconscious.” (Cocteau, 1968, pp157) then it appears I am unable to tap into my unconscious with my right hand.

The Asymmetry of Simultaneous Drawing

The simultaneous drawing was produces by drawing at the same time with identical pencils held in each hand.

The drawing below was produced by the author drawing simultaneously with an identical pencil in both the left hand and the right hand. The left hand side of the face was drawn with the left hand and the right side of the face was drawn with the right hand. It is not immediately obvious that the drawing has been done by two different hands.
Simultaneous Drawing #1 2005 Indigo pencil on paper. 25 x 29 cm. Drawn quickly in approximately 10 minutes from photographic reference. © Bruce Whatley

There is no apparent reason to think it has been drawn other than with one hand. At first glance it is only the weight of line on the left hand side, a result of less pressure applied by the less dominant hand that appears different.

But when the halves are separated and we look more closely there are major differences.

Simultaneous Drawing #2, 2005 Left drawing - made up of two left halves of the face. Middle - original drawing. Right drawing - made up of two right halves of the face. © Bruce Whatley
By duplicating the left side of the drawing, making another copy, flipping it horizontally and joining the two I created a completed face using the left handed drawing only. I then repeated the process with the right side of the face. The result highlights the differences between the two halves of the drawing and emphasises the asymmetry of handedness.

I repeated this exercise with a small group of illustrators and non-illustrators and found similar results.

![Simultaneous Drawing #3 by Jenny: LEFT: Face made up of the left handed drawing. Compiled in Photoshop. CENTRE: Original simultaneous drawing. Graphite pencil on paper. Size 30 x 36 cm. RIGHT: Face made up of the right handed drawing. Compiled in Photoshop.](image)

I also repeated this experiment with a group of school children, 13-14 years old. This time I gave them a totally symmetrical image to draw from. A portrait created in Photoshop where I flipped and joined the left half of one side of the face. This was to rule out any asymmetries already present in the subject to be drawn.

Again the results were very similar. While the lines drawn with the left hand are more shaky and less certain, the left handed drawing is far more emotive, the eyes are sadder, more sensitive, the mouth and chin softer, more delicate than in the right handed drawing. These differences in line quality contributes to this increase in character. They are about capturing the emotions of the subject rather than mapping the contours of his face.
Simultaneous Drawing #4: LEFT: Face made up of the left handed drawing CENTRE: Original simultaneous drawing RIGHT: Face made up of the right handed drawing. Compiled in Photoshop.

But what is happening here? Can these differences be defined and what part does asymmetry of function play in these differences? How does handedness determine this outcome? And what can be gained from such an exercise?

Mona Lisa and Pseudoneglect

One of the most obvious differences between the left and the right half of the simultaneous drawing is the difference in size. The right handed drawing is much fatter than the left. This was consistent with the drawings done by others. The right side was consistently bigger. Though there is a slight difference in the symmetry of the face in the photograph used as reference for the drawings for the first two examples, it is not enough to explain the huge difference highlighted in the finished drawings.

Differences between the two sides of the brain, functional asymmetries, may help to explain this.

‘Just as patients with right-hemisphere brain damage ignore the left half of space, so normal individuals over-exaggerate it: a process called pseudoneglect.’(McManus 2002. pp193)
Pseudoneglect can occur in even the simplest of tasks like putting a mark exactly in the middle of a straight line - ‘most people putting the mark a few percentage points to the left of centre (making the left half smaller) because the left half of space attracts more attention than the right... Pseudoneglect may also explain why the ‘balance point’ in pictures is shifted towards the left side, why the left foreground of a picture seems closer than the right...’ (McManus 2002, pp193)

Could pseudoneglect be the reason the side of the simultaneous drawing done with the left hand is that much smaller?

Chimeric drawings, made up of two parts, also help to illustrate the different way we observe left and right. Which of the faces in figure below looks the happiest?

Most people would choose the bottom picture with the upturned smile on the left. In part this is due to the greater attention being paid to the left, and in part to the fact that the right hemisphere is particularly involved in recognising emotions.
‘Leonardo da Vinci’s *Mona Lisa* has a smile described as enigmatic, puzzling, ambiguous. Why? Only the left side is smiling, the side controlled by the right hemisphere! Perhaps this is why the expression is so ambiguous.’ (Ornstein, 1997, pp 75)

More than that, I suggest her ambiguous smile is as much a result of how we see as it is what was represented.

Leonardo’s *Mona Lisa* might well be the result of a kind of chimeric illusion. Similarly to the chimeric example above, if you ask subjects to compare a picture of the Mona Lisa with it’s mirror image and ask them to choose which has the bigger smile, the majority will choose the picture with the turned up mouth on the left hand side. (The viewer’s left.)

When in actual fact the pictures are the same but have just been flipped horizontally. Therefore how we react to what we see is often determined by our handedness and brain lateralization. Children may react differently to visual material according to their handedness.

