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Wild beasts and other curiosities: West Australian research, issues and innovations in early childhood education

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Edith Cowan University

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Editorial Is it true that young children need to play more, that perceptual-motor programs don't work, or that schools can learn lessons from child care? Do you know how to turn children into 'greenies', help them express the wild beast within, or use computers to develop vital skills? If you're unsure, outraged, confused or curious, then this book is for you! Practitioners and academics in early childhood have written these papers for the Edith Cowan Memorial Conference for Early Childhood in 1996. The chapters are diverse in style and topic, but are linked by the authors' deep interest in the education and welfare of children 0-8 in Western Australia. Some papers broach new and controversial topics, while others cast new light on old favourites. Many topics are complex, and few answers are clear-cut. Some chapters report current projects, and represent the growing number of practitioners who are refining their skills as researchers. Skimming down the contents pages, it is easy to see why the challenges of early childhood are increasing. Practitioners are expected to do a great deal, and to know a great deal, and the knowledge base keeps changing and expanding.

We hope that this collection of papers will result in a few raised eyebrows and quickened pulse rates. We hope you will come to know some things differently as you talk, listen, debate, discuss, disagree, and examine different viewpoints, and we hope you enjoy the process.

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Contents and Contributors

*When is a job worth doing?
Perceptual-motor
programmes examined*

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Introduction

Having recently conducted a survey of the intervention programmes available in Perth for children from pre-primary to Year 3, it soon became obvious to us that there is a wide diversity of programmes on offer, and that teachers, particularly in this era of devolution to schools, have a serious responsibility in deciding which ones to participate in and which to refuse.

So, in this paper, we'd like to consider the question:

How do you know whether an intervention is going to be beneficial or not?

first in general terms, and then in relation to the specific example of perceptual-motor programmes for improving academic achievement in young children.

It is important, at the very beginning, to stress that the question we want to consider today is not a moral question, but a scientific one. The moral question would be:

Should we subject children to interventions that we believe are not beneficial to them?

We're taking it for granted that all teachers and all people who run these programmes would answer "no" to such a question. We're taking it for granted that nobody would run an intervention programme with children, particularly children having difficulties at school, unless they believed that it would help those children. So then, how can we work out whether a particular intervention is going to be helpful or not?

How to decide if a programme is going to be useful

The question of how to decide if a programme is going to be useful or not is a very important one. Although we are focusing today on perceptual-motor programmes, this talk is not so much about whether perceptual-motor programmes are beneficial, but about how you make a decision about any programme. Perceptual-motor programmes are popular, and so teachers need to make decisions about them at present, but in 5 years time, when something else is popular, teachers will need to decide whether or not it will be useful for their children to participate in.

The answer to this question is found in journal articles in which people who have been trained in research techniques have teamed up with classroom teachers and programme coordinators to see whether the programmes are effective. Such pieces of research usually take the following form:

The researchers take a group of children whom they believe the programme might help. They randomly assign half of the children to an experimental group and the other half to a control group. Let's suppose that there are 40 children. In order to randomly assign them, you would first give an identification number to each child (from 1-40) and then draw 20 of those numbers out of a hat (or a computer programme will generate 20 numbers randomly between 1-40 for you), and whoever has those numbers goes into one of the groups. The important thing is that the researchers don't choose who goes into which group. If they did, then they might tend to put more of the brighter children into one group, or the groups might be biased in some other way.

The experimental group gets the special programme and the control group doesn't. The control group should get some special treatment like the experimental group — not just left in the normal classroom—but not the programme itself. It is worth considering for a moment why a control group is needed. Why can't you simply talk to some of the parents or teachers of children who have participated in such programmes and see what they say? There are two main reasons for this:

1. Children improve over time anyway, and so whatever you did with them over a period of a few months, they would improve. So, if you took a group of children, measured their reading or maths skills at the beginning of the year, and then gave them a programme for 20 minutes three times a week for three months, they would certainly improve. But you wouldn't be able to attribute that improvement to the programme, because they would have improved anyway. A control group (or comparison group) is needed to see if they improved more than children who received no such programme.
2. Any new or different or enjoyable programme is likely to have some effect. Even as adults, we find that a change in our normal everyday routine tends to renew our interest and make us a bit more enthusiastic. This phenomenon is well documented in the research literature. And, in an educational setting, if the children, the teachers, and/or the programme coordinators believe a programme is going to help them, then their joint enthusiasm and interest will make them try a bit harder than they would otherwise, at least in the short term. The fact is that any change in routine may bring about a similar improvement. That is the reason for the two groups: experimental and control. If the programme is effective, the experimental group should do better than the control group.

In these pieces of research, both groups are tested before receiving any intervention or programme on whatever measures of academic achievement you're interested in (at pre-test), and again after the programme (at post-test). When you test them at the beginning (at pre-test) there should be no difference between the two groups. But, if the programme is effective, the experimental group should be better at maths, or reading, or whatever after the programme than the control group (at post-test).

Perceptual–motor programmes—What are they?

The rationale for perceptual-motor programmes was developed by Ayres (1972, 1979) during the late 1960s and the 1970s. It is often referred to in the literature as Sensory Integration therapy, and it involves stimulation of vestibular, proprioceptive and tactile senses. Vestibular refers to the sense of balance; proprioceptive to the sense of the position and movement of body parts; and tactile to the sense of touch. Perceptual-motor programmes are designed to stimulate these sensory modalities so that the child learns to integrate information from them, e.g. by walking along a balance beam and performing other activities that develop balance and coordination. There are also programmes that promote training of particular perceptual-motor skills. By contrast, Ayres' approach involves activities that integrate them.

Since Ayres' initial books and papers on the subject, the idea has spread, and many perceptual-motor programmes have been developed. Generally, the perceptual motor program found in Western Australian schools consists of a commercial program of activities which requires special equipment. The teacher is required to follow the program manual, and to implement special activities in a set sequence. Usually three other adults are required to implement the program, and often these are volunteer such as parents who attend on a roster system. Generally a space is cleared and four or five stations are set up for a particular activity. Children are put into group of about six per group, they go to the station, wait in line, have a turn one at a time as directed by the assistant, until a bell rings. When the bell rings they are instructed to move to the next activity. Children are required to listen to instructions, carry them out, go to the end of the line and wait their next turn.

The activities include such things as batting a balloon with a rolled-up newspaper; throwing a ball at a target net, or using a "hopper" round witches hats. Records are kept of activities completed and children's achievements, and equipment is packed away at the end of the session. The program requires teachers, helpers and children to carry out instructions as prescribed in the manual. These programmes have great appeal, because they seem intuitively as though they should help children, and the children themselves enjoy doing the activities. In our survey of schools in the metropolitan region, 29% of those who responded, indicated that they had such programmes in their schools, and a number of teachers wrote comments about these programmes, indicating how good they thought they were. Therefore, it is important to consider whether such programmes are likely to be successful.

Are they effective?

We're very fortunate in the case of these programmes because we don't need to wade through a lot of studies to find out whether they're effective. Kavale and Mattson (1983) analysed 180 studies to find out the answer to exactly this question. They reported effect sizes. Effect sizes tell us just how much difference there is between experimental groups (who get the programme) and control groups (who don't). If the effect size is zero or very close to zero, then there is no difference between the groups; if the effect size is much more than zero, the experimental group is doing better than the control group; and if the effect size is much below zero, the control group is doing better than the experimental group.

As shown in Table 1, to give you some idea of the effect sizes that you get with various sorts of interventions, if you give psycholinguistic training to a group of chil-

dren, you get an effect size of .39. If you give 9 months of reading instruction, you get an effect size of .67. So what happens if you give children perceptual-motor programmes? On average, across the studies, the effect size was only .08. The greatest effect was on the children's gross motor skills, where the effect size was .21. Effect sizes for reading, arithmetic, language, and spelling are all virtually zero. The programmes also have little or no effect on IQ scores, even on performance IQ, where the effect size is only .07.

This result raises two questions:

1. First, Kavale and Mattson's paper was written 13 years ago. So, what research has been done more recently than Kavale and Mattson's paper? And is it still finding no effects?
2. And secondly, seeing that Kavale and Mattson's results are so clear-cut, where did people get the idea in the first place that perceptual-motor programmes were worth doing?

The next two sections will deal with these two questions.

TABLE 1. Effect sizes given by Kavale and Mattson (1983)

Intervention	Effect size
Psycholinguistic training	.39
9 months instruction in reading	.67
Perceptual motor programmes (average)	.08
Gross motor	.21
Reading	-.04
Arithmetic	.09
Language	.03
Spelling	.02
Verbal IQ	-.01
Performance IQ	.07

More recent research

A search of the literature during the past 10 years shows that there has been continuing research in this area, and that it has continued to produce the same results. It is also interesting to see how carefully recent researchers have designed their studies—obviously taking note of criticisms of earlier studies. For example, children are randomly assigned to groups, measures are very carefully constructed, and appropriate statistical analyses are done. Typical of such studies are those by Densem et al. and Kaplan et al., shown in Table 2, both of whom found no significant differences in favour of the perceptual-motor group.

Added to that, there is a review of studies by Hoehn and Baumeister (1994), which reaches the same conclusions. So recent literature indicates that, far from challenging the conclusions reached by Kavale and Mattson in 1983, recent work has supported them much more strongly.

TABLE 2. Recent studies of perceptual-motor programmes

Authors	Participants	Measures	Effect
Densem, et al. (1989)	57 5- to 7-year-olds randomly assigned to E and 2 C groups	Handwriting, Reading, Language, Motor accuracy	No significant difference
Kaplan, et al. (1993)			
Alberta study	29 5- to 8-year-olds randomly assigned to E and C groups	Gross and fine motor skills	No significant difference
Ontario study	67 6- to 8-year-olds randomly assigned to E and C groups	Reading	No significant difference
Ontario study	67 6- to 8-year-olds randomly assigned to E and C groups	Maths	Control better than Experimental group

Evidence in favour of perceptual-motor programmes

Most of the evidence in favour of perceptual-motor programmes cited in the literature comes from papers by Ayres. Just as we summarized two recent papers in Table 2, let us summarize two of Ayre's papers in the same way (See Table 3).

There are several peculiar things to notice about this table:

1. If you read the paper closely, you find that the actual results are based on only a small proportion of the children who participated in the overall study.
2. The children were not randomly assigned to the experimental and control groups.
3. The results are incomplete. More measures were taken than those given in Table 3, but results are not reported for all of them.
4. The analysis to the second study is very peculiar. Instead of doing an ANOVA or a t test, Ayres calculates the median change score and then uses a chi square analysis to show that there were significantly fewer children in the experimental group than in the control group with lower change scores than the median. There is no knowing what the more usual approach of using an ANOVA or t-test would have shown.

