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## Editorial

Welcome to the winter edition of Fine Print for 1999 in which we seek to raise the curtain, however minimally, on the discussion about the relationship between the brain, language and learning.

We've probably all had one of those days when our "brain's not working" and we can't seem to concentrate to get something done. We've probably all met a "real brain" who seems to have no trouble with study or with understanding the way the world works. The brain is so closely associated with intelligence and learning that it's often taken for granted.

On one level it is obvious the brain is important for thinking and learning—after all, if a brain is literally not working, there is no thinking going on at all. The brain is necessary for taking in information through the senses and for directing our sensual/physical responses. A common enough depiction of this is the scene from a laboratory where a scientist attaches electrodes to a brain to try and map out just which part of it is responsible for a particular response or activity.

Just where is language and learning on this map of the brain however? In the first article here, Phil Graham takes us on a tour of some key issues surrounding this relationship. He argues that the brain is too often seen as "merely an information processor" and the "source of language and meaning". A possible implication of such depictions of the brain is that there is too often an emphasis on an individual's "ability to learn" rather than on the broader educational issues that need to be addressed. Graham suggests that it is better that language be seen as "both a human behaviour and an environment" if literacy issues are to be effectively addressed—"we must teach [literacies] to people, not brains".

Rod Maclean, like Graham, takes a social approach to "illiteracy" as he seeks to examine media representations of "reading failure". He argues that there is a polarisation of reasons for such failure into those of social disadvantage (illiteracy) and those of biological factors (dyslexia). Maclean suggests that such distinctions have social roots—you might have heard the old joke that 'the poor are illiterate and the rich are dyslexic'—that have "very little empirical basis". He

goes on to examine a range of proffered reasons for reading difficulties and finishes with a discussion of the implications of such studies for teaching.

The final three articles take a much more specific approach to discussion of "the brain" and learning. Julie Gunstone introduces the idea of Brain Gym and she discusses how it could easily be included in any class. Brain Gym is not specifically a literacy teaching method, but rather a tool to improve any sort of learning through stress reduction and increasing the "efficient flow of information between the brain and body". Gunstone explains the underlying theory of the "trine brain" and how all parts need to be operating in harmony for integrated learning to take place. She finishes with a presentation of a series of simple Brain Gym exercises.

Jill Ladek then writes of Attention Deficit and Hyperactivity Disorder (ADHD). Ladek presents ADHD as a hereditary "neurological developmental disorder". Common symptoms of ADHD are problems with short-term memory, concentration and the organisation of writing—'symptoms' not unknown in ALBE classes I'm sure. Ladek provides a very matter-of-fact account of the main characteristics of ADHD and some useful tips for teachers who think this could be an issue in the classroom.

The final feature article by Julia Griffin is likewise very specific in its intentions. Griffin presents a similarly direct account of the educational issues surrounding the teaching of students with Acquired Brain Injury (ABI). Again, we find a very useful 'ready reckoner' which provides teachers with strategies for effectively teaching people with ABI. In this instance, the brain and learning seem very closely associated indeed. Someone who might have been a successful learner before their accident will know only too painfully the effects of the "brain not working".

As always, we cannot hope to do full justice to such a complex topic in one edition, but we hope that, if nothing else, you gain a sense of the breadth of issues that are entailed when we start talking about "The Brain and Learning".

The editorial team

**VALBEC aims to lead the adult literacy field through identifying issues of importance to practitioners and facilitating positive change. This is achieved through networking, professional support, the sharing of information and the promotion of best practice.**

# Autopoiesis, language, literacy, and the brain

by Phil Graham

Here, Phil Graham examines ideas about the brain and learning that lie under the surface of adult language and literacy practice.



## Introduction

When we attempt to speak about the relationship between language, literacy, and the brain, we find ourselves ill-equipped to deal with these conceptually and qualitatively different phenomena. Immediately we must straddle different academic traditions that treat each of these as separate “things”. Broadly speaking, the study of language firstly belongs to the domain of biology, then to anthropology, sociology, and linguistics. At its most functional, a study of literacy education is a study of a particular technology, its diffusion techniques, and the abilities and motivations of people to adopt, or adapt themselves to, this technology. The brain is most commonly studied in the field of neurology, which is also a sub-discipline of biology, biochemistry, and medicine.

By highlighting disciplinary divisions between the three phenomena under investigation, I wish to show the paradoxical and perhaps impenetrable relationship between language and thought – most often attributed to the proper functioning of the brain – and the primarily technological relationship between language and literacy. The argument I briefly present here is that the way we have come to understand and describe literacies of various sorts, especially the ability to read and write, gives us a distorted view of language and the brain – and, perhaps, even of ourselves as learning, languaging creatures.

## Some problems with cognitivism

Language, literacy, and the brain most certainly have a lot to do with each other. Pinker’s (1994) account of cognitive linguistics is an exemplar of the cognitivist approach to reconciling the relationships between these phenomena. The prevailing attitude of cognitive linguistics, which imagines the brain to be the generative “source” of language and meaning, ignores some fundamental aspects of the human organism, its cognitive processes, and the role that social embeddedness plays in constituting the environment in which the social processes of language and cognition take place. Pinker (1994, 1997), describes the brain as a computational

mechanism. Its functionality is assessed in terms of its ability to calculate and represent the world; to encode and decode reality; and its ability to effectively give “instructions” to the rest of the body.

Language, literacy, and the brain most certainly have a lot to do with each other

The intractable difficulties of accepting the cognitivists’ argument can be explained quite quickly. Firstly, if the brain were a machine that decoded and encoded the world for its “user”, then language that describes concepts could not properly exist. This is because abstract concepts (for instance, “equality”) cannot be separated from the language used to describe them, whereas pork chops, for instance, can. Next, we must impute some tricky, basically mechanical connections: if thought and language are separate “things”, and the brain is the mechanism that somehow connects them, then we must say where language, thought, and the brain “end” in terms of their functionality (not to mention the reductionist project of deducing the functions of ever-smaller parts of the brain). Then we must infer the nature of these mechanisms. Finally, if we *do* deduce some mechanisms that connect these three theoretically discrete elements, then we must account for self-reflexivity: the “mind”. This last conceptual barrier is best explained in the form of a *gedanken* experiment devised by Restak (1995: 88-9).

Imagine that you are a neuroradiologist who has the ability and technology to perform a magnetic resonance imaging (MRI) test on your own brain. You could move your body and simultaneously see where corresponding brain activity occurred. Then you could talk, or merely decide to think about something, again watching the MRI for activity. Immediately, self-reflexivity becomes a problem. This is because the issue arises as to the relationship between your intention to perform movements, words, and thoughts for the purpose of seeing what effects occur within your own brain according to the MRI output. In other words, your intention to move, speak, or think must either be taken into account as part of the test results, or you must assume that your ‘mind is directing the operation of your brain’ (Restak 1995: 89). Descartes’ ghost suddenly looms large in the MRI machine’s output. Suddenly the body, including the brain, is a mere appendage which the mind directs.

### The 'teeny weeny people' solution

Never fearful of tackling the most complex questions on the simplest terms, Pinker (1997) elaborates a technologically updated metaphor of the ancient homunculus solution to conscious experience. The homunculus theory imagines a Russian doll arrangement of sentient little people, each inside the head of the one larger, each of which directs "traffic" inside the brain of the larger homunculus. Pinker, apparently armed with the knowledge that flatter management systems are the order of the day, describes the latest version of the homunculus solution. He calls it, charmingly, 'the production system':

"A production system contains a memory and a set of reflexes, sometimes called "demons" because they are simple, self-contained entities that sit around waiting to spring into action. The memory is like a bulletin board on which notices are posted. Each demon is a knee-jerk reflex that waits for a particular notice on the board and responds by posting a notice of its own. The demons collectively constitute a program. As they are triggered by notices on the memory board and post notices of their own, in turn triggering other demons, and so on, the information in the memory changes and eventually contains the correct output for a given input. Some demons are connected to sense organs and are triggered by information in the world rather than information in memory" (1997: 69).

Descartes' God is substituted by Pinker's system of demons. It is as if, for Pinker, the mind were situated somewhere other than "in the world". And questions about the 'demons', with their 'notice board' system of mutually triggering, ever-patient, sentient sticky notes, bear little conceptual scrutiny without resorting to numerous metaphysical assumptions. The homunculus theory has never really gone out of fashion in mainstream thought, especially not since Descartes, Newton, and the Enlightenment got together to provide a more "rational" approach to understanding the universe, our machines, and ourselves as egg-in-cup reflections of one another.

But one should not be too harsh on Pinker and the cognitivist school. Such technophilically derived explanations are to be expected. Since recorded history, and even more noticeably since the Enlightenment, the way in which we have described ourselves as thinking, acting beings most often bears an uncanny resemblance to our most advanced technologies, which includes our institutionalised conceptions of God (cf. Innis 1951). This is not surprising if we consider the role of technologies, especially communication technologies, which are humanity's primary means of socio-environmental control (Innis 1951).

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### Literacy as a technology

Increasing numbers of our technologies, which can be defined as abilities to control elements of our physical and social environments, are described as literacies. Without going into a full literature review on the subject, one can easily find references to "financial literacy", "cultural literacy", "political literacy", and, most importantly these days, "technological literacy" (eg Bigum & Green 1993).

If we look at the history of our technologies, and particularly our communication technologies, we see a number of interesting patterns corresponding to the way we describe ourselves in terms of what we are, or at least of how we operate (cf. Innis 1950). Just as Newton's clockwork universe ratified Descartes' view of the body as a machine inhabited by an ethereal mind, the historical trajectory of communication technologies, from orality and print to the widespread use of the telegraph, radio, television, and finally the personal computer (PC), has ratified views of the world as something that can be encoded and stored in memory, collective or otherwise. But this is to confuse the map with the territory. Language, at least from an autopoietic perspective, is neither a code (although it can be encoded) nor a technology (although it can be technologised). Language is, rather, both a human behaviour and an environment.

### Autopoiesis: a brief introduction to the biology of cognition

The significance of an autopoietic perspective for language and literacy lies in Maturana and Varela's (1980, 1987) assertion that the presence of cognitive processes within a system is both necessary and sufficient to classify the system as living. In other words, the basic criteria of a living system is that it has the ability to distinguish between itself and its environment (Maturana 1978: 36; Maturana & Varela 1980: 96). Such a system is also necessarily *autopoietic*, which means, literally, self-making. To discover how knowledge is produced in autopoietic systems, the unit of analysis becomes *the whole organism*, and we must 'discover "regions" that interweave in complex manners, and, in the case of humans, that extend beyond the strict confines of the body into the socio-linguistic register' (Varela 1992: 14). Maturana's perspective on the role of language in human society is even more forthright than Varela's: 'language defines humanity' (Maturana 1988).

Language differs from linguistic behaviour, such as that displayed by birds, apes, or dolphins. Linguistic behaviours are behaviours that coordinate other communicative and social behaviours. Language is possible only because humans can interact with their own descriptions of the world, which necessarily include those of their own internal states. Consequently, language and self-consciousness are concomitant with each other:

"[A] living system capable of being an observer can interact with those [observations] of its own descriptive states which are linguistic descriptions of itself. By doing so it generates the domain of self-linguistic descriptions within which it [the system] is an observer of *itself* as an observer, a process which can be necessarily repeated in an endless manner. We call this the domain of self-observation and we consider that self-conscious behaviour is self-observing behaviour, that is, behaviour in the domain of self-observation. The observer ... necessarily always remains in a *descriptive domain*, that is, in a ... cognitive domain" (Maturana & Varela 1980: 121).

As humans, observers, and describers, our knowledge is a socially and technologically constrained phenomenal domain. To explain: we humans are born into an environment of language, and therefore knowledge—preconceived ways of ordering and relating the world. We are told, in language, how to encode language in socially conventional ways, thereby becoming literate. Literacy, from this perspective, is a socially acceptable level of fluency in a technology which is the means by which we produce, hoard, consume, and distribute meanings (distinctions, descriptions, cognitions, and re-cognitions) made in an environment of language. Of course, I have over-simplified literacy here to emphasise the difference between literacy, which is a technology, and language, which is a biological phenomenon that largely constitutes the socio-cognitive environments into which we are born.

### Language as an environment

My purpose in describing language as an environment is to emphasise the social aspects, origins, and functions of language. Imagine, for a moment, that language systems are environments that are constituted as concretely as, for instance, a city. Imagine a person, newly arrived in this city, learning to navigate their way through their new environment. Without stretching the metaphor too far, we can imagine this individual eventually finding their way around the city; developing a taste for particular restaurants, shops, and shortcuts; finding suitable lodgings and an occupation; and, more often than not, settling into particular routines and locales that suit her or him. In turn, their participation in this environment changes the environment itself.

Language is an environment into which we are born. Its Participants, Processes, and Circumstances create the framework for the socio-cognitive environments in which we move, mean, and understand (Graham, in press). The socially produced and reproduced environment of language pre-exists each of us, is embodied by us, and it allows us to exist in society as we do. Trying to separate language from thought, as Vygotsky (1986) recognised, leads to certain intractable difficulties which eventually boil down to a chicken and egg conundrum: one cannot conceivably exist without the other, at least not in any

socially meaningful sense (it may be conceivable to some that a fish experiences thought, but we cannot know what it thinks). But, because we can so easily (at least for some) separate our language, and therefore our thoughts, from ourselves by using the technology of literacy, we are easily seduced into the idea that the creations (distinctions) we make in language actually exist as something objectively distinct from our socially embedded selves. Consequently,

"we live existing in our language as if language were a symbolic system for referring to entities of different kinds that exist independently from what we do, and we treat even ourselves as if we existed outside language as independent entities that use language" (Maturana 1995).

The cognitivist confusion which sees the brain's operation reflected in the dreamland of gleaming digital technologies merely extends the confused perception that arises from thinking of language firstly as a code, merely because it can be technologically encoded. As the saying goes: "give a kid a hammer and the whole world becomes a nail".