**Black white left right drawing exercise**

In this group were 10 illustrators and 4 authors who had never drawn before. All participants were right handed. The group were given two pieces of grey card. They were also given one black pastel stick and one white. The first drawing they were asked to do with the black pastel in their dominant right hand and the white pastel in their left hand. The second drawing was to be done with the black in their non-dominant hand and the white in their right hand. For ease of explanation I will refer to the drawings done with the black held in the left hand as the left handed drawings and the drawings done with the black held in the right, dominant hand as the right handed drawings. They were asked to draw from life, the subject matter being the author sitting in a chair. They had approximately ten minutes for each drawing.
Ann’s left handed drawing has a spontaneity of line and though the use of white in the right hand is very evident, the left handed black line is still dominant.

Generally the illustrators felt their left handed drawings were less balanced but this was not necessarily a negative as the shapes and shadows became more important.

‘I was focussing on shadow and got unexpected results.... I was surprised at how attractive I felt the line quality was. At first the LH drawing was a bit stressful, but later, it was easier in some respects.’

Claire’s drawing was the clearest example of the differences in the images created by a non-illustrator. Her left handed drawing was better in all respects, line quality, composition and character development.

A surprise finding was that the left handed drawings of the non-illustrators were so much better than their right handed drawings.
This exercise showed that drawing with the non-dominant hand has several benefits. Through ‘accident’ and lack of dexterity we create images that unexpected. This can produce visual solutions we would not otherwise have considered. It might be the answer to the visual equivalent of writer’s block.

**Learning through brain damage**

‘The knowledge we gain about the role of particular brain regions from the effects of brain damage is extremely valuable but tentative and most useful in combination with knowledge of brain function obtained in other ways.’ (Springer & Deutsch, 1998, p29). Neglect or hemispacial inattention, is observed in stroke or accident victims who have extensive damage to the posterior region of the right hemisphere. Looking at these patients enables us to see more clearly the functional asymmetries of the hemispheres of the brain and it’s effect on our handedness.

Drawings by patients who suffer from neglect, also referred to as visual neglect, show how the left of a given space is often unseen. Whether it be the left hand side of a clock face or the left half of a flower. English artist Tom Greenshields (1915-1994) suffered a stroke which effected the right side of his brain. Though he continued to work he would leave out the entire left half of what he was painting or drawing.

Split brain patients have had the fibres connecting the two hemispheres surgically sectioned. An intriguing aspect of split-brain patients is the difference between their drawings after their surgery. Robert Ornstein in *The Right Mind* sites an interesting example. ‘Most right-handed people write and draw with their right hand only. However almost everybody can draw something with their left. Joseph Bogen tested the split-brained patients’ ability to draw with either hand. Their right hands retained the competency to write but could no longer draw very well. Their left hands could convey the relationship of the parts, even though the line quality is poor.’(Ornstein, 1997, pp69)
Chris McManus in his book *Right Hand Left Hand, The Origins of Symmetry in Brains, Bodies, Atoms and Cultures* cites another example: ‘The right hemisphere, driving the left hand, understands three-dimensional space, and can represent a three dimensional object using lines on a flat piece of paper. It’s problem is that it can’t draw very well, and doesn’t know how to draw straight lines that join where they should join. It is like a patient with an ideational apraxia - the instructions for moving the hand properly are missing. Exactly the opposite applies to the left hemisphere, which drives the right hand. It knows how to make the right hand produce straight lines that meet at what should be the cube’s corners, but it has no understanding of three dimensional space or perspective, or of how lines look when projected on to a flat surface, so the cube is recognisable’ (McManus, 2002, pp189).

What constitutes a good drawing is a matter of interpretation. The definitions used here and in the Betty Edwards’ book *Drawing on the Right Side of the Brain* (Edwards 1999) are limited to the view that a good drawing is a realistic representation. A straight line has to be a straight line. It could be argued that a badly drawn line might be far more interesting and expressive than one drawn accurately and logically.

**Dichotomy of Handedness**

Is it possible that like dichotic listening studies (where two items, syllables, are presented simultaneously to each ear) when the hands are used simultaneously, the information flow - regardless of direction, brain to hand or hand to brain, is contralateral in nature, with other routes being inhibited or suppressed. Accepting the premise that the left hemisphere of the brain is literal and the right side is holistic and visuospatial (I realise this is a simplification but just to illustrate a point.) could this mean that the left hand has easier access to the hemisphere that is associated with emotions, self expression and visuospatial concepts.

‘Overall, there appears to be a good case for believing that the right hemisphere is more involved in both the processing or perception of emotional information than is the left. It also appears to be more involved in some aspects of the production of emotional expression, but this is more
controversial, with considerable evidence for a left-hemisphere role in positive, approach-related emotions...” (Springer/Deutsch, 1998, pp 233)

A possible explanation for this asymmetry of character and self expression within the drawings of each hand could be the theory referred to as the direct-access model. The model states that information will be processed by the hemisphere that first receives it regardless of whether it is best equipped to do the job. ‘The direct-access model predicts an advantage in performance for information that reaches the appropriate specialised hemisphere, because processing by that hemisphere presumably would be better than processing by the other hemisphere’ (Springer/Deutsch, 1998, pp 101). Therefore one could expect the images created by the right hand to be more logical and literal in nature while the images created with the left hand could be expected to be more emotional and self expressive.