TABLE 3. Studies by Ayres of perceptual-motor programmes

Authors	Participants	Measures	Effect
Ayres (1972)	68 selected from an original 148 assigned (<i>not</i> randomly) to E and C groups	Spelling	No significant difference
		Arithmetic	No significant difference
		Reading	Experimental better than control group
Ayres (1978)	46 selected from an original 116 assigned (<i>not</i> randomly) to E and C groups	Wide Range Achievement Test (WRAT)	Peculiar and unconventional analysis gave significant chi square

Finally, Cummins (1991), in a re-analysis of eight papers by Ayres, shows that the analyses and conclusions drawn from them are flawed in ways other than those which we have already identified.

Conclusion

Regarding perceptual-motor programmes, perhaps the best way to conclude would be to quote the position statement of the Council for Learning Disabilities (1987) in America, as published in the *Journal of Learning Disabilities*:

1. An extensive body of research has failed to establish the value of assessing perceptual and perceptual-motor functions when identifying individuals with learning disabilities. Moreover, there is a strong consensus that the instrumentation in this area lacks the necessary technical adequacy for diagnosing learning disabilities and for determining eligibility for learning disability programs.
2. There is little or no empirical support for claims that the training of perceptual and perceptual-motor functions improves either the academic performance or the perceptual or perceptual-motor functions of learning disabled individuals. Therefore such training must be characterized at best as experimental and non-validated;
3. Since little scientific evidence exists to show that assessment and training of perceptual or perceptual-motor functions are beneficial to learning disabled individuals, schools much view the time, money, and other resources devoted to such activities as wasteful, as an obstruction to the provision of appropriate services, and as unwarranted for any purpose other than those of pure research.

Teachers in the 1990s have been given the important responsibility of deciding what programmes and activities are the most beneficial for the children they teach. In this paper, we've seen how important it is to look critically at the programmes that are available to you—not merely perceptual-motor programmes, but any programme.

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When is a job worth doing? Perceptual-motor programmes examined

*Interactive multimedia
storybooks: What do they offer
young children?*

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Introduction

The advent of CD-ROM and multimedia technologies has provided a new reading resource—the interactive story book. This paper describes the potential benefits of young children using storybooks to improve both their performance in, and their attitude towards, reading; it also describes how young children interact with story books and how their reading of them is likely to differ from their reading of traditional books. This paper also presents some of the findings from two investigations currently being conducted into the use of CD-ROM storybooks, by staff and research students at Edith Cowan University. With rapid growth in the use of interactive story books, both in the home and school settings, these findings should be of central interest to both teachers and parents.

Reading and computers

We know quite a lot about children and reading; for example:

- not all children like to read;

- Not all children are receptive to the four main approaches to reading in Western Australian and other schools — e.g. Basal Reader; Individualised Reading Scheme; Language Experience; Eclectic approach;
- Current practices in teaching children to read often overlook the importance of motivating children to read (Wallace, 1992);
- Reluctant readers associate books as boring and functional (Pilla, 1987).

Using computers to help teach reading is a technique that has been applied since computers were first introduced into schools some 15–20 years ago. Computers are perceived as motivating for reluctant readers; as being well suited to breaking the reading act into component parts, a notion congruent with some reading process models (Lesgold, 1983); and as providing frequent feedback on progress. It has been suggested, however, that to date, the use of computer technology to help teach reading has largely concentrated upon word recognition skills and not upon higher order reading skills such as comprehension (Miller, et al, 1994). As such, the use of computers has also failed to reflect recent trends towards holistic approaches to teaching reading, with the provision of quality children's literature to foster reading ability and interest (Hladczuk and Eller, 1992).

Storybooks

The advent of CD-ROM and multimedia technology has been seen by some educators as providing the means to address such omissions. For example, such technology allows for the integrated use of text, static and animated graphics, video, sound and music. There are various examples of CD ROM interactive story books available and from a range of publishers. In addition to the well-known examples from Broderbund (e.g. Just Grandma and Me; New Kid on the Block), and Discis Books (e.g. Scary Poems for Rotten Kids; Moving Gives Me a Stomach Ache), there are others available from different publishers. Currently, at least 8 publishers offer CD ROM story book titles. Discis 'Kids Can Read Interactive Story books Series' offer perhaps the best examples of this new reading medium. Story books are complete books made accessible on a computer, that provide help and support in the reading process on demand by an individual reader; in particular, they provide a range of features that facilitate the learning of meaning in text. For example, story books

allow a reader to have the text read aloud by a human voice (either male or female), either as the complete text or selected parts of the text. They also encourage the exploring of the text though both fixed and animated graphics.

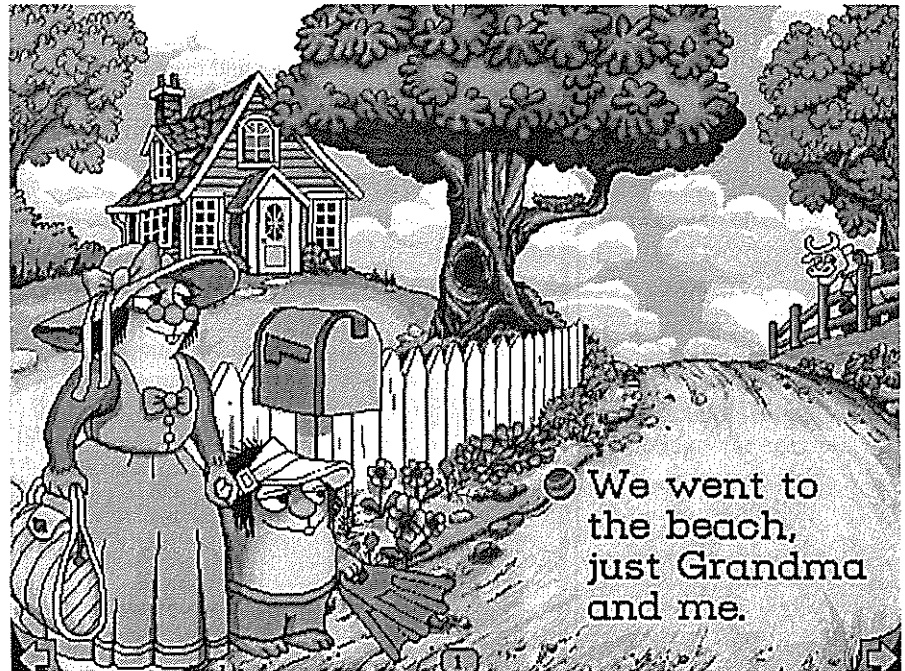


FIGURE 1. A page from Broderbund's *Just Grandma and Me*

A story book can be personalised by each reader according to their preferences. For example, customisation can specify which of the mouse options (i.e. click, double-click, or press and hold) will access assistance for the reader in the pronunciation of words and syllables, in the provision of word definitions and in the use of graphic-word recognition. Also, a menu option (*Recall*) tracks all words for which a reader requested assistance in any one session, providing a useful record keeping function for later reading diagnosis.

All these features of story books facilitate unconditional access to the type of assistance that might normally be expected in a one-to-one teacher-to-child learning situation. Furthermore, the learner is placed in the controlling position being able to explore text according to individual need and want.

It is worth considering here, that interactive storybooks use a model of interaction provided by traditional books—that is, reading is seen as a linear process, where readers progress from page to page and in one direction, according to the plot as it determined by the author. Storybooks could just as easily support a different kind of reading process, where readers follow a more dynamic pathway through the text, using hypermedia links to tract and even construct their own story from the text offered. In this context, readers could repeatedly read the same storybook, following a different pathway through the storybook on each reading.

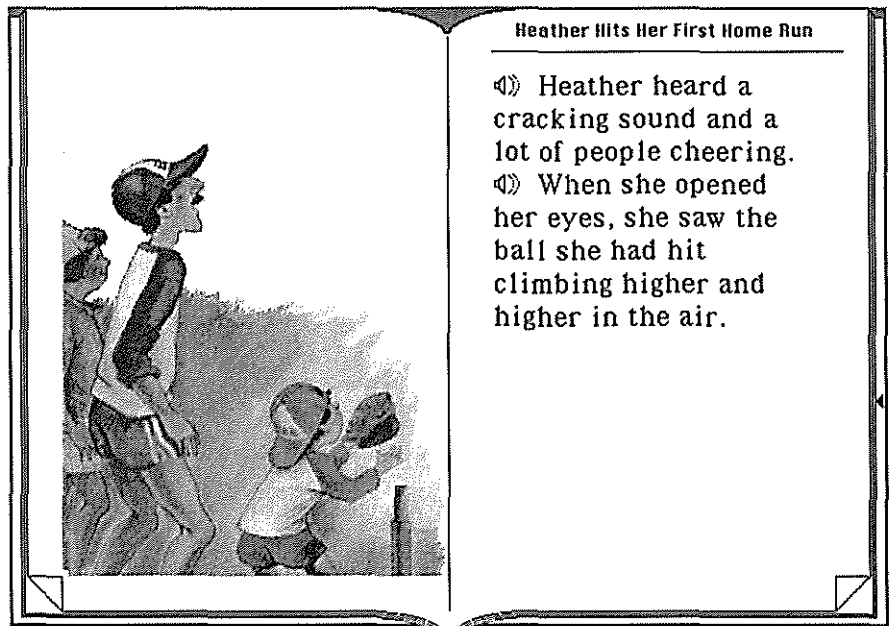


FIGURE 2. A page from Discis book, *Heather Hits Her First Home Run*

Storybooks and reading

“The best form of reading program provides children with the opportunity to explore the widest range of books possible and to read them independently” (Holdaway, 1980). However, to date, computer based developments for teaching reading

by such holistic methods have been extremely limited. Furthermore, reading story-books aloud to children is recognised as a crucial component in total literacy development (Teale, 1981). However, in classroom settings the practice of reading aloud gives very little control of the learning process to the child: the child cannot easily stop the teacher and ask for the meaning or pronunciation of a word.

The use of story books perhaps provides an unique resource that best addresses these two points. In addition, story books provide other features that seem ideally placed to promote new ways for learners to interact with text and to help advance reading skills. For example, children can obtain feedback whenever they make a miscue (particularly one which interferes with their comprehension of the plot or characters) allowing them to get help with the pronunciation of a word or phrase, for example. Furthermore, the words and phrases of the storybook are highlighted when they are read by the computer, facilitating audio-visual recognition and thereby reducing the level of difficulty of the reading task. Also, feedback obtained from the computer is always non-judgemental (unlike some teachers' feedback). Finally, the control given to the child in controlling their interaction with the text, allows them to reflect freely upon various aspects of their reading—for example, on the meanings of words.

Medium or message?

It is perhaps worthwhile to counsel caution about the likely effects of storybooks on young children's attitudes towards reading. From an earlier study, it was found that children of Year 2 (6–7 years), much preferred reading books from Broderbund's Living Book series than reading traditional books—perhaps not a surprising finding, particularly when the multimedia experience was new to the children and introduced over a short time-span (3 weeks). However, what this earlier study failed to do was to distinguish between children's enjoyment of the task and their enjoyment of the technology. It is important to discover if children enjoy the task of reading more using the new media because, perhaps, that media makes that task itself more accessible. If the positive effect is carried by the media alone, then once that media is either removed or becomes the norm in children's experiences, the effect will become much less and perhaps even negligible. If, however, the reading task is made more enjoyable, then the effect is more likely to last.