### What neurology has to say about the brain: "It's broken ..."

Neurology, like cognitive linguistics, often describes the brain as 'the preeminent information processor' (Restak 1995: 124). When speaking about the brain, neurologists tend to express themselves in terms of abnormalities (1995: 74). From the point of our investigation, this immediately raises two paradoxes. First, the brain appears as an object spoken about in language, which the brain, at least from the cognitivist and neurological perspective, supposedly "controls". Secondly, from the neurologists' perspective, the brain has two states: normal or abnormal.

Part of the reason for this is that specific brains usually only become of interest to neurology when they are damaged, or show signs of damage. To put it in the words of an eminent neurologist:

"Most of what we know about the brain has come from the meticulous examination of the effects of injury or illness. Typically a neurologist correlates what is observed about the affected patient during his [sic] illness with changes in the brain discovered during an autopsy examination" (Restak 1995: 74).

Neurology, then, believes that by understanding how a damaged or malfunctioning brain hinders the "normal" operation of other biological functions we can understand which bit of the brain controls which bit of the body. Of course, this presumes that the chicken and egg question is answered in the affirmative for Cartesianism: that is, that the brain dictates how the body operates and that the body is merely an appendage of the brain. With this approach to understanding

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the brain, neurology has also advanced its knowledge by such rigorous means as mutilating monkeys and other animals to see how brains change with physical damage:

“Just as the borders of a country change to reflect natural and human-produced changes, the brain alters itself on the basis of experience. In the monkey experiment the “brain map” was altered by the cruel act of cutting off one of the monkey’s fingers. Within the next several weeks the neurons formerly controlling that finger were incorporated into the brain areas representing one or more of the remaining fingers” (Restak 1995: 93).

The paradoxes inherent in seeing the brain as a Cartesian, ostensibly isolated element which processes information and controls the body again become apparent. Even while seeing direct evidence of the brain’s reliance on the conditions in which the body finds itself, the neurologist insists that the neurons formerly *controlled* the monkey’s former finger. It seems doubtless that the brain is intrinsic to the “normal” functioning of the whole body (whatever “normal” might mean in this context), but to assume that the relationship is one-way dictatorial on the part of the brain flies in the face of logic, and the evidence presented by the ghastly experiments that Restak describes (the monkey’s neuronal activity is checked by removing part of its skull and connecting electrodes to its exposed brain).

Further difficulties become apparent when we draw an analogy based on the assumptions of mechanistic neurology. Assume, for a moment, that cars were a naturally occurring phenomenon, by which I mean *not* manufactured by people. Your job is to deduce how cars operate based on the symptoms of various types of mechanical failure. Your focus is engines, which are assumed to make cars go. You assume that all engines are “normal” and fairly homogenous until they break down. You have no comprehensive or definitive knowledge of how the engine is connected to the rest of the car, nor do you take into account that engines all develop differently and operate in different environmental conditions. If you try to remove the engine from the car, it stops going. Thus, the only engines you can examine are from cars that have ceased working altogether. Therefore, you can’t examine the structure and function of the engine at the same time.

By taking this approach to mechanics (which I think is how my mechanic does it), you will, at best, develop a taxonomy of engine disorders corresponding with specific symptoms, the most common of which will appear to be self-evident, empirically derived truths. But none of these disorders will necessarily have anything to do with the structure or function of cars or engines. Using the approach I outline above, one could only describe cars in terms of the various malfunctions they suffer. Nor would such a taxonomy necessarily be of use in fixing the car, regardless of its condition. The taxonomy would only necessarily be coherent in terms of itself and the attributions of an ultimately abductive observation of disorders.

I’ll leave behind neurological disorders now - many of which can cause learning “disorders” - and move on to the implications for literacy of what I have said so far.

### Technologising the environment of language

*Caveat emptor*: I must confess, although I teach communication in a university, I do not consider myself to be an expert at teaching literacy. Therefore, anything I say about the subject should be treated with the suspicion that any unindoctrinated layperson ought to evoke among experts. Lack of expertise notwithstanding, my familiarity with the polemic between whole-language and phonics, formalism and functionalism, gives me the perspective of a reasonably well-informed and very interested onlooker. Such arguments, in some instances, can be dismissed as ideological trench warfare wrought by a good deal of intellectual investment on the part of well-intentioned experts. Based on the perspective I have outlined above, I argue that multiple understandings of language, literacy, and the brain are quite necessary for successful education. Still, even with an understanding of context (environment) and phonemic literacy (a basic sub-technology of literacy), learners of literacy are left with a conceptual gap which can only be filled by a functional understanding of grammar.

To explain this assertion, I will (forgive me) use another analogy. Literacy, as I have said, is a technology. Although, like all technologies, it contains language, it is not language. Let us again take the technology of cars as an analogy. If we wanted to teach people how to make their own car, we would need to teach them a number of things. First, they would need to be familiar with the qualities that cars can possess, and which contexts these qualities are suited to: do they want to build something like the latest German sports car, a vintage banger, a four-wheel drive, or an armoured personnel vehicle? By showing our student a range of cars with various qualities, we could give them some idea about the type of car they want to build. Next, our student needs to become familiar with the bits that go together to make a car: nuts and bolts, carburettors and camshafts, windshields and widgets. All that being done, we ought to be able to leave our student because they have everything they need: a knowledge of what makes a car “good”, a knowledge of what cars do, and knowledge of the bits that go together to make them up.

Of course, we *can’t* leave our student there, not if we want to teach the capability to build, or even fix cars. Even though our student knows what sort of car she wants to build, and she knows which bits do what, she doesn’t know is *how it all goes together*: she doesn’t know the grammar of car construction. Without that knowledge, she is unlikely to build a complete car. We would not expect someone to become a competent mechanic without a comprehensive understanding of the relationships between the parts of a car – that is, how cars function as systems. It is even less likely that our student would become competent in fixing or building cars with specific qualities for specific purposes without a knowledge of the mechanics of excellence; in literary terms, a

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knowledge of genre and functional grammar. No homogenous or doctrinaire formalisms would do in either case, neither in car mechanics nor literacy.

### Conclusion

My argument here is underpinned by more-than-mild alarm at the levels of literacy amongst young people. Many have never (and possibly will have never) learned the technology of writing down their thoughts in a coherent or socially acceptable way. Martin's (1998) *Linguistics and the Consumer* is an excellent indictment of the effects, real and potential, of the theory wars among literacy teachers, the public, and the state. I can add no more to what Martin has said on the matter. What I hope I have achieved here is to distinguish language (which is a socio-biological phenomenon) from literacy (which is a communication technology), and brains from computers. The brain is not merely an information processor, although it can do calculations, and invent notions such as calculation, information, and processes. Nor is it even necessarily a single organ. It is certainly neither the sole source of cognition nor the controlling, ex machina engine of the body.

If we wish to teach literacies, we must teach them to people, not brains. Thus, we must teach *all* relevant aspects of the technology. This is especially so since the preeminence of computers in the classroom. The hopeful enthusiasm for computers amongst some educators—and more particularly, the computer industry—may well be warranted, but their potential benefits will not and cannot be realised unless our children learn the communication technology upon which computers are founded: namely, print literacy. There are other social and political implications for seeing ourselves as mere reflections of our finest technologies, and these must always be considered. Because machines are more and less advanced, and therefore more and less valuable, a latent fascism lies in such understandings of ourselves, but these matters must be discussed elsewhere.

At the risk of seeming theoretically profligate, I can only conclude that multiple approaches to literacy education are required, theories of the brain notwithstanding. The appropriateness of any particular approach will depend on the individuals being taught, and what they wish, or need, to achieve by their education. Doubtless, my conception of language will raise the ire of those committed to seeing language as a code, or as a technology in itself. So be it. In the end, one must ask: "a code for what?" and "a technology for whom?"

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### References

- Bigum, C. & Green, B., 1993, 'Technologizing literacy: or, interrupting the dream of reason', in A. Luke & P. Gilbert (Eds.), 1993, *Literacy in contexts: Australian perspectives and issues*, 4-28. Sydney: Allen & Unwin.
- Graham, P., in press, 'Critical systems theory: A political economy of language, thought, and technology', *Communication Research*, 25, (4), 482-507.
- Graham, P. & McKenna, B. J., in press, 'A theoretical and analytical synthesis of autopoiesis and sociolinguistics for the study of organisational communication', *Social Semiotics*.
- Innis, H. A., 1951, *The bias of communication*. Toronto: University of Toronto Press.
- Martin, J. R., 1998, 'Linguistics and the consumer: The practice of theory' *Linguistics and education*, 9 (4), 411-418.
- Maturana, H. R., 1978, 'Biology of language: The epistemology of reality', in G. Miller & E. Lenneberg (Eds.), *Psychology and Biology of Language and Thought: Essays in Honor of Eric Lenneberg*, 27-63. New York: Academic Press.
- Maturana, H. R., 1988, 'Ontology of Observing: The biological foundations of self consciousness and the physical domain of existence', Conference Workbook: *Texts in Cybernetics*, American Society For Cybernetics Conference, Felton, CA, 8-23 October. [Available on-line at: <http://www.inteco.cl/biology/ontology/index.htm>].
- Maturana, H. R., 1995, *The nature of time*. [On-line]. Retrieved November 13, 1998 from the World Wide Web: <http://www.inteco.cl/biology/nature.htm>
- Maturana, H. & Varela, F., 1980, *Autopoiesis and cognition: The realisation of the living*. Dordrecht, Holland: Reidel.
- Maturana, H. & Varela, F., 1987 *The tree of knowledge*. Boston, MA: Shambalah.
- Pinker, S., 1994, *The language instinct*. London: Penguin.
- Pinker, S., 1997, *How the mind works*. London: Penguin.
- Restak, R., 1995, *Brainscapes: An introduction to what neuroscience has learned about the structure, function, and abilities of the brain*. New York, NY: Hyperion.
- Varela, F., 1992, 'Autopoiesis and a biology of intentionality'. In B. McMullin & N. Murphy (Eds.), *Autopoiesis and perception: A workshop with ESPRIT BRA 3352*. Dublin: Dublin City University.
- Vygotsky, L., 1986/1997, *Thought and language*, (A. Kozulin, Trans.), London: MIT.

# Representations of reading failure

By Rod Maclean

**In this discussion, Rod Maclean assesses the way in which reading difficulties get named and he suggests that it is more complex than a quick fix approach.**



## Introduction

Literacy has been a continuing source of interest in the media over the last 25 or 30 years (Hodgens 1994). In this article I want to contrast representations in the media of illiteracy, and particularly of reading disabilities, with recent research findings which present a quite different picture. My aim is to show that the media in their attempts to deal with the fact that schools fail to teach some children to read have constructed two differing kinds of accounts of this failure. One goes under the heading of illiteracy and blames social factors such as poor parenting or schooling; the other goes under the heading of dyslexia and blames organic or hereditary factors. In this discussion I question the validity of this dichotomy and explore the consequences of its abandonment for our view of reading failure and for our approaches to teaching poor readers.

A look through articles about reading problems in the daily newspapers tends to throw up two broad groups: articles on illiteracy and articles on dyslexia or specific reading disability. Newspaper articles tend to portray illiteracy as a mass phenomenon. The reporting does not concern individuals but groups. Articles almost always include statistics which suggest that a certain proportion of the population cannot read. For example:

"it is estimated that, on average, 16 per cent of students could be classified as reading disabled" (Hempenstall, 1995).

"Australian illiteracy rate '10%': Up to 10 per cent of adults in Australia are functionally illiterate, a survey by the Australian Council for Adult Literacy has shown" (*The Canberra Times* 10 Sept 1982, p. 8, as cited in Hodgens 1994).

The blame for illiteracy is accorded to social factors rather than to biological factors. These include poor teaching, inadequate teacher training, television, 'progressive' or 'whole language' teaching methods, computer games, uncaring parents, or a lack of interest in books. An example of this kind of reporting is the article "Parents, TV and Teachers Must Share the Blame" (*Sydney Morning Herald* June 5 1975). Articles such as these always make reference to the problems

faced by employers in finding school leavers who have adequate literacy skills to meet the needs of the workplace. Suggested solutions to the problems of illiteracy consist of improvements to the educational system: better teaching methods, more teachers, better teacher training, and more testing of literacy.

Dyslexia on the other hand is portrayed as being an organic or hereditary problem which affects children who are otherwise intelligent, and which no amount of effort by children, parents or conventional teaching can ameliorate. It is something that affects individuals, and newspaper articles will often have a case study of a particular child afflicted with this quasi-medical condition. Dyslexia is usually attributed to problems with auditory or visual perception or memory, or to some sort of difficulty in integrating the functioning of the two brain hemispheres. Solutions to the problem of dyslexia usually come not from educators but from outside 'experts' such as doctors or psychologists or from other para-medical professionals like chiropractors or speech therapists. Such approaches include the Irlen lens tinting system (Irlen, 1991), Dennison's Brain Gym (Dennison & Dennison 1989) or the Lindamood program (Lindamood & Lindamood, 1975).

This polarised representation of reading problems has very little empirical basis. If there really were two sorts of types of reading problem, one organically caused and one part of the normal distribution of abilities in the population as a whole, then one would expect some sort of a 'hump' or 'blip' in the distribution of reading ability in the population which marked the location the special dyslexic group with the organic problems over and above those normally found. However a number of large scale studies have failed to find any evidence of such a hump (van der Wissel & Zegers, 1985; Share et al., 1987; Shaywitz, Fletch & Shaywitz, 1996). This suggests that reading lies on a continuum of ability distributed through the population and that there is no special group of dyslexics.