Another theory, the callosal relay model, assumes the information is always processed by the hemisphere best equipped to deal with it. But if there is a delay in the transfer of information due to the initial presentation being to the non-specialised hemisphere or there is loss of clarity when passing through the corpus callosum ‘an advantage should be found for stimuli reaching the specialised hemisphere directly’ (Springer/Deutsch, 1998, pp 101). According to this model it would not be impossible for the right hand to produce work with emotion and self expression but such work might be more accessible with the left hand. But in the case of the simultaneous drawing the right hand might have problems communicating with the right brain because it is busy taking information from the left hand.

**The Asymmetry of Handedness**

The brain on physical examination appears symmetrical but the two cerebral hemispheres are far from identical when it comes to function, capability or organisation. Handedness is a good example of this. ‘The left-right physical symmetry of the brain and body does not imply, however, that the right and left sides are equivalent in all respects. We only have to examine the abilities of our two hands to note asymmetry of function. Few people are truely ambidextrous;
most have a dominant hand. And differences in the abilities of the two hands are but one manifestation of basic asymmetries in the functions of two cerebral hemispheres’ (Springer/Deutsch 1998).

Although speech and language, in general, may be the function of the left-hemisphere, some language functions like prosody - the emotive content of speech, is specialized in the right-hemisphere. ‘Research has demonstrated that asymmetries in the function of the two hemispheres include differences in the ability to produce and understand language and differences in the ability to process complex spatial relationships, among other things’ (Springer/Deutsch 1998).

So what effect does brain function have on handedness? And can handedness be used to stimulate brain function?

**Left Brain Right Brain**

Each hemisphere of the brain is a mirror image of the other, bound together by a band of fibres that conveys a continuous, intimate dialogue between each half. ‘Information arriving in one half is almost instantly available to the other and their responses are so closely harmonised that it produces an apparent seamless perception of the world and a single stream of consciousness. Separate these hemispheres, however, and the differences between them become apparent. Each half of a mature brain has it’s own strengths and weaknesses; it’s own way of processing information and it’s own special skills. They might even exist in two distinct realms of consciousness: two individuals, effectively, in one skull’ (Carter, 2003, pp 48).

Incoming information is split into several parallel paths within the brain, each treated differently according to the path it takes. The part of the brain that is best suited for that particular task will activate more strongly in that hemisphere. These specializations multiplied and amplified create a considerable difference between the two hemispheres. And therefore as brain lateralisation is so closely linked to handedness these small differences have a great influence on the abilities and functions of each individual hand.
EEG brain monitoring shows that while sketching a scene the right brain is 100% active while the left brain is idling 100%. There was 10% activity in the left brain when drawing a symbol perhaps due to the need to ‘read’ it but the right brain was still 100% active. (Herrmann 2001)

It is important to mention again the difference between drawing abilities and the production of art. Most of the studies I have encountered so far deal with the ability to draw as opposed to the ability to create images of self expression. It is the area of creating images of self expression that I am most interested in.

The right hemisphere is good at grasping wholes including ‘the ability to make out camouflaged images against a complex background and to see patterns at a glance’ (Carter, 2003, pp54). While the left brain prefers detail and ‘is good at breaking down complicated patterns into their component parts’ (Carter, 2003, pp54). As in ‘not seeing the forest for the trees’, neuroimaging experiments and neuropsychological evidence suggests it’s the right brain that helps us see the forest.

Though an over simplification these styles of working are often summerised as the right being holistic and the left being analytical. The right brain is better equipped than the left to draw on several different brain modules at the same time. ‘It might also help the right brain to integrate sensory and emotional stimuli (as required to apprehend art) and to make the sort of unlikely connections that provide the basis of much humour’(Carter, 2003, pp56). Perhaps this integration of sensory and emotional stimuli in the right hemisphere is the key to the production of self expression within art forms. This may be the reason my right handed illustration work is so detailed compared to the images created with my left hand which are far more emotional.

**Conclusion**

Evidence shows that people who have left brain injury and lose the ability to speak frequently retain the ability to sing suggesting ‘that the right hemisphere is in some way critically involved in music’ (Springer/Deutsch, 1998, pp 18). It also seems critically involved in the art. Just as our right hand can open pathways to language that is difficult for our left hand, it is possible our left
hand can open up areas of self expression and lateral thought that is much more difficult to achieve through the right hand.

In the case of children, writing and drawing exercises with the other hand might well open up new areas of creativity. A child who has a problem writing might well find it easier to express themselves visually, left or right handed. This might well get the thought process started and verbalising that thought might come later.