This issue might be compared to the use of word processors in schools—initially children were motivated to write using a computer simply because it was a computer and its use was both a novelty and a means of doing something special. But

once writing using computers became the norm (as it now has for some children in some schools), we find that writing using the electronic medium is enjoyed not for its novelty value but because the task is made easier and more accessible with children often perceiving that word processors make them better writers. In other words, children form positive attitudes towards the writing task using the word processor rather than to the technology, *per se*.

Improving reading performance using storybooks

There are specific characteristics of storybooks that might be expected to impact favourably upon children's reading skills and performance. For example, the visual cues provided in storybooks might help children develop their comprehension of texts. When children read, they form a mental model of the story which they are reading and illustrations integrated within the text can help children enrich that model. For example, when single pictures (perhaps providing the opening scene of key parts of the story) are provided to the young reader, we know from research studies that they have an enormous impact on their understanding of plot, character and events by the time they have completed their reading of that story—they better comprehend the story.

However, not all storybooks provide the same type of illustrations or visual stimuli. For example, Broderbund's Living Book series are storybooks that provide multiple and disparate images which are often only incidentally relevant to the text. It is highly likely in this case, that the type of images provided will detract from children's comprehension of the story and interfere with their reading. This hypothesis is currently being tested with children of Year 3 (7–8 years) and early findings tend to support it.

Also, the fact of reading from a screen might interfere with children's reading performance as well as their attitude towards electronic books—research into the physiological effects of reading using an electronic medium suggests that people get anxious and nervous when reading from computer screens for any length of time; and that most of us prefer to read from paper. Indeed, until the resolution of screens gets considerably better than it is currently, children are unlikely to show conscious or unconscious preference for reading from computer screens.

An investigation into the benefits of storybooks

It would seem sensible to suggest that story books are useful resources in the classroom and that children who are exposed to them will benefit in some way. As a focus for an investigation into such benefits, two studies are currently being conducted by staff and graduate students at Edith Cowan University that target young readers and in particular, reluctant readers. The findings of these investigations will identify the benefits that storybooks have for young children, in terms of reading performance as well as reading attitude. For example, there are substantial numbers of children who can be classified as reluctant readers—children who, at an early age, demonstrate a reluctance to read traditional reading materials. If we are to improve these children's reading skills and performance, we must first find a way to help them develop a more positive attitude towards their reading.

The following questions have been framed, to guide our investigations:

1. What can be learnt about a child's reading strategies when using story books?
2. How does a child interact with a story book in their reading of it?
3. Does the use of story books lead to significant improvements in children's reading performance when compared with their reading of traditional books?
4. Does the use of storybooks as a strategy for teaching reading encourage reluctant readers to demonstrate more positive attitudes towards reading?
5. Are the attitudes developed by both reluctant and willing readers in their reading of storybooks more positive than those demonstrated towards their traditional reading material?

To explore these questions, we have put into place two parallel investigations: one that targets the wider use of storybooks over a relatively long period of time (64 children, over 8 weeks); and one that is concerned to investigate the use of storybooks in greater depth (targeting only four children, over about 8 weeks). Resources for both investigations include 6 multimedia computers, together with 16 Discis storybooks and 8 Broderbund storybooks. All children are aged 7–8 years (Year 3).

Full details of these investigations and their findings will be published elsewhere. However, some of the early results to come out of the projects to date are presented below.

- Those children who can be classified as able readers (i.e. the majority of children in these studies) were initially motivated by the use of the storybooks but over time this motivation declined. Towards the end of the studies, these chil-

dren generally preferred to read traditional reading materials rather than electronic storybooks. They found that the process of reading storybooks was a different one to reading paper books and the amount of distraction (visual and audio) detracted from their enjoyment and their reading rhythm. In other words, it seems that willing and able readers, who have already 'cracked the reading code', do not need the supports provided by the CD-ROM storybooks.

- All children classified as less-able readers preferred to read storybooks rather than traditional reading materials—because they found reading easier when provided with the reading supports in the storybooks. Initially these children were motivated by the use of the computer itself and at the end of the study were found to be motivated by the reading task (and, of course, the facilities in the storybooks that made that task easier and more under their own control).

Although all reluctant readers were found to improve attitudes towards their reading of storybooks, this change of attitude only transferred to their reading of traditional materials (paper books) for some children. It may be that other reluctant readers needed more time to develop greater success and independence in their reading of storybooks before they could enjoy their reading of traditional materials.

The attitudes of willing readers to the reading task have, as yet, showed no development—they have maintained a willingness to read and have continued to enjoy it as they did prior to these studies. In other words, the storybooks made no difference to them overall; except that they preferred to read traditional reading materials after their initial experience with CD ROM storybooks.

- It seems that storybooks do have a beneficial effect on the reading performances of all children—in other words, the use of storybooks over time, does lead to children developing a larger vocabulary, greater understanding of word meanings and a greater comprehension of story plot, characters and events.

Conclusion

It would seem then, that some types of storybooks (not all) do have something to offer young children in their development of reading skills and attitudes. However, the full implications of the findings described above, as well as other findings that are yet to emerge from current investigations into the use of storybooks, are reserved for publication elsewhere. This paper simply serves to draw attention largely to the potential effects of using CD-ROM storybooks with young children.

Note

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Understanding the artistic expression of the Fauves

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Introduction

This workshop will give the opportunity to be involved in:

- looking at, discussing and appreciating the work of the group of Post Impressionist painters called the Fauves.
- translating the inspiration gained from your appreciation of the Fauves to your own drawing and painting experience using vivid colours.

The Fauves were a group of painters who delighted in the use of violent colours, their work was full of distortion and intensity. It was a short lived movement (1902 - 1908) but it changed painting forever. The name “Fauve” (or wild beast) was initially used to insult the artists but they soon accepted it with pride as they were out to shock the establishment. On visiting their first exhibition at the Paris Salon d’Automne, 1905, the public was surprised and shocked to see colour used in such a wild way—“An inferno of unmodulated colour.”

As Claribel Cone described the exhibition:

the walls were covered with canvases, presenting what seemed to me then as a riot of colour - sharp and startling, drawing crude and uneven, distortions and exaggeration, composition primitive and simple as done by a child.

The movement lasted from 1903 to 1908 and their most intense period of production was 1905 to 1906. In 1905 Henri Matisse was 36, Andre Derian 25, Vassily Vlaminc 29, Marquet 30, Henri Manquin 31, George Braque 23, Raoul Dufy 27 and Kees van Dongen 27. The art historian Elie Faure referred to them as "young primitives" in his introduction to the catalogue to the first exhibition in 1905. Their spiritual affinity with naive art was emphasised by their work being hung in the same room as the Dounier Rousseau's disturbing jungle image "The Hungry Lion." The influence of non-European cultures was apparent, in the newly discovered "exotic" arts they saw unexpected shapes and colours and suggested new ways of communicating emotion. This led them individually into various paths of free invention and took them away from the traditions of realism.

Their subject matter was as varied as their methods of painting, although many subjects familiar to Impressionist and Post Impressionist painting, such as landscapes, still lifes and the nude figure still appeared. Thus the Fauves carried on and expanded the trends begun by Van Gogh and Gauguin whose works had become better known through exhibitions held in Paris in 1901 and 1903. The artist who remained most faithful to the Fauve principles was Henri Matisse (1869-1954). Throughout his long working life his gift for combining colours in unsuspecting ways and for inventing new combinations continued to surprise and delight the art public.

Composition is the Art of arranging in a decorative manner the various elements at the painters disposal for the expression of his feelings..... All that is not useful in the picture is detrimental. Henri Matisse (1945) Gardner, *Art Throughout the Ages*, 1986, p. 893.

Art learning or the language of art

Art Language is based upon the elements and principles of art. A greater understanding of these leads to more confidence in the use of art language when looking at art and when engaged in practical art activities.

Elements of art

The basic components that all artists use are called the elements of art. They can be thought of as the ingredients that go to make up two and three dimensional art be it for example a drawing, painting, print, fabric or sculpture.

Colour, Line, Shape and Form, Texture, Space, Value or Tone.

Principles of art

The Principles of Art are the ways that artists organise and arrange the elements of art to create a painting, sculpture, architecture or craft object. Artists strive for personal and expressive uses of the elements of art to achieve: Balance, Emphasis, Proportion, Movement, Rhythm/Repetition/Pattern, Variety and Unity.

The elements and principles mostly used by the Fauves

Colour. To give the greatest impact, colour is used in its purest form, the primary colours and secondary colours. Contrasting colours or complementary colours are found on opposite sides of the colour wheel, when placed next to each other they react in a vibrant manner.

Groups of colours—families can be used together to give greater emphasis to one group of colours, e.g. hot colours, reds, yellows, oranges, contrasted with a group of cool colours, greens, blues, purples. The colours chosen by the Fauves were not related to the 'local' colour or the realistic colours of the subject. A more emotional or expressive colour choice has a more vivid, unexpected shock value.

Derain described his colour choice as "deliberate disharmony". The dashing yellows, purples, blues, greens and reds are expressive of his emotional reaction to the subject. All naturalistic effects have been abandoned and by freeing colour from its traditional descriptive role as representing reality, the Fauves led the way to its use as an expressive end in itself.

As Matisse wrote in his "Notes of a Painter" 1908:

What I am after, above all is expression; the whole arrangement of my picture is expressive. The place occupied by figures or objects, the empty spaces around them, the proportions, everything plays a part.

Balance. Shapes, colours and lines can be used to give the feeling of asymmetrical balance. Larger areas balanced by smaller more vivid shapes, lines and colours.

- feeling of movement achieved by swirling;
- brush strokes—going in a specific direction will give a restless feeling of action;

- Unity is achieved by the repetition of similar colours, shapes and lines throughout the painting. To overdo this may become too boring so a bright unexpected colour combination will give emphasis and create contrast;
- the Fauves aimed at disunity - deliberately choosing colours and shapes that might clash. The energy of the distorted lines and colours were meant to be disturbing.

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ADHD and the young child: Troy's story

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Introduction

Imagine the following scenario which is set in a pre-primary centre in the metropolitan area:

Sally Smith is an enthusiastic pre-primary teacher with five years experience. Generally she felt pleased with her teaching abilities, but this year she has been wondering what had hit her; in a word - Troy! Troy was just not normal; he was never in the right place at the right time, and he was always doing the wrong thing; mat times were a nightmare as Troy knew how to disrupt teaching time completely. He was aggressive, using his fist and feet rather than words; quick to fly off the handle and determined to get his own way; his vocabulary of foul words had parents shuddering in horror.