One of the reasons why it has been found necessary to postulate the existence of a mythical group of dyslexics is the fixed view in the public mind that illiteracy as a problem is due to some limiting factor such as low intelligence, poor parenting, or lack of schooling. These factors are held to explain or predict

articles about  
reading problems  
... throw up two  
broad groups:  
articles on  
illiteracy and  
articles on  
dyslexia or  
specific reading  
disability

poor reading, so that the low literacy skills of people with these deficits can be seen as somehow normal and inevitable. The existence of poor readers who do not suffer from these problems is however a threat to the comfortable view that poor reading is the inevitable result of some sort of background deficiency. This threat is overcome by creating a separate different group of poor readers whose poor reading is not explained by the normal factors but by some separate, special, organic factor. This allows us to direct lots of attention and resources to these, probably middle class, 'dyslexic' readers, while accepting the inevitability and inalterability of the great majority of reading problems.

### Guidelines for a theory of reading disability

- 1 In fact there is little evidence that intelligence is particularly strongly correlated with reading ability, or that it is a limiting factor on reading ability in the sense that one's level of intelligence predicts the level of reading ability that one is going to be able to attain. It is quite possible to be a good reader even if one is not all that intelligent (Share, McGee & Silva, 1989). There is similarly also little evidence that social class or type of schooling have a major effect on the reading ability which a learner can attain, unless one looks at extreme cases of deprivation. In looking for causes of reading problems we should be looking at the whole group of poor readers, including poor readers who are not very intelligent or who have been disadvantaged socially or who have behavioural problems, not just at specific subgroups such as 'dyslexics'.
- 2 It is important not to confuse cause with correlation. For example, in mythology about reading problems social class is often considered to be a relevant factor, and social class does correlate moderately well with reading problems, but once other confounding factors are taken into account, the relationship with social class all but vanishes. In order to establish a causal relationship it is important to show that the cause predicts in advance the occurrence of the reading problem. This means that in general studies of the causes of reading problems which deserve to be taken seriously are longitudinal, conducted over a period of some years.
- 3 Another guideline worth bearing in mind is that suggested causes of reading problems should be educationally relevant, that is they are most useful when they suggest ways of intervening which help people to learn to read better than might otherwise have been the case. For example many studies show that there is a very strong relationship between the number of books that a child's parent has at home and the child's reading ability. But how educationally relevant is this relationship? Does it mean that if we went into the home and put more books on the shelves that this would increase reading ability?

- 4 Related to this criterion of educational relevance is one suggested by Share and Stanovich (1995). They argue that a researcher who wants to causally relate some factor to reading ability needs to be able to propose a plausible theory or model which would account for the relationship. They go on to propose more specifically that any theory of reading disability should be consistent with and capable of being integrated with a theory of reading acquisition. A theory of reading disability is in their view essentially a theory of how something goes wrong with learning to read.

### Causes of reading failure

#### Phonological processing

Share and Stanovich (1995) point out that there is only one theory of the cause of reading disability which meets all these criteria. This is the view that phonological processing has a causal relationship to reading disability. By "phonological processing" they mean a number of related abilities which involve cognitive processing of speech information: the ability to perceive and label spoken sounds in the context of words, the ability to hold those sounds in memory and retrieve them from memory, or the ability to associate sounds with spellings or other visual symbols.

Not only is phonological processing strongly correlated with reading disability, the relation is also a predictive and hence a causal one. Measuring the phonological processing ability of a group of children before they begin to read makes it possible to predict with a good degree of accuracy who will be able to learn to read and who will have difficulty.

The relation is also educationally significant. A group of learners with poor phonological processing abilities who receive intensive phonic instruction will end up better readers than they would otherwise have been.

Finally, the relationship can also be plausibly accounted for in terms of a theory of reading acquisition. In an alphabetic language such as English, a knowledge of and ability to use letter sound correspondences allows a reader to work out the identities of unknown words, and is hence an essential part of learning to read, even if letter sound knowledge gives only imperfect cues to the identity of the word. Share and Stanovich (1995) argue that lack of phonological processing ability impedes the process of learning to read in a number of strategic ways. It impedes learning at the very beginning when acquiring the names of the letters and sounds, and learning to identify sounds in words. A lack of phonological awareness also makes it difficult for learners to hold a number of sounds in memory when they are sounding and blending in order to identify an unknown word. More generally the cumulative long term effect of poor quality information about word identity and word makeup will lead to poor quality representations of words being held in long term memory, leading to slower and less efficient retrieval.

**The blame for illiteracy is accorded to social factors rather than to biological factors**

As Hempenstall (1999) claims, these effects are a matter of "stage not age". Morais, Cary, Alegria & Bertelson (1979) show that illiterate adults who did not attend school perform poorly on phonological awareness tasks, so this is not an ability that just develops spontaneously with age. As the work of the Lindamoods (1975) has shown, many adults can be significantly helped with phonological awareness training.

#### Phonological processing questioned

Another possibility with adult learners is that the cause of their reading problem lies in a factor other than phonological awareness. The strength and comprehensiveness of the relationship between reading ability have led many over enthusiastic commentators to claim that it is the cause of reading problems, that as teachers and researchers we need look no further. Increasingly the research findings on phonological processing are appearing in the media. Hempenstall (1995, 1999) appears to argue that early intervention in phonemic awareness programs at pre-school or kindergarten level would solve many of the literacy problems which currently beset the education system. But to make such an assumption would be unwise for a number of reasons.

First, it is quite clear statistically that there are some aspects of reading disability which phonological processing does not account for, and that there are a number of other possible factors which must also be considered.

Second, the relationship between phonological processing ability and reading is not a simple linear one but involves some complex interactive relationships. Phonological processing does not develop independently of the teaching of reading but in interaction with it, so that some aspects of phonological processing ability are both cause and consequence of reading disability. Phonological abilities develop slowly because children are not reading enough, but this slow development in turn further exacerbates the reading problem. One sign of the interactive nature of the relationship is that, although teaching phonological awareness teaching helps learners to read better than they would have otherwise, the amount of improvement created is not quite as much as one might have expected on the grounds of the correlational relationships alone.

Third, it could be argued that phonological processing is not an independent causal factor but an integral part of the process of learning to read, so that a problem with phonological processing can be seen as a symptom rather than a cause of reading failure. If phonological processing is genuinely a cause it is likely to be the result of some sort of organic dysfunction. Share (1995) and Share and Stanovich (1995) suggest problems in the temporal lobe of the brain which lead to problems "discriminating, coordinating and integrating multiple events occurring in close temporal proximity" (Share 1995 p. 187). If on the other hand

phonological processing is merely a symptom of a reading problem then research is no closer to finding a single cause of reading failure. There could be as many different causes of the phonological processing problem as there are possible causes of the reading problem.

As these three points show, while phonological processing is clearly a very important cause in reading difficulties, it must be placed in the context of other possible causes. There are a number of candidates.

**Dyslexia on the other hand is portrayed as being an organic or hereditary problem**

#### Other causes? Visual perceptual deficit

One persistent claim has been that reading problems may be associated with a visual perceptual deficit, but this claim has proved difficult to substantiate. Share and Stanovich (1995) however cite two strands of research which tend to show that there may be some specifically visual problem. First there is evidence that some poor readers may have a specific problem forming visual or orthographic representations of a word in memory. Second there is evidence associated with the Australian psychologist Bill Lovegrove (see for example Lovegrove 1996) that poor readers have problems associated with the transient/magnocellular visual system. This is the part of the visual system that deals with peripheral vision, and which is highly sensitive to contrast and to changes in the visual field. Poor readers' visual problems do not show up when they are reading single words, but only when they engage in normal reading where they have to access information in the periphery of vision to control a series of fixations along a line of print. This finding also accords with the self-reports of some poor readers who claim that the print twists and squirms on the page around their immediate focus of vision (Dalton, O'Shea & Zagdanski 1994).

Although the evidence about visual processing is intuitively persuasive, it has yet to meet all the guidelines for a theory of reading disability listed above. There is little evidence that visual deficits can be used as reliable predictors of reading problems, and there is little evidence that a diagnosis of a visual processing problem can be used as a basis for an effective teaching intervention. But well-informed research is sparse and it may be that no one has yet gone about it the right way.

One suggestion that comes from Lovegrove (1996), and from Share and Stanovich (1995), is that a single problem with temporal lobe processing in the brain may account for both the phonological processing deficit and the visual deficit. But they interpret this link quite differently from each other. Lovegrove (1996) suggests that there are two separate routes through which one underlying deficit may impact on reading, an auditory and a visual one. Share and Stanovich (1995), on the other hand, suggest that the correlation between the reading problem and the visual problem reflects the fact that they have a common underlying cause, but that there is in

fact no direct causal link from the visual deficit to the reading deficit. This dispute can only be resolved by evidence which shows that an educational intervention based on the visual processing deficit has the effect of diminishing a predicted reading problem.

#### More causes?

There are a number of other factors that have a clear value in predicting reading failure. These include:

- Behaviour—learners who cannot concentrate or neurotic learners with a low self-esteem are more likely to have trouble with reading than their peers;
- Sex—this plays a clear, though limited role in predicting reading ability;
- Hearing loss—in the early years this can have a major impact on language development generally and more specifically on reading;
- Measures of parental literacy—typically, the number of books in the home are a very good predictor of reading ability;
- Some characteristics of the education system—there is a well-established relation to reading achievement, although the effects are at a much smaller order of magnitude than the major ones we have been considering. These include school and class size, teacher education and experience, and the proportion of other learners in a class who are in special need of teacher assistance (Munck & Lundberg, 1994).

However it is very hard to disentangle the causal factors that underlie these predictive relationships. There are a number of reasons for this:

First, it is unclear in many cases whether these relationships are based on environmental or hereditary mechanisms. Recent studies of identical and fraternal twins (de Fries & Light, 1996) suggest that about 50% of reading problems are genetic in origin, and many of the correlations above such as sex or parental literacy could be interpreted in either environmental or hereditary terms or a combination of both.

Second, predictive relationships do not remain constant throughout a learner's career. As work done in Melbourne by Waring, Prior, Sanson and Smart (1996) shows, children who are classed as reading disabled in Grade 2 are sometimes found to have 'recovered' by Grade 6. A positive message to be drawn from this is that a classification as having a reading problem is never a life sentence. With appropriate teaching and assistance learners can always be helped to read better than they might otherwise have done.

Third, the relationships between predictive factors and reading ability are never simply linear but always complex and interactive. A common interactive mechanism is described

by Stanovich (1986) as the "Matthew effect", citing the Matthew's gospel (Matthew 25:29):

"For everyone who had will be given more and he will have an abundance. Whoever does not have, even what he has will be taken away from him."

In this cycle an initial deficit is magnified in a process of negative feedback by inappropriate 'remedial' teaching, low self-esteem, and lack of the exposure to appropriate, meaningful printed text. Thus for example an initial behavioural problem of distractibility causes a reading problem; this reading problem in turn impacts on behaviour through low self-esteem and disruptive or avoidance behaviour, which again impacts on the reading problem. This cycle is of course familiar to adult literacy practitioners.

#### Implications for teaching

The media tend to make two sorts of recommendations about teaching. One is for a return to basics, to more structured, direct and 'traditional' forms of teaching. The research results about phonological processing are simplistically interpreted as demonstrating a need for a return to phonics, ignoring the many poor practices which took place in the past under the heading of phonics and which are not supported by current research. A second line of recommendations come from stories about miracle cures discovered by 'experts' who are working outside mainstream education systems. An example of this is the article in *The Age* "Primary education—classy glasses" (Bald, 1997). This story concerns a cost effective adaptation of the Irlen system of tinted lenses by a British psychologist. This kind of scientific 'breakthrough' fits in with the medical 'dyslexia' paradigm discussed above, and offers hope of a 'magic bullet' to learners

frustrated by the lack of success of conventional methods. This is not to say that the tinted lens system does not work for some people; the results cited above about the transient visual system offer a possible explanation for its effectiveness. It is rather that newspapers seize on this sort of story, whether justified or not, because it fits in with the polarised and medicalised view of reading problems they have constructed.

**This polarised representation of reading problems has very little empirical basis**

A concern for anyone who wants to apply recent research results to teaching practice must be to escape from this polarised view and from the inappropriate medical paradigms which dominate the 'treatment' of dyslexia. Just as theories of poor reading must be integrated with general theories of reading acquisition, so must the teaching methods used with poor readers be integrated with and related to the methods used for teaching all readers. A good general principle is that poor readers should be taught by the same methods as any other readers. The difference is that poor readers will learn slowly and laboriously, and will need careful and explicit guidance as well as one-to-one support and great patience from a sympathetic, skilled partner.

Phonological processing will be central to the teaching of poor readers, or indeed to readers of any ability. But it is important that this should not be seen simply as an endorsement of the teaching of phonics. There can be no doubt that the teaching of phonics is an essential component of the early stages of learning, if this means the teaching of the ability to hear and label sounds within words, the ability to associate simple letter-sound correspondences, and the ability to blend together isolated sounds to form words. But many other aspects of traditional phonics teaching, such as the drilling of long lists of consonant clusters or phonograms, have no support from research.

Although phonological awareness, and the other skills taught by phonics, represent a considerable hurdle for learners, most achieve it eventually. A great deal of time and effort is wasted trying to teach phonics to students for whom it unnecessary. And there are also considerable dangers in an overemphasis on phonics. There is research evidence (for example Munck & Lundberg, 1994) that teaching that focuses too much on lower level skills such as phonics is negatively associated with achievement, as it prevents students from spending time reading meaningful text. It is essential that any special instruction that poor readers receive is in addition to rather than instead of conventional teaching. Poor readers should not be taught only in the areas that they have difficulties with. They will be further severely disadvantaged if they do not receive normal reading instruction in a comprehensive range of areas.

It would be unwise to assume that phonics is a panacea for teachers of adult literacy. Most adults with literacy problems have attended schools and have at some time been exposed to phonics teaching, although often of dubious quality. Most have at some stage developed a degree of phonological awareness, although this is often atrophied by the time they reach adult literacy classes. The problem is either that they have 'cracked the code' so late relative to other students that they remain permanently behind, or that they are unable to use their phonological processing skills as a 'self-teaching mechanism' (Share 1995) to learn how to read unknown words. In these cases further persistence with a strategy that has already failed may be counterproductive.