Arthur Koestler, author of *The Act of Creation*, argued that the creative act usually occurred through ‘other than conscious, analytic intention.’ Investigators have suggested dreaming is the realm of the right hemisphere of the brain. There are many accounts of problem solving during dreaming. Koestler referred to it as the ‘type of thinking prevalent in childhood and in primitive societies, which has been superseded in the normal adult by techniques of thought which are more rational and realistic’ (Springer/Deutsch, 1998, pp 343).

The use of the left hand might well stimulate this dreamlike state or at least a broader more creative thought process. Rather than relying on semi-unconscious dreaming for our creativity, by detouring around the logical, analytical left brain we might more easily access the creativity of the right hemisphere. Artists and children alike trying to solve a creative problem might find the mere act of trying to make images or write with the left hand, (or the right hand with left-handers) will open up pathways of creativity and problem solving that they would not otherwise have found. Even if they revert back to their dominant hand to complete the task.
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Multimodality and Webquests: Important Issues for Design, Analysis and the Construction of Meaning

Julie Wilson

Abstract

This paper examines the multimodal nature of webquests for primary students in the science key learning area. It focuses on the interaction of linguistic, visual, audio and hypermedia modes of representation and how elements of these modes are organised in webquest design. The impact of salience on the representation of information in this digital genre is also examined. The paper draws from contemporary digital metalanguage and functional semiosis when describing and analysing webquests. It highlights the need for a comprehensive theory of semiosis, inclusive of the multimodal relations between text, image, sound and digital multimedia, to guide and support teachers and students as they endeavour to design, analyse and construct meaning through webquests.

Introduction

A webquest is an inquiry-oriented learning experience in which students interact with information drawn from the internet. Developed by Bernie Dodge in 1995, the webquest was designed to provide students with a structured learning framework, facilitating self-directed learning with the provision of scaffolding and support. Webquests “enhance the nature of learning and thinking, problem solving and the integration of knowledge” by providing an authentic, meaningful and contextual learning environment (Miers, 2005: 1).

A recent assessment of forty primary science webquests, designed by pre-service teachers for interactive student learning, highlighted the potential of information and communication technologies to deliver authentic learning in today’s classrooms. These webquests demonstrated, to varying degrees, a sophisticated integration of linguistic, visual, audio and hypermedia components to represent scientific content in digital form. The synergy of these components into a multimodal webquest creates learning experiences unattainable in the face-to-face context of teaching. Consequently, it is likely that contemporary teachers will increasingly turn to webquests as an innovative teaching and learning medium.

However, the complex environment of these multiliteracies requires a much more sophisticated interpretive and analytical reading to effectively engage the reader with the intended meaning. Adding to this complexity is the fact that a comprehensive pedagogy for multiliteracies has not, as yet, been developed. So how do we interpret and analyse meaning conveyed in this digital environment and why is it important?
A crucial issue in the interpretation and analysis of meaning in webquests is the impact of competing modes of representation on the meanings conveyed. In this study, the multimodal representation of information in most webquests served to enhance meaning and thereby facilitate understanding of the content delivered. However, in other cases, meaning was constrained or confused by competing modes that served to detract from the intended ideational meaning. Either way, it can be concluded that the more salient a particular component of text, the more likely it is to either enhance or constrain the intended meaning. Therefore the impact of salience must fundamentally be considered when designing and deconstructing webquests.

Salience refers to the elements of a text where the eye is first drawn to, thereby marking the beginning of the reading path. It represents a critical factor in the composition, organisation and layout of a digital text. As emphasised by Unsworth, the layout of computer-based texts construct quite complex choices about how to traverse the textual space, how to choose from a range of possible reading paths and how to navigate the multiple pathways of hypertext links (Unsworth 2001:111). Therefore, a logical place to begin de-constructing the meaning of a digital text would be to focus on those components that realise or achieve salience.

This paper highlights the importance of composition, organisation and layout, and particularly the impact of salience, in the reader’s interpretation of meaning. The purpose of focusing attention on this small yet influential aspect of digital text design is to make other educators more aware of the heightened complexity of multimodal digital texts and encourage deeper discussion about the nature, role and impact of ‘textual’ design and meaning.

Literature Review

The rapidly increasing convergence of literacy and digital technologies is redefining the semiotic environment. Verbal and visual modes of representation now permeate and underpin most of our social practices. In this digital age, where the verbal and visual interact with new ‘cyberliteracies’, a wider range of multimodal literacy practices are emerging (Unsworth 2001: 12).

One of the literacy challenges for teachers and students in primary schools is learning to navigate the way through texts that incorporate multiple modes of representation. To facilitate this, there is the need for a multiliteracies pedagogy to understand the unique grammatical features and text structures that define verbal, visual and digital forms of communication.
Systemic functional linguistics and visual grammar are two complementary forms of semiosis that provide a way of describing and analysing texts in verbal and visual modes (Unsworth 2001: 18). A corresponding theory of ‘meaning’ for multiliteracies has not been theorised. However, its development is important, particularly for teachers and students who are now learning to read and construct meaning from an ever-increasing array of digital genres.