Sally talked to Troy's parent, and put in a request for the school psychologist to assess him. The psychologist called in briefly, but was not able to observe Troy for about two months. When the psychologist did have time, he was in the centre for under an hour, asked the teacher some questions, and then said he thought that Troy may be ADHD, and he should have proper paediatric assessment. Sally felt quite relieved to hear this, as she had been feeling guilty that she found Troy so hard to manage.

In term 3 Troy and his mother were seen by the paediatrician, who diagnosed ADHD and prescribed medication. Sally is pleased that something has been done about Troy at long last and reports that Troy seems quieter and easier to manage now, but he still flares up very quickly and uses aggressive behaviour to get what he wants. Other children avoid him. Sally thinks the best has been done for Troy, but worries about him.

Many early childhood practitioners have experienced "Troy". Troy does not fit the mould; he is different and his challenging behaviour presents many difficulties.

In the last decade a great deal of attention has been paid to the issue of Attention deficit hyperactivity disorder (ADHD), and often this disorder is used to explain challenging and disruptive behaviour. Recently Russell Barkley from the USA (often described as the "world's leading expert") came to Perth as part of an Australia-wide visit, and gave a seminar for professionals that attracted an audience of many teachers, psychologists, medics and academics. The material I address in this paper comes out of the seminar, other reading I have done on the topic, and my experience as a teacher working with children with challenging behaviours in an Education Department SPER centre in Perth.

In spite of a vast number of research studies there seems to be more questions than answers concerning how Troy can be helped. Many complex issues surround any discussion of challenging behaviour, and I will restrict this discussion to the question of diagnosis of young children with behaviours characteristic of ADHD.

Barkley presents a great deal of persuasive material, but it is important to remember that he is dealing with children of all ages and adults. As an early childhood practitioner, I have questions about the diagnosis of children in the three to eight age group, and I raise three issues for reflection in this paper.

Differing views of children with challenging behaviour

The first issue to be discussed concerns the cultural and societal forces that shape our views of the nature of ADHD. Sally Smith found Troy to be "just not normal" from the beginning of the year. Like all teachers, Sally had certain expectations and values about how children should behave in school, but Troy was a surprising child! We need to ask how our expectations are formed, and how we respond when those expectations are shaken.

In the USA and Australia many people would accept that Troy's behaviour is due to ADHD, which is a medical disorder requiring medical treatment, but this is not the case in all countries. For example in Britain and France the behaviours characteristic of ADHD are viewed as conduct disorders, and treatment focuses on psycho-social factors and behavioural programs.

Although the medical view is accepted in Australia, evidence shows that there are considerable differences within Australia concerning diagnosis and treatment. For example, there are variations between states concerning the use of medication. Western Australia has the highest percentage of children between the age of 5-12 on medication in Australia, whilst Victoria has one of the lowest. Children as young as three years of age are being diagnosed and placed on medication.

Researchers have tried to explain differences in rates of diagnosis by physical or environmental causes such as the percentage of lead in children's first teeth, or thyroid activity, but research support has not been found. It seems more likely that teachers, parents, psychologists, and paediatricians in different states view challenging behaviours in different ways, and this is reflected in the rates of diagnosis and types of intervention given.

One result of the medical view is that attention is focused on the child, and teachers are not called to reflect on their program, context or expectations. Observations in Troy's pre-primary may show that Sally Smith expects high levels of compliance and participation in teacher structured tasks, and that there is relatively little time for free play, discovery and experimentation. Troy's refusal to comply creates a major disruption to the day. But there are many ways of viewing the same behaviour, and behaviour judged as "incompliant by Sally may be seen as "creative" by another teacher.

A major difficulty with ADHD is the fact that there is no medical test to prove that it exists. No blood test, x-ray, or monitoring machine will establish the presence of ADHD. Neither can we assume that procedures carried out by paediatricians are reliable, as one study found that 58% of children had been incorrectly diagnosed and prescribed medication (Sabatino & Vance, 1994). We cannot rely on children's responses to medication to "prove" the presence of the disorder, as Barkley notes that all children would concentrate more if they took Ritalin.

Diagnosis depends on largely subjective opinions and perceptions of some people involved with the child. Clear evidence has shown us that perceptions can be shaped by the values, expectations and views of a society. Few people would deny that we see children in our schools exhibiting a range of troublesome behaviours,

but responses to such behaviour vary. We need to consider what values and expectations are driving the medical diagnosis and treatment of young children with challenging behaviours.

Characteristics of ADHD and the young child

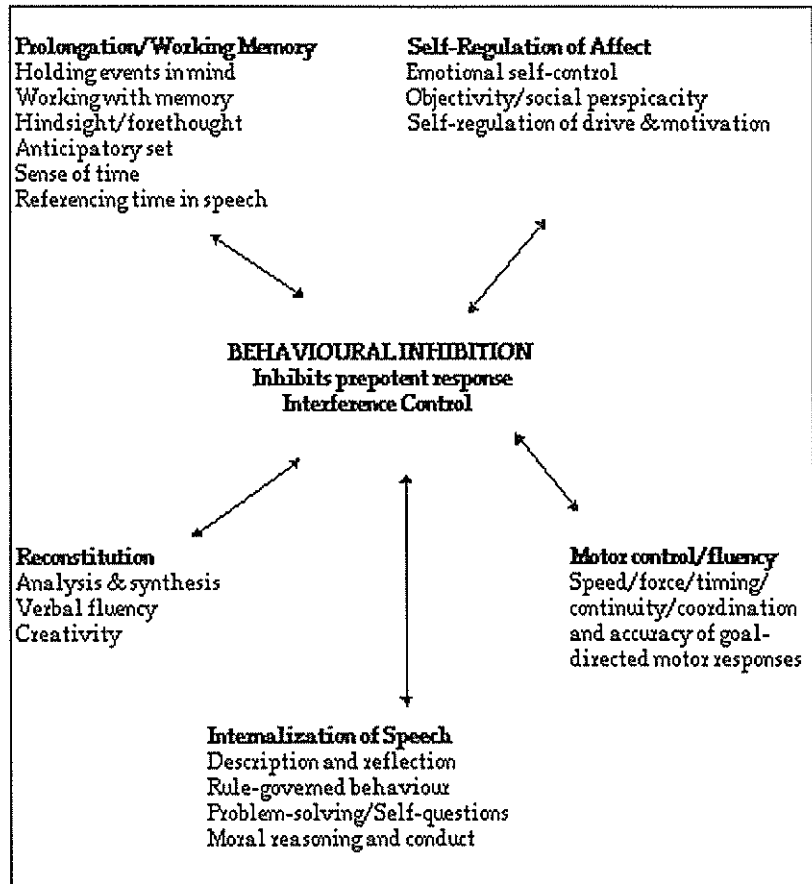
The second issue concerns the fact that the behaviours characteristic of ADHD may be displayed by normally developing young children during certain stages of development. Troy, like many young children, likes getting his own way. Generally we expect 2–3 year olds to start understanding that this may not always happen, however many factors may intervene to slow this development.

We know that the child's development is linked to experience. Troy's difficulties in learning the rules of the pre-primary may be linked to his unruly home life; Troy may lack experiences that would help him participate in the pre-primary group in an appropriate way. Barkley has constructed a model to explain his theory of ADHD, and in essence he maintains that the disorder is caused by a deficit in response inhibition, and that this is linked to five executive functions, as shown in Figure 1.

There is a problem for early childhood practitioners when we look at Barkley's model. Let us consider a few of these notions, and position them with our knowledge of child development. For example, Barkley says that the lack of sense of time is an important indicator of ADHD, and one way to judge this is to notice the presence or absence of time words the child uses in conversations. Barkley notes that a child with ADHD will not use words such as "yesterday", "tomorrow" or other words indicating an understanding of time-span.

Early childhood practitioners know that young children's sense of time develops slowly, and that the rate of development varies. Some five year olds have little sense of time, and would not refer to time in their speech. Some young children are slow to show hindsight or forethought, yet they are developing normally. So, can a lack of sense of time be used as an indicator of ADHD in young children? Similarly, should "emotional self-control" and "self-regulation" be used in diagnosis in young children, when we know that developing self-control and self-regulation is part of the work of the three to five year old?

FIGURE 1. Barkley's model of ADHD



More questions are raised when we consider the internalization of speech. Piagetian and Vygotskian theories have been influential in the field of early childhood, and this work tells us that the development of rule-governed behaviour comes with an understanding of rules, often around the age of six; that moral reasoning develops in stages of varying complexity, and that problem-solving is linked to cognitive development. Many five year olds struggle with notions of “rule-governed behaviour”, and problem solving skills are slow to develop in some cases, but Barkley does not explain how the lack of these skills is characteristic of ADHD in 3–5 year olds.

Barkley's research claims to have identified some factors that affect the severity of the symptoms of ADHD—Table 1 summarises these factors.

TABLE 1. Factors affecting ADHD symptom severity (Barkley, 1995)

The ADHD child behaves better:	The ADHD child behaves worse:
in 1:1 situations	in group situations
when faced with novelty	when faced with familiarity
when given frequent feedback	when given infrequent feedback
when consequences are immediate	when consequences are delayed
when consequences are clear	when consequences are vague
when the task is intrinsically interesting	when the task is boring, tedious
when it is early in the day	when it is late in the day
when the task is supervised	when the task is unsupervised

Many early childhood practitioners agree that the majority of young children will behave more appropriately in a situation that offers factors in the left hand list (Table 1). It is likely that Troy, like many young children, finds it easier to behave appropriately in 1:1 situations rather than group situations; when there is frequent feedback, and immediate and clear consequences of behaviour. Therefore using the factors as indicators of ADHD in young children may lead to faulty diagnosis.

Barkley notes that a high percentage of children with ADHD have a variety of other conditions. These conditions include oppositional/defiant disorders, conduct disorders and learning disabilities. But McLoughlin & Lewis (1990) claim that we do not have ways of separating behaviour disorders, from learning difficulties or mild retardation in young children, and diagnostic procedures have been called into question by many researchers and practitioners. Put simply, many experts agree that we do not have reliable and valid ways of assessing whether Troy has ADHD, conduct disorders, or developmental delay.

Procedures of diagnostic assessment

The third and final issue to be discussed here concerns procedures associated with diagnosis. The story of Troy tells a typical pattern in the assessment process. Often teachers feel inadequate to deal with challenging behaviour exhibited by some children, and they seek expert intervention.

One difficulty with Troy's story is that the teacher is not supported to make accurate and objective observations of Troy's behaviour, in order to provide factual information to the school psychologist. The lack of factual information means that the teacher has to rely on her subjective view of the child, which will lead quickly to judgements such as "he's never in the right place".

It certainly feels to Sally Smith that Troy is "always in trouble", but at times teachers are led astray by their "gut feel" of a situation. Recently a study was carried out in a classroom of a boy diagnosed as ADHD. The teacher considers that the boy is in-compliant, yet results show that he complies with teacher instructions and classroom rules for more than 80% of the time (Gerovich, 1996).