Thus, even when poor readers have mastered the basic skills of phonics they are still usually well behind in their reading development. This is because the lack of basic phonological processing skills has slowed down their learning about the lexical and orthographic structure of English. They simply do not have enough detailed knowledge about the spelling and word patterns of English to identify words quickly and reliably enough to read easily and pleasurably. A great deal of time and resources must be directed to learning about these features of English if learners are to make progress.

Evidence for other techniques is equivocal. One theme that emerges from the research is that many effective teaching

techniques for poor readers have a multi-sensory element. For learners who have problem forming an orthographic representation in memory based on visual and auditory input, conventional modes of learning may be usefully supplemented by tactile or kinaesthetic methods. Tracing or manipulating letters, for example, can be helpful in conjunction with reading words aloud (Hulme, Monk & Ives, 1987; Bradley & Bryant, 1985).

As a general principle poor readers are best taught by teachers. Outside experts such as psychologists have no magic solutions to reading problems which teachers are not already aware of, and often when they try to usurp a teaching role they do this rather poorly. Professionals can be useful in solving secondary problems which impede learning to read, such as hearing loss, visual perceptual problems, or attention disorders. It is hard to see how approaches which depend on chiropractic or kinesiology can have a direct impact on the causes of reading difficulties. Their effectiveness is probably through reducing distractibility and improving the learner's ability to benefit from teaching. But this theoretical distinction between direct and indirect effects is probably one that those with a literacy problem are not too concerned about in practice.

Instead of relying on specific techniques which offer a magic cure, the most successful approaches seem to rely on integration into an overall package of a series of elements. These includes a clear locus of responsibility and clear plan of action for provision of resources, community support, intensive one-to-one teaching, effective teacher training, and careful support within a well-structured program.

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#### References

- Bald, J., 1997, "Primary education – classy glasses", *The Age*, 11 February, p. 5.
- Bradley, L. & Bryant, P. E. 1985, *Rhyme and Reason in Reading and Spelling*, University of Michigan Press, Ann Arbor.
- Dalton, J., O'Shea, J., with Zagdanski, D. 1994, *Dyslexia: How Do We Learn?* Hill of Content, Melbourne.
- de Fries, J. C., & Light, J. G. 1996, 'Twin studies of reading disability', in *Language Learning and Brain Disorders: Developmental, Biological and Clinical Perspectives*, J. H. Beitchman, N. J. Cohen, M. M. Konstantareas, & R. Tannock, (eds) Cambridge University Press, Cambridge, pp. 272-292.
- Dennison, P., & Dennison, G. 1989, *Brain Gym: Teacher's Edition*, Edu-kinesthetics, Glendale, Cal.

... it has been found necessary to postulate the existence of a mythical group of dyslexics ...

Hempenstall, K. 1999, 'The role of phonics in learning to read: What does recent research say', *Fine Print*, vol. 22, no. 1, pp. 7-12.

Hempenstall, K. 1995, 'Tackling the "guarantee" of early failure at reading', *The Age* 28 March, p. 8.

Hodgens, J. 1994, 'How adult literacy became a public issue in Australia', *Open Letter*, vol. 4, no. 2, pp. 13-24.

Hulme, C., Monk, A., & Ives, S. 1987, 'Some experimental studies of multisensory teaching: the effects of manual tracing on children's paired-associate learning', *British Journal of Developmental Psychology*, vol. 5, pp. 299-307.

Irlen, H. 1991, *Reading by the Colors: Overcoming Dyslexia and other Reading Disabilities through the Irlen Method*, Avery Publishing, Garden City Park, NY.

Lindamood, C. H., & Lindamood, P. C. 1975, *The ADD Program, Auditory Discrimination in Depth*, Teaching Resources Corporation, Hingham, Mass.

Lovegrove, W. 1996, 'Dyslexia and a transient/magnocellular pathway deficit: the current situation and future directions', *Australian Journal of Psychology*, vol. 48, no. 3, pp. 167-171.

Morais, J., Cary, L., Alegria, J. & Bertelson, P. 1979, 'Does awareness of speech as a sequence of phones arise spontaneously?' *Cognition*, vol. 7, pp. 323-331.

Munck, I., & Lundberg, I. 1994, 'Multivariate analyses of data from population A', in *The IEA Study of Reading Literacy: Achievement and Instruction in Thirty-Two School Systems*, W. B. Elley (ed.), Pergamon, Oxford.

Share, D. L. & Stanovich K. E 1995, 'Cognitive processes in early reading development: accommodating individual differences into a model of acquisition', *Issues in Education*, vol. 1, no. 1, pp. 1-57.

Share, D. L. 1995, 'Phonological recoding and self-teaching: *sine qua non* of reading acquisition', *Cognition*, vol. 55, no. 2, pp. 151-218.

Share, D. L., McGee, R., & Silva, P. A. 1989, 'IQ and reading progress: a test of the capacity notion of IQ', *Journal of the American Academy of Child and Adolescent Psychiatry*, vol. 28, no. 1, pp. 97-100.

Share, D. L., McGee, R., McKenzie, D., Williams, S., & Silva, P. 1987, 'Further evidence relating to the distinction between specific reading retardation and general reading backwardness', *British Journal of Developmental Psychology*, vol. 5, pp. 35-44.

Shaywitz, S. E., Fletch, J. M., & Shaywitz, B. A., 1996. 'A conceptual model and definition of dyslexia: findings emerging from the Connecticut Longitudinal Study', in *Language*

*Learning and Brain Disorders: Developmental, Biological and Clinical Perspectives*, J. H. Beitchman, N. J. Cohen, M. M. Konstantareas, & R. Tannock, (eds) Cambridge University Press, Cambridge, pp. 199-223.

Stanovich, K. E. 1986, 'Matthew effects in reading: some consequences of individual differences in the acquisition of literacy', *Reading Research Quarterly*, vol. 21, pp. 360-407.

van der Wissel, A., & Zegers, F. C. 1985, Reading retardation revisited, *British Journal of Developmental Psychology*, vol. 3, pp. 3-9.

Waring, S., Prior, M., Sanson, A., & Smart, D. 1996, 'Predictors of "recovery" from reading disability', *Australian Journal of Psychology*, vol. 48, no. 3, pp. 160-166.

## Coming issues *Fine Print* in 1999

In 1999, *Fine Print* seeks to examine a number of different perspectives on Adult Literacy and Basic Education.

This autumn edition considered the essential question of where Theory and Practice meet. The winter edition focusses on "the brain" and psychological perspectives on adult learning.

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Sub-cultures and ALBE;

Classroom cultures;

A culture of learning;

And many more.

(If you have other ideas related to this theme and you wish to contribute an article which adds to the discussion, please see details on the back cover about contributing to *Fine Print*.)

As the year 2000 looms ever closer, the final, summer edition will attempt to stand back and consider the place of ALBE in the new millennium.

# Brain Gym®

by Julie Gunstone

**In this article, Julie Gunstone discusses the ideas behind Brain Gym and how it might be useful in ALBE classes (and staffrooms).**



## Introduction

We are all born with the capacity and ability to learn. Some of us have an emotional commitment to it because we are motivated to learn. Others learn because they understand it is a matter of personal survival, so they try hard and keep at it until they succeed. But when stress occurs it inhibits and blocks our learning, and it requires a huge effort to take in and comprehend new information. Stress impacts on our emotions, and if emotions don't connect with thinking, then real learning does not take place. Brain Gym is a dynamic system of 25 simple movements that prepare the brain and body for learning readiness. It shifts the learning experience from one of trying hard and struggling to that of learning with understanding and ease.

Brain Gym enhances the effective and efficient flow of information between the brain and the body. Everything we do, see and hear is translated into nerve impulses so that the brain can interpret and respond accordingly to let us know what we are looking at, hearing, touching, tasting, smelling

and feeling. The ability to take in and process information depends on the free flow of messages passing through our neurons. Under stress the free flow of information is interrupted and blocked, causing us to 'switch off'. For adults struggling with literacy there is often long-term stress associated with learning.

For example, when reading, a person can look at the words but not be able to work out what they are reading, or they might read something today and forget it tomorrow, or get very tired after a short period of reading. A person experiencing this type of block will either put in greater effort and try hard to concentrate and comprehend what they are reading or give it up as too hard to do. Years of this type of struggle lead to the belief that reading is too difficult.

Stress in learning leads to physical reactions such as a tightening of muscles, poor posture, staring and constricted breathing, resulting in poor memory and recall. Brain Gym aims to release tight muscles, increase energy, improve posture, relax eye movements, make breathing easy and enhance memory, recall and understanding.

## Development of Brain Gym

Brain Gym is part of a larger body of work, called Educational Kinesiology (Edu-K). Edu-K developed out of clinical studies started in 1969 by Paul Dennison, Ph.D who was looking for ways to help children and adults who had been identified as 'learning-disabled'. His research led him to the study of kinesiology—the science of body movement—and the relationship of muscles and posture to brain function. Dr. Dennison has been developing Edu-K for more than 25 years and he continues to research and develop the process of learning through movement. In 1980 he began travelling and teaching the Edu-K process internationally. His work is in 40 countries and 27 languages.

Edu-K is not a method but rather a 'tool' to enhance performance in learning situations such as school and work, making positive life choices, improving sports coordination, and more. The educational philosophy, language and procedures integral to Edu-K draw on some of the best thinking, research and applications offered by leading educators. Edu-K is designed to enhance and support teaching methods to work better and faster, not replace them.

### Dennison's special interest in learning

'I was a late talker. I didn't reach all of the developmental milestones, such as turning over, crawling and standing, as fast as the other kids...by age nine, when I was in fourth grade, I still wasn't reading. I failed that grade and was held back. My mother was informed by a school counsellor that I would never go to college or accomplish anything with my life. She wept beside my bed one night, wondering what would become of me. I was never that worried. My soul had its own learning pace. A movement program such as Brain Gym would have helped me to feel safe as I struggled with reading and writing.'

Paul Dennison went on to do his doctorate in Education. In 1975, he received the Phi Delta Kappa award for outstanding research. This year he received a RETA (Reading Excellence Through the Arts) award for his innovative program in reading and learning.

## What is Brain Gym?

The basis of Dennison's work is freeing up the body to move and stimulating the nervous system to integrate the body and brain. His research confirmed for him that learning was a physical as well as mental activity. Thinking and learning don't only occur in our heads—the body's senses feed the brain environmental information which it uses to form an understanding of the world. The more we activate those senses, the more thinking and learning the brain can achieve. Movement of the body serves to integrate this information into the neural networks that are located throughout our bodies. To anchor a thought in our brains, there must be movement of our bodies. When we read, write, listen, or talk we are moving our body—our eyes, ears, arms and mouth. The more we move, the more we create new spaces for learning: "to remember a thought, an action must be used to anchor it. We must materialise it in words". (Hannaford: 98)

In a learning situation the steps we take are sensory input, integration, assimilation and then action. Brain Gym facilitates each step by waking the brain up and bringing it into readiness through simple integrative movements. These focus on activating the senses, preparing the brain and entire nervous system for optimal performance in all areas: intellectual, creative, athletic and interpersonal. The movements are easy, quick and enjoyable, and they can bring about noticeable change in skills such as writing, organising, remembering, reading, concentrating, communicating, taking action and physical coordination.

## The neurology of Brain Gym

To understand how Brain Gym works it is useful to look at the brain and nervous system and how they interact with the body in learning. Our body is designed to collect information and we have billions of nerve networks that grow from the experiences our senses have as we live our life. Learning first comes in through our senses and is processed by the brain.

We develop our neural 'wiring' in direct response to our life experiences shortly after conception onwards. A newborn's brain is only slightly organised but has almost the full complement of nerve cells. As we experience life, taking in information from our senses, we develop extensions on the nerve cells, called dendrites. Dendritic extensions bring the nerve cells into communication with other nerve cells. The more these pathways are used, the easier they are to access, which allows us to interact with our world easily and quickly. "The process of nerve cells connecting and networking is, in reality, learning and thought." (Hannaford: 18)

A well known and accepted brain model that Edu-K uses is that of Dr Paul MacLean, Chief of the Laboratory of Brain Evolution and Behaviour at the National Institute of Mental Health in Washington DC, who developed a theory that postulates three distinct areas of the human brain. According to his Triune Brain Theory, the three parts are based on developmental patterns

## Why Edu-K is special for me

Dr Dennison's story was particularly relevant for me. I too had difficulties learning at school. My school reports continually said "tries hard, needs to try harder." I didn't read my first book till I was 13 years old and I failed HSC not once, but twice. I loved learning but found it difficult. My father despaired about what would become of me, but I knew I wasn't stupid and that I could make my way in the world.

I was introduced to Educational Kinesiology (Edu-K) in the late 1980s when I began training in Naturopathy. When I started attending lectures, I found that I still had problems taking in information and retaining it. A 17 year absence from school hadn't made any difference to my learning skills. My experience of Brain Gym has changed my life profoundly, and I am grateful to Dr Dennison for his work which has opened the door to learning for me and so many people.

and evolved functioning. He named these three areas, the reptilian brain, the limbic system and the neocortex.

The reptilian brain (brainstem) develops from conception to fifteen months of age. Reptilian brain behaviour is repetitious and operates from instinct. It has an automatic response to stimulus and is concerned with safety and physical survival. It is not used to think for learning and is unable to reason.

The limbic system (midbrain) develops between fifteen months and four and a half years. It is also called the 'relationship brain' because it processes emotions, and emotional attitudes and responses. It is also important for memory.