A large amount of research has been undertaken analysing the relationship between linguistic and visual meaning in print-based texts. Two such studies focus attention on the science key learning area and provide interesting comparative analyses for this study of science webquests.

Van Leeuwen (2000) provides insight into the ways primary students represent scientific understanding in linguistic and visual modes, while Unsworth (1997) explores the parallels of distinctive grammatical features and text structure of explanatory genres; and the ways in which images can influence how school science texts are interpreted.

Van Leeuwen’s analysis of primary students’ scientific writing and drawing combined systemic functional linguistics and visual grammar to describe the students’ use of linguistic and visual modes of representation. The aim of his research was to demonstrate how (rather than why) these students used the semiotic resources available to them (van Leeuwen 2000: 303) in their multimodal descriptions of exhibits at the London Science Museum.

Of interest were the few generic variations adopted by students in their descriptive and explanatory writing and drawing. These variations served to realise a more narrative and subjective orientation. Where most students’ written texts endeavoured to follow the proposed generic structure of a description and explanation, some included narrative elements in a way to introduce subjectivity into the discourse (van Leeuwen 2000: 279). In the students’ drawings, wider variations were presented, demonstrating either a more detailed and factual drawing or making their drawings more subjective and affective (van Leeuwen 2000: 292).

Van Leeuwen’s analysis demonstrates the different ways in which writing (linguistic) and drawing (visual) can be considered as “two distinct, perhaps even opposed modes of communication” (van Leeuwen 2000: 286). He shows how important the metalanguage of linguistic and visual semiosis is to the understanding and description of multimodal textuality.

Similarly, Unsworth (1997) explored the relationship between linguistic and visual forms of specialized knowledge in the genre of science explanations. Of particular interest was his discussion about the visual construction of meaning through the ‘reading’ of scientific
images. When comparing the images in two science texts, Unsworth uses visual grammar to demonstrate the ideational, interpersonal and textual meanings represented and his analysis clearly highlights the effectiveness of visual grammar as a tool for constructing deeper meanings.

An example involves the exploration of ideational meaning in the images. Unsworth contrasts the ‘narrative’ (less scientific) representations of science concepts in one book with the ‘conceptual’ (more scientific) representations of science concepts in the other book (Unsworth 1997: 36). When exploring interpersonal meanings, the differences between ‘naturalistic’ and ‘realistic’ coding orientations are illustrated (Unsworth 1997: 37). And when making reference to textual meaning, Unsworth highlights the impact that ‘salience’ of certain images in the layout of the page has in orienting readers to the construction of specific knowledge and understanding (Unsworth 1997: 38).

Unsworth’s exploration also demonstrates the importance of the metalanguage and visual grammar to the understanding of scientific visual texts. It highlights, too, the increasing role of images in the communication of key concepts and information in the science key learning area. Similar to the drawings portrayed in science texts by students in van Leeuwen’s research, Unsworth demonstrates how images in scientific texts serve either to compliment written information or communicate key aspects of information in their own right.

Research by Gunther Kress adds an important third dimension to multimodal semiosis. His research into the visual and verbal modes of representation in electronically mediated communication describes the ‘screen’ as the new space of representation and suggests that the predominant organisation of ‘screen-based’ texts will have more to do with the organisation of the visual entity than of the linguistic entity (Kress 1997: 72).

Kress discusses the differences between semiotic theories of use (those relating to a more stable system of elements and rules) and semiotic theories of remaking and transformation (as would relate to the ever changing domain of electronically mediated texts). This differentiation in ‘meaning-making’ demonstrates that “the changes in use, form and system arise as a result of individuals’ interested actions”. This encourages designers of [digital] texts to “stretch, change, adapt and modify the elements, and thereby change the whole set of representational resources with its internal relations” (Kress 1997: 74).

As Kress discusses this new theory of representation in light of electronic, multimodal, multimedia textual production, he is suggesting that “the task of text-makers is that of
complex orchestration [or design]” (Kress 1997: 77). Therefore, ‘design’ plays a crucial role in the process of representing multimodal meaning.

Methodology

This study reports on significant elements of how forty pre-service teachers represented scientific content through linguistic, visual, audio and hypermedia modes in their webquests and which elements or modes were made, by way of organisation and design, to realise greater salience. The study predominantly analyses the meanings constructed through the organisation of elements in a text. The study also analyses how such organisation may serve to enhance or constrain the ideational meaning of the intended scientific content. To gain insight into the most common principles of webquest design and organisation, this analysis will compare and contrast the layout of linguistic, visual and hypermedia elements across forty webquests. In order to highlight how salient elements of multimodal texts can serve to enhance the representation of meaning, a closer analysis of one webquest will be detailed. The “Mission to the Moon” webquest (Hayes, 2004) offers a sophisticated integration and organisation of linguistic, visual, hypermedia and audio modes to realise salience of key elements and enhance meaning.