The importance of dealing in observable facts is highlighted when we examine the diagnostic procedures carried out by paediatricians. The main instrument that is used frequently in diagnosis is a rating scale questionnaire that parents, teacher and (sometimes) the child complete. Such questions include

- has difficulty organising tasks and activities;
- fidgets with hands or feet or squirms in seat;
- is easily distracted.

These have to be rated:

Never or rarely; sometimes; often; very often.

The trouble is that the person's subjective view shapes their answers, unless the behaviour is defined and measured. What counts as "easily distracted"? How much fidgeting counts as "often"? How can we measure this behaviour? Often teachers do not have the skills or time to spend observing and recording the behaviour of one child. Teachers may not have the knowledge of the range of observational tools they could use, such as event sampling, time sampling, or running records.

Sally Smith needs support. Either she needs time release to observe in the classroom and accurately record Troy's behaviour over time in a variety of settings, or she needs a skilled observer to do it for her. Ideally, both strategies should be used

because often observers can give feedback to the teacher, which may help him/her to understand their role in the child's challenging behaviour. An accurate objective set of facts concerning of the child's behaviour will be a good starting point for diagnosis, but there should be multiple sources of data obtained in different settings at different times of the day.

We should not assume that the title "paediatrician" equals expert. One study in Western Australia (Lewin & Fletcher, 1993) found that one paediatrician had only a few weeks experience in the job; he knew very little about ADHD, and relied heavily on the school psychologist's report. Neither should we assume that all paediatricians conduct thorough assessments. Lewin and Fletcher found that some paediatricians merely interview parent and child, and this is considered to be an inadequate basis for the diagnosis of ADHD and prescription of medication.

Conclusion

This paper has dealt with a few issues related to the diagnosis of young children with challenging behaviours. It is asserted that early childhood practitioners face some particular problems in diagnosis due to the child's developmental levels and the lack of good diagnostic procedures. Teachers can make a valuable contribution to the diagnostic process, but often they need assistance to observe and record factual information concerning the child's behaviour.

Children like Troy are in urgent need of help, and quick-fix solutions do not exist for complex matters. Sally Smith must be reassured that it is perfectly normal to need support to make the best possible assessment of Troy's behaviour. Objective and accurate observations and measures of behaviour may be time-consuming but it is a valuable investment of a professional's time, and may lead to an accurate diagnosis for the young child. Schools and institutions have a responsibility to support teachers in their endeavours to provide the best possible options for the young child with challenging behaviours.

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Researching the use of the Internet with young children

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Abstract

As media hyperbole would have us believe, the second major phase of the computer revolution is now upon us (did the first phase pass you by untouched?): the convergence of communications' and computer systems is leading education at all levels along new roads. Where do these roads go? What unresolved issues lie along the way? Is it worth starting out on the journey? These typify the fundamental questions that need to be answered in evaluating the prospect of widespread Internet access for schools.

This paper describes a developmental investigation into young children's use of the Internet. In particular, it rationalises one particular approach to research into children's use of distributed information and communication systems; it also outlines some early findings arising from this research. Whereas the presentation of this paper demonstrates children's work, published on the Internet, this paper provides an appendix of information systems and sites that are current and relevant to educationalists working in this field, either as researchers or teachers.

Introduction

Its hard to pinpoint exactly when the media suddenly decided the Net was a sexy beast but one day there were but a few individuals who knew what the Net was, and the next every newspaper had a resident expert and every magazine had run a cover story about the sex appeal of cyberspace... And now, when the children's BBC TV has a competition to win a computer, the best thing about the prize isn't the collection of games it comes with, it's the free access to the Internet (Pope, 1995).

This quote, from a popular magazine, one of the many now published that just deal with the Internet (it's called.net) provides something of an accurate picture albeit in rather a glib fashion. The Internet is here, here to stay in some form or other, and it is beholden for education to react to the Internet in ways that exploit its potential, if it has any, for enhancing teaching and learning at various levels of the educational process.

This paper provides an initial account of how children might engage in using the Internet to extend their learning experiences; and in particular, seeks to document the possibilities determined by the medium itself together with the realities of use. The paper is based on the results of an on-going, exploratory and developmental research project into primary children's use of the Internet.

The Internet

Today the Internet directly connects over 100 countries, encompasses more than 10,500 computer networks (about 130,000 computers) and reaches some 20-odd million people—and is growing exponentially (Espinoza & McKinzie, 1994; Hazari, 1994). In particular, educational use of the Internet has exploded, with large numbers of universities world-wide providing Internet access to staff and students (Hazari, 1994).

What is the Internet? Well, as Crispen points out, in an answer to this question from a computer scientist, you are likely to hear something about 'transmission control protocols' 'Internet protocols', 'T1' lines, and some organisation called ARPA (Crispen, 1994). Quite simply, however, the Internet is a worldwide network of computers that shares a common Internet Protocol (facilitating inter-computer links) and offers a range of services—including sending and receiving electronic mail (email), accessing information located on remote computers, interactively

searching databases and library catalogues and electronic conferencing facilities. The World Wide Web (Web) provides what is probably the most public and accessible face of the Internet; it uses the concept of hypertext or hyperlinks to navigate electronic documents (often comprising a mix of media—sound, graphics, video and text) and is an attempt to organise information according to a standard semantic structure, based upon Uniform Resource Locators (URLs). Users can both provide information on the Web and by the use of Web browsers, such as Netscape, can access Web documents or pages.

The role of the Internet in education

There is some confusion about the nature and role of the Internet amongst educationalists. For example, Espinoza characterises the Internet as a new technology, one which conforms to the needs of the user; she contrasts this with a Ptolemaic vision of the world, borrowing from Hedrick (Hedrick, 1993), in which users are forced to adjust to the characteristics of technologies (Espinoza & McKinzie, 1994). However, it is difficult to appreciate her characterisation: certainly it is the case that the Internet provides well for a human want, to socialise, to communicate, to investigate—but it provides for these things in somewhat of an unnatural manner, through the confines of largely text-based, asynchronous, tools and facilities. Certainly we can make good use of such facilities but to do so it is necessary to learn new communication and information handling skills.

Furthermore, the Internet is not easy: it is not easy for schools to provide access to their students; tools necessary to access the Internet are not, in many cases, easy to use; and practical limitations on the current technology used for access (e.g. modems, computers, various software tools, etc.,) often frustrate and sometimes kill motivation for students. Despite the Internet being the prime communications network worldwide, it is, in itself, a major obstacle to the use of communications as a medium and source of learning in education. The potential of the Internet in education is often encapsulated by references to it providing 'a classroom without walls' (Barron & Ivers, 1993); in reality it is far from providing the features and interactions common to most classrooms. However, what it might offer, despite the potential difficulties in obtaining and maintaining access, is a significant addition to, and development of, traditional learning activities, both for school and university students.

Mapping possibilities

As a communications network, the Internet provides a range of possibilities for school use. These are summarised in Table 1. Email is a facility based on the Internet, to send and receive mail as personal communications. Educational activities provided for by this function include purposeful writing and the researching and publishing of textual information. Listservers offer virtual meeting places where groups can thrive, perhaps sharing a common interest, concern or affiliation; by becoming a member of a list, it is possible to interact with others, as a group, on the list, in the form of textual communications (as with email). The Web provides a means to access information, as well as to provide information—in the form, perhaps, of multimedia and hyperlinked documents. There are other functions, purposes and activities provided by the Internet; but those described in Table 1 are the ones more commonly accessible in schools; and in particular, they provide the focus for this research project.

TABLE 1. Possibilities for the use of the Internet in education

Internet Function	Purpose	Activity
Email	information resource; one-to-one communication	Inquiry; Communication
List(server)s	information resource; one-to-many communication	Inquiry; Communication
Web	information resource; publishing	Inquiry; Communication

The Internet is, paradoxically, both a physical and virtual network, linking computers, one to another as well as information resources, one to another. More importantly, it is also a socially constructed network, where relationships, thinking and learning occur, sometimes deliberately and sometimes without planning. In a conceptual sense, socially constructed networks provide virtual meeting places for groups or communities to interact. It is the processes and results of these interactions that are of interest to this research project.

Research directions

Currently we are still making observations about the children's use of the Internet, particularly their use of email. These are anecdotal and recorded in the form of a researcher's diary. From these observations, it is becoming clear that children are being encouraged to reflect — not only on what they are writing, but also on the situation of their learning (i.e. where they are situated in relation to where others using the email system are situated), the nature of their communications with others and on the information that is being made accessible via these communications (that is, information the children are providing to others on the email system as well as information that is being provided to them). It is the nature and extent of these reflections that is likely to form the basis for more formal investigations into the children's use of the Internet.

We are also looking at investigating the nature of children's enquiry as well as their writing, in particular, on the Internet. For example, there is some evidence to suggest that children in embarking on distributed enquiry, are assuming roles which perhaps they would not do in similar tasks not centred on the Internet—roles such as respondent and evaluator. Projects that might help encourage this development include Australia Remembers, where children are set distributed enquiry tasks (in this case, the tasks are concerned with people's memories of the Second World War) within the context of a list. The children conduct their enquires and later post the results to the list (thereby posting the results to all members of the list); they are also able to read and respond to other children's postings (Loosley & Gesthuzian, 1995) involved with the same or similar tasks. It may also be the case, that children are writing more for publication on the Internet than they might do otherwise; certainly there is some anecdotal evidence for this, to date.

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Appendices

Sites of currency

The following electronic addresses represent information sites on the Internet (Web) that have been of use in our research; they may also be of use to teachers of primary schools interested in pursuing the Internet.

1. *Web guide to children's literature and children's writing*

The first site is a great jumping-off point for various sources of literature and other writings suitable for children. It needs a teacher to guide children to the various addresses given. The second site provides a good range of sources for children's writings, published on the Web—including magazines, and stories where the children pick their ending.

<http://www.ucalgary.ca/~dkbrown/index.html>

<http://www.ucalgary.ca/~dkbrown/writings.html>

2. *Just the News*

This site provides a world-wide set of links to other sites that offer foreign and English language versions of radio news and newspapers: for example, the electronic version of the UK daily paper The Daily (Electronic) Telegraph. These provide good sources of news from various viewpoints on world events.

<ftp://ftp.carnet.hr/pub/audio/radio/>

3. *UK schools*

This gives a range of UK schools that are currently on the Web (i.e. schools that have provided Web pages or URLs). Each school offers something different, from children's descriptions of themselves and their school (including pictures) to teachers' indications of how schools are using the Web for curricula purposes.

<http://www.sys.uea.ac.uk/Schools/schoolnet/schls.html>

4. *How to set up your own classroom Web server*

Just what it says—a cookbook of recipes for setting up a classroom Web server.