The neocortex is the most recent to develop. It develops from four years to between nine and twelve years of age and continues to develop throughout life. This is where rational survival planning occurs. It contains seventy percent of the brain's 100 billion nerve cells. In learning it is responsible for rational thinking, it is the centre for all intellectual and abstract thought, responds to ideas and is capable of innovation and high level creativity. It emphasises discrimination and focusing abilities and is important in long term memory storage.

The neocortex has two hemispheres. The left side (logic) of the brain controls and receives information from the right side of the body and the right side (gestalt) of the brain controls and receives information from the left side. The left and right hemispheres communicate to each other via a bundle of nerve fibres called the "corpus callosum". If learning is easy, then information flows freely back and forth. But if we are stressed in our learning, information doesn't flow easily through the

“corpus collosum”, and can be likened to shutters coming down and access to information is denied.

Our gestalt develops between age four and seven, and our logic develops between seven and twelve years of age. The gestalt brain is our creativity, and has the ability to see the whole picture. It looks for the similarities, and is the centre of our intuition. It deals with feelings and experience as well as long term memory. Logic is interested in facts, and analytical thinking. It wants details, and sequence, and is more interested in differences. This is where short-term memory is located.

### **Stress is a barrier to learning**

When we are under stress, receptors in the brain/body can close down. Energy to the higher thinking brain areas (neo-cortex) can become blocked, communication between the left and right brain hemispheres can break down, the sensory organs (ears, eyes etc.) can involuntarily ‘switch off’ and we may operate mainly from one centre of the brain.

When communication is blocked it results in poor attention span. Students may try hard but the result doesn't reflect the effort, or they might stop participating, have no motivation and develop a ‘couldn't-care-less attitude’. With confusion in learning they become anxious and worried when faced with a challenge, which often leads to fear or avoidance. Unable to think clearly and make effective choices, they can't see the options. Learning is a stressful experience and they can react either by withdrawing and not being there, or becoming angry and disruptive.

Learning acquired under stress is easily forgotten and is not fully assimilated into the long term memory. Under stress the natural inclination is to move and look into the distance, rather than to do close work. We also tend to hold our breath, which starves the brain of oxygen and less learning can take place. If this is how we learn all the time, then it becomes a habitual pattern and the brain/body system is constantly overloaded.

If we operate mainly from the reptilian brain, we can't see any choices and don't like change, it is hard to do formal reasoning, routine becomes very important, and we don't like risk-taking or innovation. It becomes a challenge to participate, pay attention and comprehend. If we normally operate from the reptilian brain, Brain Gym can be used to improve our ability to focus. This is the key to total attention, concentration and comprehension.

When we operate mainly from the limbic system we can't see alternatives, and don't like change or choice. Learning doesn't transfer to long term memory, emotions operate without reason, and we develop a strategy and use it indiscriminately for everything. We are constantly under stress and on alert. In a state of confusion, and scattered, we get thrown off track, and can be disorganised and overwhelmed. In this state we may display low self esteem, and lack of confidence.

If we operate mainly from the limbic system, Brain Gym can be used to improve the connections between the emotional centre of the limbic system and the reasoning centre of the neo-cortex, the frontal lobes. No associative learning is possible without our ability to respond to emotions and create memories.

If we use mainly either logic or gestalt functions, learning becomes hard work. We can lose sight of the whole picture or perspective and only understand parts.

If we operate mainly from logic we can over focus and find ourselves trying too hard, and worrying too much about making mistakes. We can take everything very seriously, and need very clear specific written directions. The impact in reading is to read word by word and not be able to interpret the meaning of what is said.

If we operate mainly from gestalt, then we drift off into a daydream state, may procrastinate and have difficulty getting started. We lack the ability to be organised, are super sensitive and easily upset, can be creative but unable to do anything about it. Checking work is a nuisance and in reading we may guess at words and have difficulty with comprehension and expressing ideas.

Brain Gym creates the opportunity to allow the effective flow of information between the left and right hemispheres as well as having access to both logic and gestalt functions of the brain and body.

### **Brain Gym movements**

In a state where the whole brain and body are relaxed and ready to learn it is easy to pay attention. Learning may require effort, but students stay calm and get results. It is easy to think and do and remain motivated, even when tackling difficult subject matter. There is the ability to solve problems and meet challenges—they can be seen as opportunities rather than stumbling blocks. We can stop and think, consider possibilities and options, make a decision and act on it. Learning is a positive experience and students are likely to be friendly and cooperative. We are aware of our behaviour and can be reasoned with.

Brain Gym movements are divided into four categories: Midline movements, to integrate left/right communication; Lengthening movements to relax and release tight muscles; Energy movements to improve energy; and Deepening Attitudes to restore a positive attitude. The movements can be done at the start of the day, before a particular task, or when you notice a loss of attention. It can take as little as five minutes or can be more extensive if desired. No special equipment is needed.

A four-stage readiness routine called PACE, which stands for Positive, Active, Clear and Energetic, is very useful to do at the start of the day or before a specific task. The stages are:

**Our body is  
designed to  
collect  
information**

**Water for energy**

For energetic learning, drink water and keep drinking it throughout the day. Water is an essential part of the readiness routine in Brain Gym. Water facilitates all of the electrical and chemical actions of the brain and plays an important role in giving us the energy to learn.

**Brain Buttons to be clear**

Rest one hand over your navel. With the thumb and fingers of the other hand, feel for the two hollow areas under the collarbone about one inch out from the centre of the chest where the collarbone meets the sternum. Rub these areas vigorously for up to one minute as you look from left to right and right to left. Change hands and repeat the exercise.

These help supply fresh, oxygenated blood to the brain when you want to 'wake up', bring back your focus or stay alert after a long day.

**Cross Crawl to be active**

This is simply a cross-lateral walking or marching in place, alternately touching your right elbow or hand to your uplifted left knee, and then your left elbow to your right knee. Cross crawl can be done slowly during the course of four to eight complete, relaxed breaths. It activates both brain hemispheres simultaneously and improves listening, reading, writing and memory.

**Hook Ups to feel positive**

These can be done sitting in a chair, lying down or standing.

1. Cross one ankle over the other—whichever feels most comfortable—cross your hands, clasp and invert them. Rest your tongue on the roof of your mouth. Close your eyes and rest in this posture. (An alternative to clasping and inverting your hands is to cross your arms and place your right hand under your left armpit, and your left hand under your right armpit).
2. Uncross your legs, place both feet on the floor and lightly join the finger tips of both hands together. Relax and breathe until there is no pulsing in your fingers. Open your eyes.

PACE can be done at the start of the day or before any particular activity to be able to focus and attend to the activity.

**Conclusion**

Adults with literacy problems who have struggled with learning often believe that learning is difficult and stressful. Learning performance is enhanced when there is a free flow of information between the brain and body. Brain Gym movements increase and strengthen the pathways for learning by reducing physical, mental and emotional stress. Brain Gym creates positive learning experiences, supports teaching methods and can be done at the beginning of a class or before study.

Julie Gunstone is an Educational Kinesiologist, Naturopath, lecturer, teacher and author who runs her own practice *The Thinking Body* in Melbourne and she is on the National Faculty of Edu-K Australia. The Faculty is responsible for maintaining professional standards and training people for qualification as Brain Gym consultants and facilitators.

**References**

*Brain Gym Journal*, 1997, December, Educational Kinesiology Foundation, pp. 1-14

Dennison, P. E., 1981, *Switching On*, Edu-Kinesthetics Inc.

Dennison, P., & Dennison, G. 1989, *Brain Gym: Teacher's Edition*, Edu-kinesthetics, Glendale, Cal.

Hannaford, C., 1995, *Smart Moves—why learning is not all in your head*, Great Ocean Publishers Inc.

“Learning acquired under stress is easily forgotten and is not fully assimilated”

Brain Gym® is a registered trademark of the Educational Kinesiology Foundation.

**The Adult Literacy and Numeracy  
Australian Research Consortium  
(ALNARC)  
Victorian Centre**

Invites you to participate in a  
Professional Development Seminar:

**Literacy and Numeracy  
Needs of Unemployed  
Early School-Leavers**

The aims of this seminar are to discuss findings from recent research in relation to early school-leavers, and for teachers working in that field to identify issues for further research. Speakers to be confirmed.

Friday, July 30, 9.30 - 3.30 pm  
CAE City Conference Centre  
256 Flinders Street, City  
Cost: \$15 (includes lunch)

RSVP and for further details contact  
Jill Sanguinetti  
(Victorian Centre Coordinator)  
Tel: 9688 5086. Email: jsang@deakin.edu.au

# Adults, ADHD and learning

by Jill Ladek

**Jill Ladek takes a look at some of the key aspects of Attention Deficit Disorder and its implications for learning and teaching.**



## What is it?

Attention Deficit Disorder is a neurological developmental disorder, characterised by developmentally inappropriate degrees of inattention, over activity and impulsivity. As a problem of development it arises early in childhood, is usually very evident during the student years often causing serious problems in school, and for many adults with ADHD it continues to cause difficulties with concentration, organisation, writing, and short-term memory. Some will also have a learning disability compounding these difficulties.

Attention Deficit Disorder is usually a hereditary disorder, and many adults are diagnosed after realising that they had, and may still have, the same difficulties their child or another relative has been diagnosed with. Some younger adults may have been diagnosed as children.

## Diagnosis

There are four main means of diagnosis:

- Clinical examination—the childhood and adolescent history. This excludes other disorders and social and environmental factors.
- Psychological assessment of cognitive abilities in verbal and non-verbal reasoning. A profile of relative cognitive strengths and weaknesses is compiled.
- Educational-Assessment of educational history including teachers comments e.g. “Must concentrate more”; “Must apply themselves better”; “Not trying”; “Must write faster”; “Must talk less”. These comments show the ADHD traits from an early age.
- Social Interaction—People with ADHD often have difficulties with verbal and visual cues. This area needs assessing .

## Main Characteristics of people with ADHD

Impulsiveness either verbally or in actions e.g. they might say whatever comes to mind; or timing, tone-of-voice and actual wording may not be appropriate. There might be impulsive spending of money, impatience or a low tolerance for frustration.

Disorganisation and procrastination—without a clear structure they may not manage everyday demands. They might forget appointments, lose things, forget they have been told something. They often have trouble organising themselves so often tasks are put off or not started at all.

Restlessness—they often have trouble sitting still and there can be fidgeting and drumming fingers.

A sense of underachievement—they may feel their goals are not met and they cannot ‘get their act together’.

Distractibility—they could tend to ‘tune out’ during conversations and so they may not have heard what was said. There can also be often hyper-focus on an activity due to attention inconsistency.

Low self esteem—this is often a result of having spent years putting huge amounts of effort into schoolwork and other activities, yet failing or not getting it right. It can lead to anger or withdrawal when difficulties as an adult remind him/her of past failures.

Writing difficulties—about 60% will have poor fine-motor skills and poor hand-eye coordination skills, often resulting in messy and slow writing. A lap-top computer is very helpful, as people with ADHD find writing stressful and fatiguing.

Creativity—they often think in a very creative way and have a flair in a creative or ‘hands-on’ field.

## Hyperactivity

Not all ADHD people have the hyperactivity. These people were often overlooked in the classroom as a child. This type of ADHD appears to affect more females than males, and characteristics include: being prone to daydreaming; poor short-term memory and poor memory retrieval; and a tendency to be socially reticent. Overall more males are affected by ADHD.

## Learning disabilities and school problems associated with ADHD

Learning disabilities are present in at least 30% of those with ADHD. A student with both will generally have had significant difficulties at school and may not have successfully

completed schooling to a level where he/she has year passes to show to prospective employers, or for tertiary education.

This outcome often also applies to students solely with ADHD due to difficulty completing work, for the above reasons, and also because some students drop out of school early (often year 9 and 10).

Some common problems are:

- Speech and language difficulties (including reading and writing) are very common, as is an inability to complete ideas within a sentence, and organise paragraphs. Essay style subjects are a frequent area of difficulty.
- Poor fine motor coordination affects the ability to grip a pen or pencil effectively.
- Given a book to read, many only get through the first few pages, or, they complete reading it, then forget the contents. If there is a video of the novel or subject this may be a better choice.
- Avoidance is common when tasks are felt to be difficult
- There will be a problem of overload if trying to concentrate on listening to the lecturer and take notes at the same time.

### Treatment

Some key ways of treating the problem are:

- Medication—if the adult chooses to try medication, it can assist with concentration, and also improve organisation, motivation and writing. The adult has to remember to take it at the appropriate time (usually prior to needing to concentrate, such as before work or study);
- Time management and goal-setting coaching from a psychologist or support group;
- Stress and anger management—usually with a psychologist, psychiatrist or community organisation offering relevant services.
- Remedial teaching—this may be needed, but it needs to be used where ADHD is understood.
- ADHD Support group—this is somewhere to meet people who fully understand what it is like to have ADHD and somewhere people can exchange coping strategies and give support. There are only two groups in Victoria known to have regular adult meetings, Geelong Adult ADHD Group, and ADDSUP KNOX ADD Group in Bayswater. Geelong Adult ADHD Group has a newsletter specifically for adults. Many other groups have parent meetings, where you will meet other ADHD adults.

### Teaching adults who have ADHD

If you're teaching people with ADHD, there are a number of strategies you can use. Remember, the older student with ADHD may find any classroom or learning situation stressful

due to frequent difficulties in the past and many of these strategies are similar to those for people with a learning disability. Some key strategies are:

- Have a regular place for classroom equipment;
- Provide structure and organisation where possible;
- Sit students near the front of the classroom;
- Make sure you have the students' attention (unobtrusively) when giving information;
- Assist students with the organising of equipment or they might forget things;
- Break work up into small sections—to allow for more short-term goals;
- Understand that longer time for any tests or written work may be needed;
- Allow a note taker for any lectures or talks;
- Using a computer instead of handwriting can reduce distractibility and assist with written work;
- If they must use handwriting, using a rolling ball pen with a built in grip can be suggested.
- Modify work if able—they may need smaller amounts;
- Be specific with work requirements and write these rather than give them verbally;
- If possible, provide notes to the student;
- Check over work if rushed through;
- Minimise background noise as it can be distracting. Someone with "figure ground discrimination", a background noise difficulty, can have difficulty hearing the teachers' voice—they may not even realise the teacher has spoken and therefore miss out on information;
- Play music in the background to reduce distractibility—this is a structured noise and makes other noises less prominent (particularly for people with ADHD);
- Be positive and point out what was achieved.