There are inherent limitations in the process of contextualising the methodology used in this analysis. As any web-based text would demonstrate, the multimodal nature of represented information communicates multiple layers of meaning. Each requires different semiotic systems to interpret. An analysis of such a text would therefore require an educationally accessible grammar that could describe meaning across all modes. Such a multimodal semiosis is yet to be created.

Therefore elements of systemic functional grammar (Halliday 1985) and visual grammar (Kress and van Leeuwen, 1996) are used when interpreting intended meaning in the linguistic and visual modes. More general terms of reference are used when interpreting and describing elements of audio mode. For analysis of hypermedia representation, terms of reference are taken from Dresang’s (1999) conceptual framework for discussing digital text. In the one case where an analysis of moving imagery is required, metalanguage developed by van Leeuwen (1996) is used for interpretation and discussion.
Analysis of Material

The Organisation of Linguistic Text in Webquests

Written language was the linguistic mode used to communicate content in all webquests. Although technology facilitates the possibility of incorporating spoken language in electronic texts, it was not used in any case. In all webquests, the title of the science theme was positioned at top of the home page with specific attention given to its prominence. Generally, the title font varied, the font colour was brighter and the font size was larger than that of the main text. Such attention to the design of the title was successful in realising salience.

A closer analysis of the positioning of the title demonstrated that in fact the majority of webquests had positioned the title at the top and to the right of the screen, allowing for a static or animated image (representative of the science theme) to be positioned at the top and to the left of the screen. In most cases, the image merely provided a peripheral, visual representation of the theme. However, in cases where the title suggested a more abstract theme, the image communicated a more familiar representation of information. The positioning reflects research by Kress and van Leeuwen (1996) which points out that “what is placed on the left-hand side is usually likely to be more familiar to the readership, and what is likely to be new is placed on the right-hand side” (Unsworth 2001: 104).

In each webquest, written language was used to introduce the webquest theme and position the reader either as a character in the complimentary ‘story’ or as themselves in a ‘real-life’ exploration of content. Generally, changes in font and colour were used to differentiate between the webquest’s narrative and the integrated informative texts.

The positioning of the narrative on the home page was crucial to the reader’s orientation of the webquest and understanding of its rationale, and in all cases these webquests adhered to this structure.

In one webquest the narrative was made visually salient through framing. This served to differentiate the webquest ‘story’ from the science-based content, but in doing so, it attracted attention to the peripheral storyline and away from the intended meaning of the science content. Critical understanding of the impact of salience and the importance of textual meaning is therefore required to avoid competing modes of representation constraining intended meanings in a webquest.

Written language was also used predominantly in the design of hyperlink icons and menu bars to navigate the reader through the multiple pathways and webquest tasks. Only in one case
were image-based icons used for this purpose. This suggests that these particular pre-service teachers may view written language as a more accurate mode of representing specialised content than the visual mode; a suggestion that differs from van Leeuwen’s study of children’s science texts that found writing to be the “generalized and idealised essence of the information” and image (or drawing) to be a “more detailed and factual complement” (van Leeuwen 2000: 283). Alternatively, it suggests that the technological and visual design skills required for creating image-based hyperlinks may be too highly specialised to be realistically practised by these pre-service teachers.

A final observation of the linguistic text in the webquests builds further upon the discussion of linguistic and visual forms of specialised knowledge. The ‘engine room’ for the learning of new content in each of these webquests appeared to reside in the content of the many linked websites, rather than the webquests themselves. Although it was found that these linked websites invested mainly in the linguistic mode to communicate detailed and factual content, diagrams, animations and photographs were included to ‘summarise’ the science concept, seemingly by condensing the knowledge into a more accessible mode. Again, the relative salience of these visual ‘texts’ in the layout of the screen demands the readers’ first attention, demonstrating the impact of web ‘text’ design and organisation on the establishment of reading paths.

The Organisation of Visual Text in Webquests

The salience of visual elements has already been established as an influential factor in the design and organisation of webquests. The fact that the preceding analysis could not analyse linguistic text in isolation from the visual text echoes Kress’ belief that the increasing dominance of the visual mode has shifted written language from the centrality of public communication (Kress 2000: 182). The preceding analysis observed the tendency for websites to condense lengthy, detailed and factual content into visual diagrams, animations or photographs. In this sense, as Kress evaluates, “it seems that the visual is a vastly more efficient mode for carrying and ‘processing’ great amounts of information” (Kress 1997: 55).

All webquests in this study used static and / or animated imagery to some degree. Generally, the images presented on the screen realised salience over the written text. Static images in the form of photographs, diagrams or symbols were used to represent specific content or to serve as thematic hyperlink icons. In some webquests, salience of the image was achieved by the
choice of naturalistic images, but in most cases, the manipulation of colour, size and layout
drew the reader’s attention predominantly to computer-generated graphics.