<http://web66.coled.umn.edu/Cookbook/contents.html>

5. *NASA*

The world-renowned NASA Web site—ideal for exploration and up-to-date news on NASA projects. However, the site is ostensibly graphical and therefore it can take considerable time to download pages; it is also very popular and consequently often unreachable for certain periods of the day. This is one of the best Web sites available for children (there are two addresses to the same site—the first is the one that appears most available).

<http://astro-2.msfc.nasa.gov/>

<http://indus.gsfc.nasa.gov:8080/>

6. *The world of the Vikings*

This is a UK site that gives a graphical and museum approach to the Vikings—real artifacts and appropriate history.

<http://www.demon.co.uk/history/vikings/vikhome.html>

7. *K-12 Web sites*

Comprehensive listing of schools on the Internet (via a dynamic map)—ideal for facilitating email access to a range of schools world-wide (good for purposeful writing).

<http://web66.coled.umn.edu/>

8. *Global Schoolhouse Project*

A page that gives access to reports and other resources related to this Internet project. More for teachers than children.

<http://edweb.cnidr.org/gsh/gshwelcome.html>

9. *VocalPoint*

Good example of Web newspaper created by young children (from Boulder, US).

<http://bvsd.k12.co.us/cent/Newspaper/Newspaper.html>

10. *Museums and exhibits related to science*

For budding scientists—lots of related sites, some interesting (with on-line exhibits), others not so.

<http://www.halcyon.com/cairns/museum.html#scimuseum>

11. *Ask-an-Astronomer*

Have you ever wondered why the stars are different colours? If there are so many stars in the known universe why isn't the sky bright at night? Where is the moon in relation to the earth and sun when it is 'full'? What are the limits to our knowledge of the structure of distant galaxies? For all these are other queries.

<http://www-hpcc.astro.washington.edu/k12/ask.html>

12. *Yahoo*

A well-known and almost exhaustive site for exploring the Web in all its guises (needs teacher vetting).

<http://www.yahoo.com/>

13. *A visit to the Louvre, Paris*

This is the Australian mirror to a popular and interesting site—for Art enthusiasts.

<http://cutl.city.unisa.edu.au/louvre/>

14. *A global show and tell for kids*

This might need the teacher to view first—particularly American in flavour.

<http://www.manymedia.com/show-n-tell/>

15. *Children's pages*

Interesting collections of pages from children over the world.

<http://www.comlab.ox.ac.uk/oucl/users/jonathan.bowen/children.html>

<http://www.pd.astro.it/local-cgi-bin/kids.cgi/forms>

16. *Lets learn Japanese—a child's eye view*

Great fun and beautiful graphics.

http://jw.stanford.edu/KIDS/kids_home.html

The way of the Internet

The following represent edited items of news taken from a US news service, Edupage (on-line), for August and September, 1995. Edupage, a summary of news items on information technology, is provided electronically three times each week

as a service by Educom, a Washington, DC. based consortium of colleges and universities. Each item listed below has some relation to the Internet and is included for general interest, as to current and future directions of the Internet.

Widening the net

At current growth rates, it's estimated that everyone in the world will be hooked up to the Internet by 2004, (Internet Index 2 September 1995)... However, network enthusiasts are hoping that there will be a dramatic new worldwide population surge, so that Internet growth can continue well into the 21st century.

Minitel messages

Started 12 years ago by France Telecom, the Minitel computer network now supports 6.5 million special Minitel terminals used by 14.4 million people, almost one-third of France's adult population. Use of the system for games and sex has declined from 22% of total usage to 14%, and the French now use the system mainly for such practical things as banking and public information services. Minitel now offers 24,600 services, offered by more than 10,000 companies, (The Economist, 19 August 1995 p. 62).

A grand vision

AT&T's vision of the future includes a talking Web site, so that customers can chat with salespeople over the Internet with the click of a mouse, (Information Week, 28 August 1995, p. 14).

One-stop shopping on the web

The Guide to Computer Vendors is an interactive service with more than 600 links to computer vendors on the Web. < <http://www.ronin.com/SBA/> > (Information Week, 28 August 1995, p. 10)

Banking on the Internet

A number of major banks, including Citibank, Chemical, Wells Fargo and Bank of Montreal, have allied themselves with technology partners IBM and Sun Microsystems to develop a system that will allow bank customers to send personal checks over the Internet. Consumers will need a special card with a computer chip containing their bank account information and computer codes representing their signature as well as a small device attached to PCs to read the card, (New York Times, 23 August 1995, C2).

Technology with young children: The DMA strand

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This house is special because I can see right down inside this house...

The inclusion of technology into the school curricula in Western Australia is a recent one. Until 1994 technology was linked with science and computing and the decision to give 'Technology and Enterprise' broad area of learning status means teachers must consider how to implement this new subject into their classrooms. For teachers of young children this is a challenge.

The W.A. Technology and Enterprise Learning Area comprises four interdependent strands of learning, which are:

1. designing, making, appraising (DMA);
2. information;
3. material;
4. systems.

This paper only relates to the 'designing, making, appraising' (DMA) strand, which is the "process through which students develop ideas and create imaginative solutions for the learning tasks in which they are engaged. They participate in decisions

about what to do, why it should be done, how it should be done and how what has been done might be improved." (Student Outcome Statements [Working Edition] 1994, p.1.) This strand has four substands: investigating; devising; producing; and evaluating, all of which need to be addressed in junior classrooms.

Little research has yet been carried out on how to introduce technology into early childhood education as Napper (1991. p.23) states, " Educational databases searches reveal quite a number of studies on the use of computers in early childhood settings but practically nothing on technology education for young children, let alone the development of technological capability." Fleer (1992) has made a valuable contribution through collecting data on how technology can be introduced to young children "so that it is inclusive of girls' interests and needs and is cognizant of the physical structure and philosophy of early childhood education." (p.132) and Beat (1991) has carried out case study work monitoring 'free-play', observation of groups involved in construction play and considering how pre-school experiences and parental attitudes affected interest in the use of construction kits.

The DMA strand of technology focuses on technology as a 'process'. Much of the resource material available for teachers highlights this aspect which has led to an unwritten assumption by some educators that "We do not teach design and technology, it is a process, we provide opportunities, we facilitate." (Cross, 1994, p.71). Teachers certainly are facilitators but they must also actively teach skills and concepts. Those who remember the push for 'discovery science' will know that children do discover some things for themselves but they will not discover everything they need. Children are entitled to develop their capabilities to their fullest potential and so it is 'incumbent upon us as teachers to have reasonable and high expectations and to use all our strategies actively, just as we do in other areas to achieve learning." (Cross,1994, p.72).

Some teachers are concerned at their own perceived lack of confidence and competence in the area of technology education. Many studies have indicated teachers' concerns when teaching science and early studies of computer education with young children highted teachers' insecurities with what was then a new technology. The knowledge, skills and attitudes of teachers are key factors in any change process in schools. As Tickle (1990, p.2) says, " Change of any kind may be threatening for many teachers. Design and technology seems particularly intimidating to some because it requires de-skilling from well-proven teaching methods. There are different classroom management techniques needed for its activities. It demands new learning of concepts as a basis for instruction." This is an area that requires investigation and if proved true will need to be appropriately addressed to enable

teachers to gain the skills and confidence to approach teaching technology with enthusiasm and competence.

Whether young children will be able to cope with all aspects of the DMA approach is still to be discovered. The design phase, where the children actually draw their model before commencing any building, appears, on the surface, to go against all sound educational views of young children's learning, that is, the need for concrete experiences before moving on to abstract representation. Work by Fleer, (1992, p. 133) indicated that " it is important to orient children's attention to the bird's eye view (plan view) when drawing and constructing. This can be done through the teacher modelling this perspective to children. The second area which needs to be modelled to children is drawing their design before constructing. Once again this focus is not familiar to children and needs to be carefully introduced to young children."

The making phase may be easier for teachers and children to cope with. Building 'junk' models has been a feature of early childhood classrooms for many years and teachers have the skills to introduce children to the properties of different materials and management of simple equipment. The block corner is an established 'constant' in most pre-primary and junior classrooms. Matching the completed model to the original design may, however, be beyond the skills and cognitive level of many young children. At the beginning the sequence may need to be reversed and the children asked to draw the design of their completed model.

The third phase of the DMA process is appraising. Most young children are satisfied just through the completion of their task- whether it is finger painting, building a block tower or making a paper basket. The 'doing' is the important bit. Teachers often use children's work as a key for discussion and elaboration to extend children's language skills, however, asking children to evaluate their work to see if it satisfies their original intention will need thoughtful handling to ensure there is no loss of self esteem, and if it is suggested that further improvements are needed children may quickly lose interest and confidence.

The Technology and Enterprise learning area is new for teachers and may present challenges in choosing appropriate strategies for developing young children's potential in this field, yet as Napper (1991, p.24) says, "the preschool is one place where children have opportunities to design, to solve problems, to acquire knowledge and physical skills so necessary for the development of technological capability." Early childhood teachers may find that they can overcome some initial concerns and lead the way in this new and exciting curriculum area.

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*The quality improvement
accreditation system: Lessons
from childcare*

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Background

The National Childcare Accreditation Council's (NCAC) Quality Improvement and Accreditation System (herein after called the Quality Improvement System) evolved in response to significant 'change forces' (Fullan, 1993) which were bringing the quality of long day care centre provision into focus. These driving forces have been the growth of knowledge about children, coupled with an increase in the number of children and the amount of time they spend in care (NCAC, 1993).

Quality improvement and accreditation schemes for daycare are not unique, and have successfully operated on a voluntary basis in the United States since 1984 (NCAC, 1993). Australia is the first country to introduce a national childcare quality improvement process that culminates in accreditation and is directly linked to Commonwealth Government funding paid to centres on behalf of the families that patronize them.

Rationale and purpose

The Quality Improvement System focuses on the quality improvement process by examining the factors that determine quality and focusing on outcomes for children. By emphasising the actual outcomes for children, the Quality Improvement System “shifts the focus from meeting minimum standards to striving towards the highest level of care” (NCAC, 1993, p. iii). Moreover:

Central to the design of the Quality Improvement and Accreditation System is the idea that improvements should be initiated from within the centre itself, not imposed by outside ‘experts’. . . [It is] a constructive, rewarding, ‘user friendly’ method for ensuring that the quality of care and education is assessed and enhanced on an ongoing basis. It is not a system to punish every centre which cannot meet strictly defined criteria within a rigid timeframe. (NCAC, 1994b, p. 4)

All stakeholders are involved in the process of analysing the centre's policies and activities and as a consequence, gaining a more accurate picture of the quality of care provided for and experienced by the children. The Quality Improvement System helps the centre staff measure the standard actually being provided to “determine whether there needs to be improvements in this standard and, if so . . . plan and implement them” (NCAC, 1994b, p. 4).

The NCAC (1993) believes that contributing and determining factors combine to produce quality care and education that leads to the “good developmental outcomes” in the learning domains of physical, intellectual, social, language and creative development (p. iv). The contributing factors involve context, staff, environment and organisation whilst the determining factors include: (a) developmentally appropriate practice; (b) sensitive and responsive interactions between staff and children; (c) clear philosophy and goals; (d) a balanced program; (e) high standards in nutrition, health and safety; and (f) positive, supportive relationships between staff and parents (NCAC, 1993).