### Conclusion

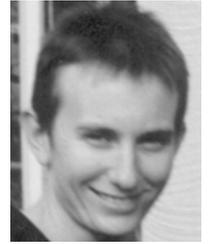
Many people with ADHD have successful careers. Identifying their particular area of skill, talent and interest, and choosing work in that area where possible, is more likely to create success. The main difficulty may be in obtaining the necessary entrance qualifications to access the area of choice. This is where adult learning classes and TAFE are very useful—so it is essential that teachers and lecturers have a good understanding of the difficulties faced by those with ADHD and learning disabilities.

**Jill Ladek is President of ADDVic Inc. If interested in information about ADHD support groups in Victoria please contact ADDVic Inc. at: PO Box 417 Bayswater Vic 3153 or on 9578 8522, 9801 7185, 0419 577 952**

# Acquired Brain Injury and learning

by Julia Griffin

**Julia Griffin provides us with some background on some of the key issues teachers need to consider when working with students with ABI.**



## How does the brain work?

To understand Acquired Brain Injury, a basic understanding of the brain is helpful. The brain is divided into different lobes and each lobe is responsible for certain functions. The rear part of the brain is responsible for processing information (sight, taste, touch, smell, hearing) that comes in from the sensory organs, while the front of the brain is responsible for coordinating all of this information, and making decisions to do things. Looked at another way, the left hemisphere is involved with speech, motor, and sensory functions while the right hemisphere is linked to abstract concepts and visual information processing.

## What is the definition of an ABI?

Considering that the ABI is a major cause of disabilities in the Western World, it is surprising that a definition for Acquired Brain Injury was not determined until *The National Policy on Services for People with ABI* defined ABI in 1994:

“Acquired Brain Injury is injury to the brain resulting in deterioration of cognitive, physical, emotional or independent functioning. ABI can occur as a result of trauma hypoxia, infection, tumour, substance abuse, degenerative neurological diseases or stroke. These impairments to cognitive abilities and physical functioning may be either temporary or permanent and cause partial or total disability or psychosocial maladjustment”.

Delve into the definition and you find a series of subset acronyms: ARBI (Alcohol Related Brain Injury), SRBI (Substance Related Brain Injury), HRBI (Hypoxia Related Brain Injury), IRBE (Infection Related Brain Injury) and so on.

## How does an ABI occur?

An Acquired Brain Injury is just that, acquired. ABI may be acquired through internal forces (via physiological events like strokes, tumours, aneurisms or infections and viruses like HIV/AIDS and meningitis, through poisoning and substance abuse or degenerative neurological diseases).

## ABI Statistics

Events such as workplace accidents, road traumas and assaults, account for the majority of acquired brain injuries.

These injuries are heavily linked to male youth aged between 18 and 25 years. Alcohol Related Brain Injury is estimated to affect 2 to 3 % of the population and is prevalent amongst the 30 to 60 age groups. Strokes affect the 45+ age group while dementia affects the 75+ age group.

## What are the symptoms of an ABI?

There is nothing generic about an acquired brain injury. Each person with ABI will have cognitive difficulties unique to their own injury. Although the brain can be divided into hemispheres, each hemisphere responsible for different functions, the chemical and electrical pathways between the nerve cells are complex and the site of brain injury does not necessarily directly correlate with functions that can be affected.

Ian was 13 when he sustained a brain injury as a car accident. He spent some time in rehabilitation and was returned to his family within six months. His family was told that he might have some difficulties with memory but that “he should be ok.” He started back at school immediately and the education department supplied him with an integration aide. At primary school he found things difficult but managed reasonably well with extra support and assistance.

Secondary school was much more difficult. His integration aide was cut and teachers thought he was lazy and slow to learn. At one stage it was suggested that he might do better in a special school. He left school in year 10 and continued to live with his family.

Unemployed for most of his post secondary life, now Ian, 33 years old, has returned to study on recommendation by Centrelink. During the interview Ian says that he wants to improve his reading and writing and that he wants to do more with his life. Ian says that he left secondary school because he hated it. Occasionally Ian struggles for words to explain what he wants while at other times he bursts out with what he wants to say in an abrupt manner.

A person with a moderate or severe injury may show obvious cognitive difficulties in the form of memory and problem solving or behavioural problems, depression and anxiety.

### **ABI: The hidden disability**

An ABI can often be a hidden disability. A road accident survivor who sustained brain injuries may appear completely "normal" to new friends and function well on a day to day level while long term friends and family observe fundamental changes in personality and motivation.

### **What are the chances of recovery?**

A person's 'recovery' depends on many factors. Be aware of the pathway that led the student to a class. A typical student with a severe ABI will have been through these organisations:

- TAC, Workcover, Private Insurance/Human Services;
- Acute Care in a general hospital ward;
- Up to 5 years in a Rehabilitation Centre;
- Community reintegration.

The first stages may be fraught with frustration and ongoing legal battles regarding eligibility for compensation, contributory negligence or crimes compensation.

As a person with ABI approach community integration and a return to education, access to formal and informal rehabilitation varies greatly. The rehabilitation process is more likely to be compromised or stalled at this point. Why? Firstly, learned skills in a rehabilitation centre setting may not necessarily transfer without proper planning and support, and secondly resources for community integration are scarce. It is also around this period students may experience acute grief, anger and a sense of loss of identity.

Current research shows that the brain may recover, to a degree, from an ABI by finding alternate routes for processing information and bypassing injured areas. However, this is a narrow interpretation of recovery. "Allowing a person to reach their full potential by building on prior knowledge and developing new skills" may sound trite but it may be a more beneficial definition than looking at restoration of a former self.

### **The ABI label**

What happens when a student joins your class with clear difficulties with cognitive or perceptual skills but s/he lacks a 'label'? Labels are always difficult things. Most teachers lack the expertise to "diagnose" disabilities. Moreover, adults with ABI may also have a pre existing intellectual or psychiatric disability (disabilities, which, by the way, are entirely different from each other, as well as ABI.)

With the student's permission, a teacher may refer students to medical or related practitioners. Again, a teacher may not have the expertise or breadth of knowledge to understand the legal and emotional minefield that labels

Maria is a 40-year-old woman who sustained a brain injury as a result of two strokes. Maria was born in Italy but came to Australia when she was aged 8. Her written and spoken English was excellent prior to her injury. Maria briefly worked as an interpreter before working as an intensive care nurse.

Maria was in hospital (acute care and general ward) for three months after the injuries. She was discharged to a rehabilitation centre and was there for a further 18 months of intensive rehabilitation.

During the interview, Maria says her mind is good but after suffering a stroke, she can't express herself. Maria has great difficulty executing reading, writing and oracy tasks because of damaged motor skills.

can create but it's important to direct a student to someone who can. For some people, labels are not empowering or valuable but it's also important for students to access support to which they are entitled.

### **Assessment and research**

Talk to students about their learning goals and future pathways. Be aware that some ABI students can often remember past skills but they have difficulty accepting diminished abilities (insight).

Find out the extent of the damage, their pre-injury learning styles, their literacy level before the injury, their age at the time of injury, and the amount of time that has passed since the injury.

Never make assumptions. Do not assume that adult students with an ABI have not encountered barriers commonly experienced by other language and literacy or ESL students. The loss of some skills or knowledge after an ABI does not necessarily mean new skills and knowledge can not be acquired or that they cannot relearn previously known skills.

The two cases outlined in boxes are quite different. Maria has an identified ABI. She is unlikely to have pre existing literacy or ESL needs per se while in the second case Ian does not say he has an ABI and he may also have literacy issues. Their learning goals will be entirely different and so will the teaching strategies used to assist them with their studies.

### **Formal Assessment Tools**

A valuable appraisal for people with an ABI is a Neuropsychological assessment. Available through ARBIS, a panel of experts from various fields will assess the student and provide a comprehensive medical report that includes identification of learning strategies best suited to the student.

### Some useful teaching strategies

#### Problems associated with ABI

#### Strategies

##### Cognitive

- Memory loss (short and long term)
- Problems in arousal, attention, and concentration
- Problems in initiating, planning, organising and completing action
- Difficulty in recognising ones cognitive deficits/limits
- Spatial disorientation

- Provide information in short segments
- Encourage students to use a diary if appropriate
- Provide written notes
- Allow classes to be taped
- Provide visual cues
- Adjust pace/speed of lesson
- Minimise external distractions
- Use alternative means of assessment: oral or graphic
- Teach memory strategies
- Limit impulsive answers

##### Physical

- Visual/motor coordination
- Sensory loss
- Increased fatigue
- Visual Impairments
- Loss of Taste/Smell
- Slowness and/or difficulty with speech

- Provide periods of rest
- Where fluency is reduced allow time for students to express ideas
- Use computers as an alternative to writing
- Use large print.
- Experiment with coloured paper. Some students read print better on blue paper for example.
- Arrange seating and materials to accommodate for visual field losses or auditory problems.

##### Psychosocial

- Anxiety and Depression
- Mood changes
- Denial

- Link into other services

#### The difference between adults and children with an ABI

Adults with an ABI bring a rich store of life experience, skills and knowledge on which to draw. Younger people have a smaller store of skills and learning to draw upon, so new information may be difficult to assimilate.

While sometimes teachers will be teaching adults how to relearn lost information in other areas they will be building on existing prior knowledge and skills.

Indeed, a teacher may discover a student has a memory of a skill but is unable to carry it out. Likewise the same student must relearn a previously known skill/knowledge in its entirety.

The most significant hurdle to learning after an ABI is memory loss. The mind's capacity to receive, store and retrieve information is affected especially, in most cases, regarding short-term memory loss.

#### Professional support for teachers

For teachers, accessing information is very important. The following agencies will help you with accessing information and support:

Headway Victoria  
2nd floor  
212 King St,  
Melbourne  
9642 2511

Commonwealth Rehabilitation Services Australia  
C/O Health & Family Services

(ARBIAS) Alcohol Related Brain Injury Service  
226 Gertrude St Fitzroy  
9417 7071

(ADEC) Action on Disability within Ethnic Services  
13 Munro St Coburg  
93835566

Brain Foundation Victoria  
746 Burke Rd Camberwell  
9882203

Thank you to Dean Dadson from Headway Victoria for providing much of the material for this article.

Julia Griffin is has worked in adult and secondary education last 8 years and she has taught across most fields including MID, ESL and Literacy. Julia is currently joint manager at Olympic Adult Education.

# Foreign Correspondence

This edition we hear about the state of ALBE in Ireland from Jennifer Lynch of the Irish National Adult Literacy Agency (NALA).



## Adult Literacy and Practice in Ireland

by Jennifer Lynch

### NALA's Definition of Literacy

Literacy involves the integration of listening, speaking, reading, writing and numeracy. It also encompasses aspects of personal development - social, economic, emotional - and is concerned with improving self-esteem and building confidence. It goes far beyond mere technical skills of communication. Literacy skills play a key role in combating long-term unemployment, access to education, learning and training, breaking the cycle of poverty and dependency as well as building and strengthening the community.

Up to the 1970's there was no recognition of the literacy problem in Ireland. There was no commitment during these years to equality of educational opportunity nor to a critical evaluation of how effective the National School system operated. By 1960, Charles McCarthy, then General Secretary of the Vocational Teachers' Association of Ireland, said that the population in Ireland "...is almost universally literate; or more accurately ... only the unteachable are illiterate. I have nothing more to say on illiteracy".

NALA was established in 1980. It is a membership organisation, managed by a voluntary executive. It is the national referral agency, responsible for guiding people to where they can contact their local literacy provider. We also run a resource room with literacy software and materials, all of which is reviewed by members.

While literacy tuition takes place in a number of settings most tuition is operated by local Vocational Educational Committees (VECs) through the Adult Literacy and Community Education Fund. There is a very heavy reliance on volunteer tutors in Ireland, with over 85% of literacy tutors being volunteers from the local community. This has of course implications for the kind of service available to people. While there is a move to make group work available in every scheme, one to one tuition is the norm. Neither is there workplace literacy provision, and family literacy programmes are not yet the norm in each literacy scheme.

Adult Literacy Organisers who are responsible for recruiting learners, and recruiting and training volunteer

Up to the 1970's there was no recognition of the literacy problem in Ireland

tutors, have only been employed on a full-time basis since September 1998. Prior to this most worked minimal paid hours (approx. 7 hours per week). There are currently around 2,500 volunteers contributing to the service. As a result of the dependence on volunteers and insufficient budget (5.5 million shared between 107 schemes and community education), adults can only access 2-4 hours tuition per week in most schemes, equivalent to 2-4 weeks full-time study per annum. There are approximately 9,000 adults participating in literacy schemes nation-wide.

Adult Literacy Organisers have recently formed their own professional association to promote the quality practice of adult literacy work. In the future this may lead to literacy work recognised as a career rather than a sacrifice in Ireland.

NALA are currently undergoing research into quality standards in adult basic education. The standard of literacy provision throughout Ireland is inconsistent. NALA recognised that there is an urgent need for the implementation of an appropriate national quality standard and monitoring system. NALA is currently working with partners in Northern Ireland, England and Belgium in order to design a flexible and creative evaluation framework which will enable adult literacy schemes to develop appropriate evaluation procedures at local level and thus ensure that they continue to improve the service they are offering students.