Images were generally animated to provide the reader with both ‘given’ and ‘new’
information, highlighting ‘information value’ through the spatial and temporal ‘layout’ of the
imagery. Van Leeuwen stresses that this is not part of the ideational meaning, for the given-
new relation of moving imagery is achieved by “showing the given element before showing
the new” in much the same way as “placing an element on the right or on the left gives the
element a particular information value” (van Leeuwen 1996: 94).

For example, the use of animated imagery, such as a volcano erupting, planets orbiting the
sun, or an earthquake, was mainly used to demonstrate a science concept. In each of these
instances, the given (or familiar) image was shown first, followed by the new image or
concept to be explored. Respectively, an image of a dormant volcano was shown first,
followed by an explosion of lava; the sun was shown first, followed by the orbiting of the
nine planets at various distances from the sun; the earth was shown first, followed by the
animation of the earth shaking and the earth’s plates trembling. Therefore, the organisation of
such animated imagery plays a crucial role in the representation of new information.

Finally, it is important to address the crucial importance of visual text embedded within
websites hyperlinked to a webquest. For many of these pre-service teachers, it was apparent
that linking various websites to their webquest would provide the reader with access to more
specialised and detailed visual information. In most cases, this was successful. However, in
some cases, the inclusion of websites with visual texts irrelevant to the webquest’s specific
learning objectives distracted the reader from the intended meaning. It can be likened to
research by Miller and Olsen (1998) that found digital narratives “replete with gratuitous
hypermedia links to images that are at best peripheral to the story” (Unsworth 2001: 14). As
salience was realised most powerfully via the visual mode in most of these webquests, more
critical attention needs to be given to the significance of relevant and informative imagery in
the organisation of webquests.

The visual impact of animated and moving imagery naturally attracts the attention of the
reader’s eye to such elements of text. The manipulation of shape, size, colour, angle and
perspective that accompanies animated and moving imagery makes it virtually impossible for
the reader’s eye to avoid being drawn to its reading path. The very nature of visual text
creates salience that cannot be rivalled by the static nature of black and white written text.
The inclusion of visual text in the design of each of these webquests has a powerful impact on the representation of meaning.

The Organisation of Hypermedia Text in Webquests

The integration of linguistic and visual modes of representation with hypermedia technologies generates the potential for graphics to be designed in new and exciting forms and formats, words and pictures to reach new levels of synergy, and the organisation of digital texts to be interactive, non-linear and non-sequential (Dresang 1999). These elements of hypermedia have a profound impact on the representation of information in digital texts, generating in most cases the construction of multiple meanings. The webquest is no exception.

The design and organisation of each webquest in this study incorporated the use of graphics. In the world of hypermedia, graphic refers to any aspect of a ‘text’ that is digitally-influenced and visually unusual (Dresang 1999: 82). Colour, images of various genres, and words transmitting meaning by virtue of design and placement on a page, are some of the ways that these webquests used graphics in the design and representation of meaning. Some interesting graphic elements used to enhance meaning included zigzag framing around the title ‘Sharks’ to visually represent the image of shark teeth, and the letters in the title ‘Volcano’ appearing in bold colours of red and yellow and designed to resemble fire.

Synergy of words and pictures was also achieved using elements of hypermedia. For example, in one webquest, the words ‘Great Barrier Reef’ were placed in such a way as to visually represent the shape of a fish. The font colour and texture was also carefully designed to represent the blue, rippled water of the ocean. A common trend was the use of colour to symbolically perform the function of words and evoke images of the theme. This is best illustrated by the effective use of blue in titles such as ‘Great Barrier Reef’, ‘Sharks’, ‘Water’, the use of red in titles such as ‘Volcanoes’ and ‘Earthquakes’, the use of green in titles such as ‘Greenhouse Effect’, ‘Rainforests’ and ‘Living Things’ and the use of black in titles such as ‘Out of This World’, ‘Space Mission’ and ‘The Solar System’.

While non-sequential and non-linear formats are common to most digital texts, these webquests tended to order the hyperlinks of the menu bar, and thereby the order of the webquest pages, in a sequence resembling that of instructional learning. In most cases, there was an introduction, followed by tasks, then processes, resources, evaluation and conclusion.
Naturally, the reader still had the choice to navigate their reading along non-sequential pathways, but the layout strongly suggests the most meaningful progression.

The Impact of Salience on the Representation of Meaning in Webquests: A Case Study of “Mission to the Moon” Webquest

The “Mission to the Moon” webquest demonstrated the most effective integration of linguistic, visual, hypermedia and audio modes in its dual representation of narrative fantasy and scientific content about the solar system. Many elements of the four modes combined together to imaginatively construct ideational, interpersonal and textual (organisational) meanings.