Structure of the quality improvement system

Fifty two Principles address key areas of the centre's activity and are divided into four vital areas or parts:

1. Part A. Interactions between: (a) staff and children, (b) staff and parents, and (c) staff.
2. Part B. The program.

3. Part C. Nutrition, health and safety practices.
4. Part D. Centre management and staff development.

Core (essential) principles appear at the beginning of each part, in most cases with an overview explaining in general terms why the Principle is important and how it can be achieved. Descriptions of some of the attitudes, activities and practices which are regarded as characteristic of four standards of care accompany each Principle. The four standards of care are Unsatisfactory, Basic, Good quality and High quality. Good quality is the standard for the Core Principles and Basic for the others. The descriptions relate to three groups of children: (a) Infants, (b) Toddlers, and (c) Pre-schoolers. These do not necessarily reflect groupings within a given long daycare centre, “but rather reflect the developmental stages of the children attending” (NCAC, 1993, p. ix). The Handbook (NCAC, 1993) stresses that the descriptions accompanying each Principle do not constitute an exhaustive list, but are provided as examples to guide centres in the process of self-study. Moreover:

In order to be rated as a certain standard in relation to any Principle, it is not essential that every description provided is applicable to a particular centre. The descriptions can be used as a guide to rating equivalent provisions or comparable activities and behaviour. (NCAC, 1993, p. ix)

The accreditation process

There are five steps in the Quality Improvement System that lead to a decision for or against accreditation by the NCAC:

1. Registration: Registration is necessary for a centre to continue to receive, or be considered for Childcare Assistance from the Commonwealth Government. Centres will have up to 18 months from the time of registration to complete a Self-study Report and request a review visit.
2. Self-study: Each centre needs to form a Centre Quality Improvement and Accreditation Committee comprising the coordinator or director, staff, parents and, if desired, the proprietor or sponsor. The Committee coordinates the self-study process “which involves assessing the quality of care provided and comparing this with the standards of care set out in [the] Handbook” and completing the Self-study Report (NCAC, 1993a, p. xv).

A Plan of Action to improve the quality of care towards these standards will need to be implemented “where the quality of care is below the standards set for accreditation” (NCAC, 1993, p. xv). Funding to support centres and train staff involved in the Self-study or Plan of Action process is available from the Commonwealth Government.

3. External review: A Reviewer will come and validate the Self-study Report and prepare a Reviewer's Report when the Committee considers the centre is ready. If a Plan of Action has been necessary, the Reviewer will provide comment and review progress at a later date.
4. Recommendation by Moderators: Moderators examine the Self-study Report and Reviewer's Report and make a recommendation to the NCAC in the Moderator's Report in favour of or against accreditation. The Moderator provides advice on the Plan of Action (if required) and, in a later review, feedback on whether satisfactory progress has been made. The NCAC (1993) stresses that an important role of the Moderator is to “ensure national consistency in decisions” (p. xvi). Both Reviewers and Moderators are qualified experts in the early childhood field.
5. Decision by the NCAC: The NCAC makes a decision on accreditation based on the Self-study and Reviewer's Reports and the Moderator's Report and Recommendation. In order to be accredited, centres need to demonstrate Good quality for 12 of the non-Core Principles. A centre that is Unsatisfactory in relation to any of the Principles cannot be accredited. Centres which achieve a higher overall standard than the base standards will be granted intervals of up to three years between reviews.

The NCAC also decides on an appropriate timeframe for implementation of the centre's Plan of Action (if required). A centre may continue to receive Childcare Assistance subject to satisfactory progress against a Plan of Action to improve to the required standard. If satisfactory progress has not been made after two reviews “without adequate reason”, the NCAC can advise the Minister for Family Services that the centre is a “centre of concern” (NCAC, 1993, p. xvii). A further unsatisfactory review (generally after 12 months) can lead the Minister “as a last resort” to withdraw the centre's Childcare Assistance and Operational Subsidy (NCAC, 1993, p. xvii).

The self-study process

The self-study process is central to the Quality Improvement System and is a collaborative process involving “those who have most interest in the quality of care” (NCAC, 1993, p. v). Moreover:

The cornerstone of the Quality Improvement System is the encouragement of each centre and its parents to work together in their complementary roles, and together to define a philosophy and goals to guide the program, the style of interactions and all other activities in the centre. (NCAC, 1993, p. v)

The Workbook (NCAC, 1994b) stresses that “inherent in the Quality Improvement and Accreditation System is recognition of the diversity of childcare centres in Australia” (p. 10) and a result of this, flexibility in the ways in which self-study can be conducted. The suggested 14 step process can be followed ‘to the letter’ or used as a guide and adapted to suit the particular centre with certain provisos. The benefit of this process is that centres are able to confirm their particular strengths and identify the areas in need of improvement where energies should be focused. The Workbook (NCAC, 1994b) stresses that:

Not all of the activities related to your involvement in the Quality Improvement and Accreditation System will be completely additional to your existing activities: you may already be doing much of what is required . . . In the same way, the evaluation and planning components of self-study can be built into current programming time, and the improvements deemed necessary will normally be incorporated into or can replace existing activities. (NCAC, 1994b, p. 7)

The plan of action

A Plan of Action may be required if the Self-study Report shows that a centre has not yet reached accreditation standards or if the NCAC does not agree with a centre's self-assessment. Some centres may use a Plan of Action to help identify their strengths and weaknesses and make plans for improvement. The Plan of Action may take several different forms, but would usually include the issues, strategies and tasks a centre is addressing. A Plan of Action subject to review by the NCAC has a set format under five headings: (a) task, (b) person responsible, (c) action, (d) target date, and (e) training and resources needed (NCAC, 1994a).

Resources

The resources for the Quality Improvement System are the: (a) Handbook, (b) Workbook, and (c) Self-study Report. The Workbook contains all the information the centre will need to complete the Self-study Report. The Handbook contains a full explanation of the objectives and operation of the Quality Improvement System, as well as the 52 Principles and detailed explanations of the four standards of care (NCAC, 1994b).

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Why don't we play anymore?

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Introduction

At present, early childhood education in Australia is receiving considerable attention both from a political and educational standpoint. Politicians and administrators are recognising that the early years of schooling represent a crucial stage in the development of learners and therefore much effort is being invested in examining examples of best practice in teaching and learning in the early years. Since the mid 1980's Developmentally Appropriate Practice (DAP) has been the rhetoric of early childhood education. But what do we really mean by developmentally appropriate practice? According to the literature (Bredekamp 1988) it is intended to describe programs which are grounded in child development theory and research, thereby designated to meet the individual needs of children. It describes age appropriate activity, congruent with children's growth whereby meeting the needs of all children, including cultural, social, behavioural, physical, intellectual and emotional differences. DAP advocates a meaningful curriculum, with choice, interest, and adult guidance, as the key features. Presently, issues surrounding student outcome statements, and the notion of accountability are impacting on classroom practice including programs for 4-8 year olds. With the Education Department of WA assuming responsibility for programs for 4 year olds in 1997 it will take committed early childhood practitioners to ensure quality developmentally appropriate programs are offered to these children.

Despite the focus attributed to the field of early childhood, educationalists/practitioners might ask the question, what is happening to early childhood education? Increasingly, early childhood programs are being viewed as preparation for formal schooling. Programs for four and five year olds are being treated as an early start to the development of literacy and technical skills which will ensure readiness for the first years of school. Social outcomes which are assuming importance are those which reflect conformity; such as, sitting still on the mat, listening attentively, taking turns, responding correctly. There is no denying that these behaviours are important, but at what cost do they assume a central focus of a program. With student outcomes taking a central role in planning, the danger is that learning and teaching may take on a "technical rational model", where the mechanics and product assume importance rather than children being valued for themselves and for their active involvement in processes. What must be central to any curriculum model is what children bring to the experience, their knowledge, skills and understandings which will form the foundation of their learning. This can only be achieved with a model which places play at the centre of the curriculum.

The study of play has at times been both fascinating and frustrating (Moyles 1994). Research and publications abound with articles promoting the importance of play however, teachers spend relatively little time in planning for it. Often play is regarded as an 'optional extra', a fill in activity when all other planned activities have been completed. Educationalists and practitioners seem to agree that play is the 'work' of young children and when children play they are learning; value the concept of play; admit that a single rational definition of play is elusive; and recognise the diversity of play and therefore the difficulties in attempting to quantify it. However what is indisputable is the firm belief that educationalists and practitioners should be strongly advocating for a greater understanding of the potential and role of play as a process in young children's development and learning.

As outlined by Moyles (1994):

If as adults we are really 'hooked on children' we have to be 'hooked on play' as a process across the continuum of experiences and agree that play is valid in relation to a broad, balanced and relevant education. The United Nations Convention of the Rights of the Child makes it quite explicit that every child has a right to play. But what seems to be the issue is whether they have the right to do so in educational contexts (p 5).

Contemporary research (Weininger and Fitzgerald 1988, in Hughes 1995) into the neuropsychological model of play provides an interesting approach to the biological significance of play. This in turn has implications for the use and role of Perceptual Motor Programs which have been gaining prominence in early childhood

programs in WA in recent years. To understand this approach, one must understand the psychological functioning of the brain. That the cerebral cortex of the brain is divided into two hemispheres, the right hemisphere being concerned with the processing of information that is nonverbal, spatial, perceptual and affective (e.g. sorting objects according to appearance), and the left hemisphere is concerned with the processing of information that is analytical, conceptual, and abstract and is responsible for verbal functioning (e.g. sorting objects according to function). In every day problem solving situations, when information is being processed, there is a blend of the two approaches of the two hemispheres. It is believed (Weininger and Fitzgerald 1988) that by integrating the skills of the two hemispheres, we become better problem solvers.

Young children tend to be concrete and perceptual in their thinking about the world, and it is not until the age of five to seven, when there is a gradual shift from a reliance on the right hemisphere which has been functioning at a more mature level during the preschool years to a reliance on the left hemisphere. The years between 5-7 are also marked by an increased interest in symbolic or pretend play and Weininger and Fitzgerald (1988) believe that this is more than coincidence. Symbolic play is a highly integrative form or behaviour which involves experimentation with new possibilities. It is a creative process integrating the familiar with the novel and this type of play facilitates the transfer of information between the hemispheres. Thus the neuropsychological model views play as an integration of two modes of understanding the world and of processing information—one that is perceptual physical and structural and another that is abstract, conceptual, and functional

What then of perceptual motor programs? Children in many Western Australian schools, who are perceived as developmentally delayed are being placed on perceptual motor programs which purport to develop the maturation of the brain. However, there is no research evidence which supports this claim. Play reflects the maturation of the human brain and is a tool for facilitating intellectual growth. As practitioners and educationalists we need to accept play, but more importantly understand its functions rather than begrudge children the opportunity to play and make efforts to hurry them into adulthood.