Adult Literacy in Ireland and internationally, has received unprecedented attention in recent years due to a number of factors. The biggest factors however have been our changing economy, the Irish results of the International Adult Literacy Survey (IALS), sponsored by the OECD, and the publication of the first ever Green Paper on Adult Education in Ireland. (Green Paper is a Government discussion document)

Ireland is currently experiencing a decline in the net unemployment rate, with figures falling from 17% in 1987 to 7%, with approximately 86,300 people classified as long term unemployed. However, 74% of the long-term unemployed have less than upper secondary education.

## International Adult Literacy Survey

By 1995, the OECD Literacy Survey results sparked off the debate and led to the recognition of the adult literacy issue and the policy imbalance being redressed. The IALS looked at three categories of literacy:

*Prose*—the ability to understand & use information from texts;

*Document*—the ability to locate & use information from documents;

*Quantitative*—the ability to perform arithmetic functions.

Each category was measured against five levels from 1 (lowest) to 5 (highest). Level 1 indicates very low literacy skills, where the individual may, for example, have difficulty identifying the correct amount of medicine to give a child from the information found on the package. At Level 2, respondents can deal only with material that is simple, clearly laid out and in which the tasks involved are not too complex. Level 3 is considered the minimum desirable threshold in developed countries but some occupations require higher skills.

Ireland compared unfavourably to most other countries surveyed with a rating of 25% or 500,000 adults aged between 16-65 at Level 1. The corresponding figure for Sweden was 7% and Britain 21%. A previous survey by the OECD revealed that the proportion of adults in Ireland who have left school at or before the junior cycle of second level is 58% which is among the highest in the EU. In real terms, this figure amounts to just over 930,000 people. (OECD 1996.)

Age was found to be very strongly associated with literacy performance in the Irish sample. In general, the greatest differences are between the younger age groups and those aged 46 years and over. For example 17% of those aged 16-25 are at Level 1 compared with over 44% in the oldest age group (55-65). Free education was only introduced in Ireland in the late sixties, relatively late compared to other European countries.

It is also evident from the survey that literacy level is associated to income. Higher literacy levels result in higher incomes. Literacy activities are most engaged in at work, in particular in higher status occupations. This has major implications for those who are not currently employed, as they may not be exercising their literacy skills on a regular basis. Over 20% of those interviewed indicated that they never read a book.

Overall the Irish survey concluded that a significant minority of adults do not engage in challenging literacy activities in everyday life. If reading and writing skills are not utilised regularly, they can be lost. Therefore people who may have learnt basic skills can become de-skilled over a period of time - think about learning a language and then not practising as opposed to riding a bike!

**For almost 60% of those interviewed, joining the literacy scheme was their first experience of any form of education and training since leaving compulsory schooling**

The first ever Green Paper on Adult Education (Government discussion paper) proposes the expansion of the literacy services in order to cater for more adults with literacy difficulties, building on the extra resources made available to local VECs last year. This had led to initiatives in family literacy, intensive basic education and distance learning. In addition, most of the VEC areas have increased the number of Group Tutors available to schemes. The recent investment of £2 million in the literacy services however is only the first step towards the reviving a service neglected for over a decade. Most notably the Green Paper advocates an investment of £10 million annually in order to cater for some 15,300 students.

In addition to the local VEC literacy schemes, reading and writing tuition takes place in a number of specific settings including the Prison Education Service, Centres for the Unemployed, Youthreach (early school leavers), SIPTU (trade union), Community Training Workshops, Travellers' Workshops and Rehabilitation Centres (disability). In most cases tuition is delivered as an 'add on' to the main vocational training programme and is therefore not fully integrated.

Research in Belgium highlighted that many social inclusion measures targeted at the long term unemployed, actually excluded the participation of those with insufficient basic skills. (Literacy, Socialisation & Employment, Catherine Stercq, UNESCO, Institute for Education, Paris, 1993) Irish initiatives targeted at such a group also appear to mirror this experience.

It is clear that the integration of basic skills development within existing training programmes targeted at disadvantaged groups is both highly beneficial to the participant but also essential in widening the access to such programmes. NALA is currently working with training groups interested in integrating literacy provision into other curriculums.

### Research Findings—Access and Participation in Irish Adult Literacy Schemes

From 1996 to 1998, NALA carried out a piece of research into access and participation in adult literacy schemes in Ireland. 159 learners participated in interviews outlining their experience of having a literacy difficulty and deciding to do something about it. The main barriers to participation were categorised as follows:

*Dispositional* e.g. negative attitude to education—learning seen as irrelevant

*Informational* e.g. too difficult to read or understand—lack of appropriate information

*Institutional* e.g. use of applications forms—traditional classroom setting

*Situational* e.g. not enough time—lack of childcare

In almost all cases the dominant barrier was the dispositional. Many of the interviewees highlighted how their experience of poverty had contributed to their literacy difficulty. As children they knew that "better off" children were given the attention in school. The attitude of the interviewees parents was also highlighted as many regretted that their parents did not play a more significant role in their education.

There were few adults seeking employment within the 16 literacy schemes who participated in the survey. Almost half of the research participants were in paid employment (mainly men) while a significant number of those not in paid employment were working full time in the home (mainly women). Many spoke about their frustration with their jobs or lack of them and felt that their education levels had severely limited their lifestyle options.

These people returned to the local literacy service in order to help their children, improve their job prospects or change jobs and simply to meet their own developmental needs.

For almost 60% of those interviewed, joining the literacy scheme was their first experience of any form of education and training since leaving compulsory schooling. All the learners who participated in the survey provided ample evidence that non-formal adult basic education is having a profoundly positive outcome on people who regarded as "hard to reach".

As part of this research NALA worked with nine different state agencies and government departments on their policy and practice in relation to adult literacy. Literacy Awareness Training was developed and provided to a range of staff from these organisations and this led to a quantified increase in the level of referral between local services and literacy schemes, as well as greater understanding of adults with low literacy levels. In addition, Teagasc (state agricultural training agency) trainers have embarked on an integration of basic skills training programme, in order to respond to their clients with literacy difficulties.

FAS, the state employment training agency, have also included adult literacy for the first time in their policy and practice.

### Conclusion

The extent of the adult literacy problem and the current capacity of the adult literacy service and other providers to meet the potential demand in Ireland, presents an enormous challenge to all involved.

The combination of employment growth, skills shortages and the demographic dividend, has focused attention on those in the labour force with low educational attainment. The economy has spoken and we are all listening and responding. It is important however to take the widest interpretation of economic needs

and bring in those who may be excluded by the focus on the labour force and related needs. The human rights perspective that all adults are entitled to a quality adult basic education service, whatever their goal, must be the underlying principle guiding these developments.

## the adult literacy problem can only be addressed within the context of partnership

It is also clear from the sentiments expressed in the Green Paper on Adult Education, and in particular those concerned with the proposed National Adult Literacy Programme, that the adult literacy problem can only be addressed within the context of partnership.

This will entail agencies involved in training and tackling educational disadvantage, targeting resources into this area, addressing basic skills within their own policy and practice, and working in an integrated fashion.

Please look up our Webpage if you would like to see more details about NALA or any of our research projects. Our address is [www.iol.ie/~nala](http://www.iol.ie/~nala)

### References

OECD, 1996, Lifelong Learning for All, Paris.



the challenges faced by people living with acquired Brain Injury

Bear In Mind is a self-advocacy and community education group for people with acquired brain injury.

We want to present a workshop for ALBE workers to enhance understanding of the issues and challenges faced in:

Working with people with Acquired Brain Injury

When: Friday 30 July 1999, 1.00-2.30p.m.

Where: Ross House (Room to be confirmed)

Cost: \$10.00

RSVP: 23 July to Ria Strong, Bear In Mind

Phone: 9639 7222

Other: A minimum of 10 people required for workshop to go ahead.

# Open Forum

In this Open Forum, Gwenda Lavender describes a new story writing website set up by Victoria university.

## Story site opens up Net to women

Four teachers from Women's Education programs, department of Arts and Preparatory programs in TAFE have developed an innovative online course focussing on stories.

The course was designed for women returning to study who may go on to courses such as the Diploma of Liberal Arts. It can also be useful for literacy learners, students of non-English speaking background and anyone with an interest in stories.

Project manager Pat Bodsworth, Clara Brack, Gwenda Lavender and Merne Scown developed the course in the second half of 1998, with some students trialling it. Their intention was to create a flexible, attractive resource that could be accessed by students at any time. This accessibility is particularly useful for women with children, who have difficulty attending formal classes. It was launched on December 19th by Nel Cook, Associate Director of Further Education and Employment Services.

The resource has five sections: *what is a story?*, *stories from everyday life*, *stories from childhood*, *untold stories*, and *stories in cyberspace*. Examples of texts are drawn from sources as traditional as Grimms fairy tales right up to stories from the Internet. Every unit has activities designed to make the students think about their own and others' experiences, language and learning.

As well as developing students' reading and writing skills, the course helps them develop confidence using computers. Feedback from students has been good, with most becoming confident Web surfers and emailers.

### Literacy aspects

*Stories Online* fits into the CGEA framework and is delivered as an on-line course, with face-to-face support when required. It meets the requirements for the following learning outcomes from level four of the Certificates of General Education:

- Writing for Self Expression: "Write a complex recount, narrative or expressive text."
- Reading for Self Expression: "Demonstrate that meaning has been gained from reading a complex, sustained narrative, recount or expressive text."
- General Curriculum Options: "Can plan and organise activities"; "Can communicate ideas and information"; and "Can use technology."

The unit was adapted in part from existing flexible delivery materials in print-based form which are used in the Diploma of Liberal Arts and students who complete the course can bridge into the Diploma of Liberal Arts or other Humanities courses.

It attempts to meet the diversity of learning styles for language and literacy development through the use of on-line technologies: web pages; html; e-mail.

The development of technological literacy is supported through the provision of embedded online help. Students who took part in the pilot program last year showed great advances in their technological literacy, particularly in their use of the Internet as a learning tool. The course explores online technologies for learning and creating access for CGEA students to higher learning.

The course development took place with a group of students who were at CGEA levels 3 & 4. Their learning styles varied from the dependent to the self-directed and they had varying levels of technological literacy. What these students had in common was that they were all mature age women returning to study and had all worked in a student-centred learning program.

The course was also designed to suit the needs of those who do not have regular access to face-to-face classes due to physical, social and geographical isolation. It also serves as a 'taster' for those wishing to return to study and for those who write for their own personal purpose. During the pilot program, learners were very excited to see their stories published on the site.

The course is responding to a wide range of learning needs of CGEA students. It sits well with the Personalised Access and Study (PAS) policy at Victoria University which aims to bridge the gap between TAFE and the higher education sector.

It is also consistent with *Transforming Lives, Transforming Communities: Conceptual Framework for Further Education*.

*Stories Online* as a course creates greater flexibility of access for CGEA students. It also provides a model of delivery for students with lower literacy levels by using explanatory links to explain ideas, words or to prompt learners to think.

### Methodology

The four of us worked one day a week to develop a sample of on-line resources and a learner's guide to use by working with a small focus group of students, trialling and developing the materials.

The students were an enthusiastic group and vigorous in their demands. Consequently, the final product (if there is such a thing as a final product) is a collaborative effort. The section *What is a story?*, for example, was a late inclusion but was necessary to provide a context for the whole idea of stories. Being able to include the stories written by pilot group members added strength to this.

The course was written so that learners need not have Internet access at home. The site has links to *Hotmail* and students are able to use university computers or those in a public library.

The *Stories Online* web site is at <http://cpdserver.vut.edu.au/stories>. It is an interactive site which includes stories, learning activities, links to other web sites, information on further education and online help. There is also a print-based Learner's Guide.

Student responses to the course include:

"This is a new way of learning. I can access it any time and work when it suits me."

"It was great to be able to do the course in your own time. I'd turn on the computer at 10.30 when the house was quiet and the kids had gone to bed."

"I feel really comfortable with the reading. I focussed on the reading and forgot about the technical things."

"What I liked about the course is that it allowed me to work at my own pace."

"I love it. I can fit it in when I feel like it. I can work no matter what I look like. I can compose myself if I am upset and I can quit when I'm sick of it. It is a great way to learn."

## 1999 ACAL-VALBEC National Conference

Melbourne, Australia

11th - 12th November

### CALL FOR PAPERS

Deadline for Submissions: 2nd July

Expressions of interest are currently being sought for the forthcoming ACAL/VALBEC National Conference 'Living Literacies'. We are keen to receive proposals that reflect **innovative classroom practice and classroom-based research** in a range of settings and dealing with a range of aspects of ALBE. Presentations, which focus on literacy and numeracy issues for indigenous Australians and youth, are especially encouraged. Submissions are welcome from teachers and researchers, and they may be in either paper or workshop format.

To register your interest, contact the VALBEC office for a conference presentation proforma upon which to record your presentation details. You can contact VALBEC at:

Post: 2nd Floor Ross House,  
247 Flinders Lane,  
Melbourne 3000.

Phone: 9650 6906

Facsimile: 9654 1321

Email: [valbec@vicnet.net.au](mailto:valbec@vicnet.net.au)

We look forward to hearing from you.

## Policy Update

Government economic policy has often unforeseen effects within the various sectors of the economy. In this Policy Update, we present a reprint of an item from the Adult Learning Australia website. Tony Brown provides a timely examination of the recent Commonwealth budget and its possible affects on adult education.

### The 1999 Commonwealth Budget from the Lifelong Learning perspective

Those looking for new Commonwealth initiatives on lifelong learning in this years Budget will be disappointed.

The Treasurer described this as an Education Budget yet outside a few specific areas there is little to support this claim. It is true that new funds have been found for school literacy, for Catholic schools and medical research in universities. What is missing is a vision for and of education that goes beyond the boundaries of school literacy and one area of higher education research and begins to promote policies and initiatives aimed at supporting a lifelong learning perspective.

Catherine Armitage writing in The Australian took up the view that the government's educational perspectives are too narrow. Her reaction was "if this is about education, our future in the information millennium is less than assured."