The design of the introduction to this webquest incorporates all modes of representation. Salience is realised in many elements, serving to saturate the reader in a multimodal experience. The purpose of the introduction is to establish the webquest narrative of a mission to the moon. Upon opening the webquest, the impact of the loud, powerful and distinctive musical soundtrack to Star Wars combines with the moving graphic of the title ‘Mission to the Moon’ spinning into the centre of the screen before fading out. Immediately following the title, but as the soundtrack continues, is the written text of the narrative that establishes the reader as the captain of the ‘star ship high distinction’ on a mission to the moon. This text draws the reader’s attention due to the use of framing and the dynamic nature of the movement of the text, which moves from a low angle to a high angle and from a close and large text at the base of the screen to a distant and small text at the top of the screen. In this representation, the text is simulating that of a space ship flying off into outer space.

Moving image in the form of a short animated film continues to establish the narrative fantasy until the space ship is ‘forced to land on the far side of the moon’ where the webquest’s intended learning objectives take place. At this point, the screen layout is designed to visually represent the cockpit of a space ship, positioning the reader as the ‘captain at the wheel’. The salience achieved by this graphic form of framing helps to focus the reader on the anticipated webquest tasks. It is a constant framework for all tasks, effectively differentiating between the intended learning experiences and the multitude of hyperlinked websites.

To access each new learning experience and task, the narrative fantasy continues to prompt the reader to enter codes to permit access to each new learning experience and task. As each code represents a key aspect to the scientific content, such as time, phases and planets, it
effectively integrates ideational meaning with the organisational meaning constructed through the hyperlink codes. The contrasting white colour of the code box with the dark background of the space ship interior is effective in realising salience and thereby drawing the reader’s attention to each new task in the webquest. In fact, the reader is given no choice but to follow the designed reading path, by entering the required codes and progressing through a sequential set of learning experiences and tasks.

The integrated nature and high quantity of salient elements in this webquest had the potential of constraining or confusing the intended learning experiences. However, it is apparent that the pre-service teacher who designed this webquest understood not only the technical skills in manipulating text, image, sound and hypertext but how these elements work to create meaning. The role of salience and layout design in this webquest were the key elements in assisting the reader ‘bridge’ their learning from a familiar, visual (albeit imaginary) learning context to the less familiar patterns of written language and specialised knowledge.

Discussion of Policy and Practice Implications

A number of important conclusions can be drawn from this study that have direct implications for pedagogy, policy and practice.

The first issue to be addressed is the need for an educationally accessible pedagogy of multiliteracies for teachers that provide a multimodal framework and metalanguage for analysing, interpreting and describing meaning. The heightened complexity of interpretive and analytical reading skills required by multimodal, hypermedia texts demands this new framework. There is a critical need for collaboration across the education sector to ensure this new pedagogy will be inclusive of all modes of representation and accessible to all stakeholders.

Once the theory base of a multiliteracies framework is established, it becomes important for policy to reflect this in its mandatory benchmarks for school-based literacy instruction and the pre-service training of teachers. There is a great tendency for many school teachers to resist or dismiss digital literacies (Healy in Green and Campbell 2003: 154), partly due to “an over-emphasis on ‘techno-centrism’ or the technical aspects of information and communication technologies” (Morgan in Durrant and Beavis 2001: 69). By contrast, while pre-service teachers demonstrate a greater willingness to embrace digital literacies within their teaching
practice, their focus on the technical aspects of design tends to overlook the critical importance of multimodal semiosis and its impact on the construction of meaning, as illustrated in some of the webquests of this study.

Professional development of teachers and pre-service teacher education needs to address both these technical and semiotic functions of digital literacies through mandated curriculum policy.

The diverse range of new digital genres that are emerging will continue to transform the semiotic landscape. Most digital texts will develop from commercial enterprise. However for those digital texts developed as tools for content-based learning within educational contexts, attention must be given to the impact of competing modes of representation and the multiple meanings that are constructed. It is in this context that salience plays an influential role.

Informed design principles and careful assessment of digital texts at all levels of education will help overcome the tendency for digital learning tools, such as webquests, to provide entertainment at the expense of knowledge and understanding. Such principles must be integrated within the explicit multiliteracies pedagogy and metalanguage for discussing the ideational, interpersonal and textual / organisational layers of meaning and particularly, the impact of salience often realised simultaneously across many modes.

It may be some time yet before literacy theory accommodates a comprehensive pedagogy for multiliteracies. In the meantime, the convergence of literacy and digital technologies will continue to increase exponentially. Clearly, the nature of literacy pedagogy and instructional practice must find temporary avenues for developing teachers’ and students’ knowledge, understanding and use of multiliteracies in the composition and comprehension of digital texts.

The pedagogy must also develop “meta-semiotic understanding and the associated metalinguage to facilitate critical understanding of how meaning-making systems are deployed to make different kinds of meaning in texts” (Unsworth 2001: 282). Literacy theorists and aspects of pre-service teacher education have taken some important first steps, as demonstrated by the contemporary dialogue around multiliteracies and studies like this on webquest design respectively.

A more comprehensive and rigorous integration of current multimodal semiotic practices are required, across all levels of education, before effective digital literacy pedagogy and practice can be achieved.
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