Late last year ALA made a budget submission which identified 8 key interconnected policy initiatives which could stimulate and support lifelong learning. We proposed:

- Support for Employee Development Proposals
- Support for a Learning Cities Network
- Enhancement of Information, Guidance and Counselling services for adult learners
- Government review of its own role in citizen education
- A national 'State of Learning' report of participation in adult learning
- Integration of Adult Learners Week into a lifelong learning policy framework
- A review of taxation and learning
- Individual learning accounts.

The cost of these initiatives in total is modest and in a number of instances required policy work or seed funding.

Assessing the budget's education portfolio direction, combined with the government's attitude to community based adult education and the GST, reflects a retreat from earlier statements on the government's commitment to the importance of lifelong learning. In his opening speech to Adult Learners Week in 1997 Dr Kemp explained that:

"The Government has a comprehensive package of education and training initiatives which recognises and encourages the concept of lifelong learning".

These initiatives are designed to instil positive attitudes to lifelong learning within individuals. Lifelong learning is far broader than the provision of a second chance education and training for adults. It is based on the view that everyone should be able, motivated and actively encouraged to learn throughout life. This view of learning embraces individual and social development of all kinds and in all settings - formally in schools, vocational, tertiary and adult education institutions, and informally at home, at work and in the community."

ALA welcomed and supported this orientation. It was a framework that enabled new policy to be developed and one that was hospitable to the proposals made in our budget submission.

It may be that opportunities will arise within the funding programs of ANTA and possibly DETYA but it may also be time to begin looking at other portfolio areas for opportunities to initiate new policy directions. In agency terms, both DETYA and ANTA received increases in the program funding they administer. DETYA-administered funds will increase from \$10,577.7m in 1998/99 to \$10,806.3 in 1999/2000 while ANTA's administered funds will grow from \$954.1m to \$968m. But both agencies will receive a cut to their operating funds.

There were a number of positive initiatives announced in other portfolio areas including Regional Services; Aged Care; Attorney General's; and Communications.

#### Regional Services

##### Family and Community Network Initiative

This initiative was commenced last year with the aim of improving access by families and communities to information on services and benefits available to them, and building more effective community networks. In 1999-2000 a further \$2.3m is available to develop an interactive website and to fund community-based organisations in 16 locations to strengthen local community networks.

### **Rural Plan and Rural Communities Program**

The Rural Plan has \$5.3m over the next two years for bringing rural area communities, industries and local businesses together to examine strategic and interrelated economic, environmental and social development.

The Rural communities program has \$6m available over the next two years and funds small regional communities to undertake projects in community planning and development, information provision, information services technology and financial counselling.

### **Area Consultative Committees (ACC) and Regional Assistance Program (RAP)**

Area Consultative Committees comprise business and community representatives and are charged with finding community-based solutions to enable jobs growth, skill development, regional growth and improved service delivery. There are 58 ACCs in metropolitan, regional, rural and remote areas. In 1999-2000 \$40.8m will be provided to support the operation of ACCs and to fund RAP projects in local areas. RAP projects are developed in the context of the ACC regional strategic plan. Funding is available for projects which include:

- Expanding job and training opportunities for local people
- Activities to improve the community's understanding of the regional economy, workplace relations and labour market structural change
- Activities to enable communities to access Government initiatives such as small business development
- Regional skills surveys and industry profiles to assist in improving the skills base to better meet emerging skills needs.

### **Indigenous employment**

A number of changes were announced for the Community Development Employment Projects (CDEP) scheme. Community organisations managing individual CDEPs will become eligible to receive payments when they place participants into full-time employment. The community organisation will receive \$2000 for each person placed into a job and who remains there for more than six months. Local Government Incentive Program (LGIP) A new program (LGIP) will provide funds to local government to contribute to economic development in regional Australia. Between 1999-2001 the program will provide funding of \$7m for projects which support:

- Adoption and transfer of innovative and best practice projects skills transfer
- Local government's role in regional development or service delivery
- Assistance to comply with the new tax system requirements.

Encouragement will be given to Councils that combine with other Councils to propose cooperative projects and that form partnerships with relevant stakeholders.

### **Domestic violence**

One of the key themes of the Partnerships against Domestic Violence is 'helping people in rural and remote communities'. The budget commits \$25m until June 2003 to renew the program and will focus on key areas such as community education, children affected by domestic violence, perpetrators of domestic violence, and family violence in indigenous communities.

### **Aged Care**

The government announced that it will be doubling its financial commitment to the International Year of the Older Person (IYOP).

### **Attorney General's**

The Government will provide \$21.4m over the next four years to the National Crime Prevention Program. The program aims to identify and promote ways to effectively reduce and prevent crime. The program involves a partnership between the Commonwealth, States and Territories, local government and the non-government sector. An important part of the program to date has been the development of Learning Circles by ALA

### **Communications, Information Technology and the Arts**

1999 has been designated as Online Australia Year. A program of events, developed through consultation with industry business, community and government stakeholders, will be conducted from March to November 1999.

Please take the opportunity to add to this analysis.

**Tony Brown**

**Adult Learning Australia Inc**

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**ACT 2614 AUSTRALIA**

**Phone (02) 6251 7933 Facsimile (02) 6251 7935**

# Beside the whiteboard

**Daniela Ibrido has been teaching with Learning North West in Glenroy for the last five years. She talks here with Libby Barker about her work with young adults and how her teaching practice has developed.**

## What teaching background do you come from?

After completing my BA.Dip.Ed at La Trobe University in 1992, I briefly taught at Montmorency Secondary College. At this point, I still wasn't fully convinced I wanted to be a teacher. However, after a brief stint at the now defunct Preston Tech. (where NMIT now stands), I soon realised that I preferred schools that dealt with so-called 'challenging behaviours'. I felt that the students were lively and free spirited, despite the enormous external pressures they faced. Some of them dealt with homelessness, financial pressures, and health issues, and I quickly learned that behaviour and substance abuse were all symptoms of these pressures, not the other way around. For these students, school was a release and, ironically, for many of them it was their only security. It was here that I decided I wanted to be a teacher working with these types of young people.

The early to mid nineties was a terrible period for teachers. Many schools closed, teachers were retrenched, and jobs were scarce. I was steered towards Community Education. So after Preston Tech, I taught adults with Mild Intellectual Disabilities for Craigieburn Further Education Options. The classes were mainly run out of Neighbourhood Houses. Then I met Angela Harrison from Glenroy Adult Literacy and Community Learning Centre (now Learning North West). I was successful in my application to replace the MID teacher there. After 1 year of teaching MID and ALBE classes, I never lost sight of the group I most wanted to be involved with. So I gave Angela a proposal for a youth Media class. We were successful in obtaining ACFE funding, and I was subsequently appointed to the position of Youth Teacher. We have now offered a whole Youth Program for the last 4 years at Learning North West, and I now teach and coordinate the youth classes.

I am also the English tutor in the Study Centre at the Meadow Heights Learning Workshop, and I teach a computers class and an English tutorial group in the Alternative VCE Program PRACE runs at Northlands Secondary College.

## How would you describe the students and classes you are teaching now?

The students and classes I currently have are still very challenging. However, I now find that the pressures these students deal with on a daily basis seem to have magnified

over the last couple of years. The external issues they battle with include unemployment, substance abuse, homelessness, crime, health and mental health ... the list goes on. Many of these students are only 16 years old, and have either been thrown out of schools, or are early school leavers (some have been out of school since they were 12!). Educationally, many of them battle learning difficulties—ADD, dyslexia, etc. ... Some are coping with their pressures, some are just surviving.

The students are working toward CGE(A) accreditation, and many of them are between Levels 2 and 3 of the Certificate. The curriculum content is negotiated with students, relying heavily on what they are personally interested in. Interestingly, some of these students have very impressive literacy and numeracy skills!

## What barriers to learning do the students have and how do you approach this?

The students have many barriers to their learning, many of which are contributable to their external pressures.

Some've got learning difficulties, such as ADD. The constant, uncontrolled, disruptive behaviour is a huge barrier for the student, and the rest of the class. This particular student also refuses to take medication to help control his behaviour, so this is quite a challenge. Frequent change of pace in class activities, frequent breaks and use of 'time out' to clear his thoughts, and reassurance are several strategies that address this.

Poor concentration can also be a major barrier for the students. I find poor concentration can be isolated to one or two particular reasons—lack of food or sleep, drugs or alcohol, a health issue such as poor eyesight, or personal problems. Isolating the reason and dealing with it accordingly not only helps restore some concentration, but it also builds an important trusting relationship between teacher and student.

'Stickability' is another major barrier to the student's learning is inability to stick to a task and see it through to completion. Several approaches here can be used, including acknowledging what the student has achieved, resetting more realistic goals, re-explaining the task—giving clearer directions, and encourage self paced learning.

Negative attitudes to learning—I can't do it! Often, the students have had negative school experiences. This creates a learning barrier as it makes them dismissive and negative towards their learning. Approaches here include using positive language, praise when something good has been achieved (especially with behaviour), positive reinforcement, encouragement and support.

**When you moved into an adult learning environment, what adjustments (if any) did you have to make to your teaching practices? AND What other challenges that you face in your daily teaching practice?**

It is very difficult for these young people to understand the idea of an adult learning environment. Their only experience of school life is in a very controlled environment, dominated by rules, Principals, and discipline policies. I find when these students first arrive, they ask permission to do just about everything! Once they realise that this practice is not necessary in an adult environment, their interpretation of this seems to be Oh! We can do what we want, when we want! Cool!! This is the most difficult point, as a lot of time and patience is needed to negotiate to a happy medium. The students soon realise that with this new found freedom comes a new or different responsibility towards their learning. It requires and challenges the students to work on their commitment to their learning, and, to some extent set their own goals.

I adjust my teaching to allow for regular changes in activities, pair and group work, class discussions, outings (to control noise levels), and plenty of small 'smokos'! The group thrives on the social aspect, so I integrate this into their learning as much as possible.

Ironically, I find that these students like structure and consistency, and they work best when they are told at the beginning of class what activities are planned for the class, and what work is expected from them by the end of class.

Behaviour is a challenge that I face daily. Finding discipline strategies that don't alienate the students, whilst maintaining a common respect and trust is most difficult. There are many challenges that effect other students in other classes, such as noise, and coarse language, however, there are also challenges that need to be addressed from a legal perspective, for instance, issues with drugs and alcohol, and Internet pornography.

**Do you think there is a need for literacy classes specifically for young adults and why?**

I think it is most important to have specific literacy classes for young adults. Their interests are different, and the ways they learn are also different. Some more mature young people may not mind being a part of an adult class, and it is ideal for a centre to offer this choice to a young person (if possible). However, with negotiated curriculum, the teacher usually draws on the interests of the students to run class activities, often relying on resources and subjects that are age specific—music, articles, books, magazines, web sites, etc. ... These can often be very different to the interests students in the adult classes have. It must also be considered that some young people may feel overwhelmed and uncomfortable being in a class with older people.

Young people need an environment where all their literacy needs are addressed without ridicule or a feeling of failure. It is important for young people to develop self-confidence, social skills, and socially acceptable behaviour. This is achievable when the group is of similar age and can relate and identify with one another. It is most important to nurture a sense of belonging.

**What are the challenges for your centre in providing programs for young people and how does the organisation cope with these?**

One challenge for our centre is recruiting the young people for the classes. It was difficult to establish contact and support from the local schools. Centrelink proved to be a great resource, as well as referrals from other youth services such as Youth Housing and Accommodation, Youth Futures, etc...

However, the greatest challenge for our centre in providing programs for young people is how to deal with the challenging behaviours, whether a discipline policy was needed, and how to go about putting a discipline policy into place. It was very important to carefully plan what processes and strategies needed to be included on the discipline policy, and then how to implement it.

It is most important to maintain the support of other staff in the centre, as well as students from other classes. It can be quite difficult to run a youth class at the same times as, for instance, a Women's ESL class! In this situation, this is a timetabling issue, and must be considered from the outset of the program. The youth classes need to be scheduled during a time when their disruptions won't cause too much inconvenience.

**Thanks for your time Daniela.**

The Adult Literacy and Numeracy Research Consortium (ALNARC) has developed out of the work of the former Adult Literacy Research Network (ALRN). The newly constituted Consortium is funded by ANTA through DETYA for a period of twelve months. Each state has a Centre with a Director/Co-directors and coordinators or research officers.

ALNARC will have a range of functions which will include:

- undertaking up to two national adult literacy and numeracy research studies in areas developed in collaboration with ANTA and DETYA
- undertaking state adult literacy and numeracy research activities in conjunction with other adult literacy and numeracy stakeholders such as policy makers and practitioners
- assisting in professional development activities regarding the applications and implications of adult literacy and numeracy research
- preparing publications for a range of audiences in the adult literacy and numeracy community and other key stakeholders
- conducting a national forum on adult literacy and numeracy research

In 1999 each state will carry out complementary research on different aspects of two projects.

Project 1: To examine the implementation of Training Packages and the effect of inclusion of literacy and numeracy.

Project 2: To investigate effective and responsive literacy and numeracy provision for groups with identified special needs or circumstances.

Towards the end of 1999 or early in 2000 a national ALNARC Forum will provide an opportunity for state research centres to report on outcomes of the different aspects of the research projects undertaken through ALNARC funding.

A National Advisory Committee has been established to oversee the completion of the two national projects being undertaken by ALNARC. Membership of the Advisory committee is made up of the state Directors and representatives from ANTA, DETYA, ITABS and ACAL.

ALNARC has a national office hosted by the School of Education, Victoria University, Footscray with a National Manager, Beverley Campbell. A National Website is being developed. For further information about ALNARC please contact Beverley on 03 9688 5085, Fax: 03 9688 4646 or email [beverley@dingo.vut.edu.au](mailto:beverley@dingo.vut.edu.au)

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