The event based approach

In Queensland a number of teachers in preschools began to question some of the practices inherent in their activity based programs (Perry 1994). They began to question how meaningful or motivating particular activities were for individual

children. For example, how relevant was the threading to a pattern activity provided for one child noted as having poor hand eye coordination, as compared to the small group of children who had decided amongst themselves to build a shop. For these children the verbal exchanges concerning the design of the building, the foodstuffs to be represented and the taking on of pretend roles of customers and sales assistants demonstrated great enthusiasm and vigour. Reflecting on such incidents, the teachers came to the view that they wanted to offer children more opportunities for pretend play and to encourage them to incorporate their own ideas for games and activities into the program.

To find out what children were interested in the teachers began to involve themselves more in the children's pretend games. They began to develop a better understanding of the knowledge the children had and found that with the events the children had created there were many opportunities for children to engage in meaningful activities to promote particular skills.

Teachers found that to accommodate this type of play, rooms had to take on a different appearance. Instead of being organised according to an adult's sense of order with clearly defined activity areas, children marked their own play spaces with blocks and other readily available pieces of equipment and materials. Certain pieces of material were placed in more strategic positions, depending on their rate of use. Children needed to be able to make decisions about the materials they needed for their games, therefore access to a storeroom filled with a wide variety of recyclable materials became essential.

Group discussions became a time for sharing and clarifying ideas, talking about each others' games and thinking through problems. As teachers began to think more about what their observations of children were telling them about the nature of a preschool child's learning they came to realise that learning did not automatically occur just because a child played with blocks or threaded to a pattern. It was the child who did the learning and when children were able to initiate activities for themselves, based on their own ideas then there seemed to be greater involvement and enthusiasm. There were still questions which were being asked:

Were the children really learning?

Were the teachers really teaching if they played with children?

To answer these questions a research study was undertaken by Perry (1988) which focussed on language, social knowledge and problem solving. The study was undertaken in a double unit preschool in Brisbane over an eight month period. Teacher A saw herself as an activity-based teacher whose program was organised

around activities that the teacher thought the children needed and where interested in. Teacher B saw herself as an events-based teacher and aimed to provide an environment in which children felt able to express their ideas and to explore and test them.

After eight months post treatment measures were administered (Peabody Picture Vocabulary Test, Test for Auditory Comprehension of Language, Test for Social Knowledge, Story telling with a focus on story structure/language, Alternate Uses Test). The multivariate analyses showed that there were significant differences on all the post treatment measures in favour of the children in the event-based unit. The research found that children in the event-based unit had significantly enhanced abilities in terms of vocabulary, auditory comprehension, social knowledge, story telling, and creativity in terms of alternate uses.

Conclusion

The event-based program enables the teacher to focus on children's play and how they share, use, and clarify their own ideas in a group setting. As children engage in pretend play they are integrating competencies, and skills and creating meaning from within, rather than imitating external models. If teachers are to support the developmental forces of each individual child, then they must carefully consider a play-centred curriculum. This means being responsive to children's interests and prior knowledge, and using these to orchestrate opportunities which will match and stretch children's development.

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Teaching fundamental movement skills

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Introduction

The aim of physical education in the school curriculum as stated by Gallahue (1993 p.6) is:

- learning to move where movement skills are acquired and fitness is enhanced through physical activity; and,
- learning through movement where cognitive learning (knowledge) and affective learning, (social and emotional, values and attitudes) occur.

The Review of Physical Education in Western Australia (House Report, 1994) details the findings of studies which have involved children participating in a regular daily program of physical activity. These indicate that these children, compared to the control groups are:

- more self-confident;
- more skilful;
- more sociable;
- superior in health, fitness, discipline and enthusiasm; and,
- academically better than the control group.

Regular physical activity by children also contributes to:

- optimal physical growth and development;
- a decrease in obesity;
- disease prevention;
- the development of regular activity patterns that extend into adulthood;
- enhanced classroom learning with promotion of early cognitive functioning through imitation;
- symbolic play, the development of language and the use of symbols;
- positive student behaviour;
- improved mental health.

House Report 1994 (p.10)

Although increasing the activity levels of children produces many benefits, the House Report identified K-3, particularly the development of fundamental movement skills, as an area of need.

A fundamental movement skill is an organised series of basic movements that involves the combination of movement patterns of two or more body segments. (Gallahue, 1993)

Gallahue (1993) groups the skills in three categories:

Stability. e.g. balancing, rolling, dodging.

Locomotor. e.g. running, jumping, hopping.

Manipulative. e.g. throwing, catching, striking.

Parker (1995) considers, “fundamental movement skills as the building blocks, the ABC of the active life. These skills are pre-requisites of games and recreation activities that contribute to the physical and social development of the young child.”

There is considerable documented evidence to suggest that all is not well in this area. The Senate Inquiry (1992) and the House Report identified deficiencies in the teaching and learning of fundamental movement skills. Walkley’s study (1992) found that the 1182 boys and girls studied, at all year levels, lacked competence in the motor skills assessed. Competency in FMS enhances success in physical activities, contributes to acceptance by other children and encourages further participa-

tion. They are best learned at an early age and teachers can have considerable influence between the ages of 5 and 8. A wide variation of competency in FMS occurs in children so developmentally appropriate programs are essential.

Current programs

Although some excellent programs currently operate in WA schools the trend is for the following to occur:

- little time devoted to PE;
- emphasis on fitness (especially using the training model) to the exclusion of sequential skill development;
- programs directed predominately towards sport or games e.g., modified sports and whole class games such as Duck Duck Goose. This often precludes other components such as dance and gymnastics (movement programs).

Most generalist teachers have had limited instruction during their pre-service training in the area of physical education. Thus a lack of understanding regarding desirable outcomes and key content is to be expected. Another factor limiting the provision of quality programs is the perceived difficulty in managing children in environments outside the classroom.

Resources available

Currently a large number of very good teaching resources are available with more being developed. The following are recommended:

Sportstart (Aussie Sport). This was written for parents of children from ages 3 to 12 and is particularly useful for teachers of K-3. Included is a gross motor development chart and developmentally appropriate activities and progressions.

Sport It (Aussie Sport). A 15 week fundamental movement skill program for years 1-7. Covers locomotion, ball control, throwing, tracking and trapping, kicking and striking in sequential, developmentally appropriate activities and skill progressions.

Physical Education Primary (PEP) Fitness—Lower (ACHPER). Fitness activities based on the philosophy of raising activity levels through fun activities that also contribute to skill development. They are developmentally appropriate and grouped

around the themes of Fundamental Movement Skills, Dance, Outdoor Education, Movement Exploration and the much neglected Talking About Fitness and Physical Activity. ACHPER are also in the process of writing books on Dance, Gymnastics, Games Skills and Aquatics which will replace the Daily PE Files.

Gymnastics resources. Gym fun, Gym Skills, Gym kit and Kinder gym available through WA Gymnastics Association.

Curriculum materials

During 1996 the Interim Curriculum Council will co-ordinate the writing of two documents pertinent to teachers of physical education. The Health and Physical Education Learning Area Statement will outline the key outcomes and content and the Physical Education Curriculum Support Document is likely to provide advice to teachers in the areas of programming, teaching strategies, resources available and assessment.

K-3 was identified as a priority for the Physical Steps Project and two initiatives are currently underway:

1. A Fundamental Movement Skill Assessment Support Package is nearing completion and will be distributed during semester 2, 1996. It will provide a number of strategies which will enable teachers to identify students who are having problems with FMS and may be at risk. These strategies include: an observation schedule; a developmental continuum highlighting essential FMS; and a quantitative motor screening test. These strategies will be further supported by a video, which will clearly identify for teachers the basic components of each FMS, for example what to look for when observing a student in an overarm throw. Advice will be provided on how to set up an environment conducive to the teaching and observation of children in FMS activities. Reference to support materials and remedial programs to assist teachers with children who have FMS deficiencies will be provided in the teacher support package.
2. A FMS teaching model framework is being developed and trialled by a group of eight K-3 teachers. The model is currently being refined and will be promoted through the Physical Steps train the trainer workshops in 1996. This model is outlined below.

FMS Model

- Minimum of 2 x 30+ minute activity sessions per week (30 minutes of activity each session)

- Small working/activity groups
- Organised around stations
- Activities at each station on a continua of “developmental play”
freeplay;
structured play;
student designed problem solving;
teacher directed/instruction.
- Students select the station they participate at although teachers may limit their choice to their areas of need.
- Activities foster independent learning and cater for extension.
- Maximum participation and fun are encouraged at stations (no waiting in lines).
- Activity sessions are supported in the classroom by class teachers (not just PE specialist) with design and debriefing sessions that incorporate other activities and learning areas.
- To facilitate the stations concept and organisation, additional support may be required from other teachers, assistants, parents or older students).
- The environment must be challenging and stimulating with high yet realistic expectations.
- Evaluation is via checklists with referrals to the screening package.

The trial results so far indicate that children, especially K-2, enjoy the play aspect and the station approach which provides great variety and opportunities to access equipment. Since only 6–8 children are involved at the teacher directed station quality teaching, observation and feedback are possible. The skills taught can then be reinforced at the structured play station through the use of task cards and selected activities. At one station children can design their own activities but the teacher provides specific equipment that will lead them on to practising previously learnt skills. A positive outcome from using this model is the increase in the play aspect which could involve returning to the pre-school outdoor environment that children enjoy so much.

Setting up the equipment required is a concern to many teachers but those involved in the trial found that by training the class early in the term even pre-primary children were able to be responsible for setting up and packing away. It is essential that schools place the development of fundamental movement skills high on their list of priorities and it is important to recognise that these skills are necessary for success-

ful participation in a wide range of sporting and recreational activities as well as in general life.

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Making meaning from multimedia

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Introduction

This paper is concerned with multimedia and how it might be used by young children to help make meaning of information. The presentation of this paper will be provided in a multimedia format, and will describe what multimedia is and how it might support young learners as well as present unique problems to them. However, whilst the presentation is essentially a visual and discursive affair, concentrating on young learners in particular, this paper provides a more formal and generalised account of the issues related to both the use of multimedia, especially in an educational context.

What is multimedia? It is a collection of different forms of media, interlinked to provide coherent access to information—so, a multimedia product (e.g. a game or a learning resource) would incorporate at least two forms of media (say, sound and animation). In many cases, multimedia products incorporate more than two forms of media—sound, animation, static images and text. Furthermore, multimedia products are usually provided on CD-ROM.

At a fundamental level at least, multimedia provides a simple means of communication but since multimedia is different in construction to conventional media, it is likely to demand different ways of ‘reading’ it—that is, making meaning from it. It

might appear that information conveyed by multimedia should be easier to 'read' than the same information conveyed by other means, simply because the information can be encoded in multiple ways—by sound, animation, static images and text. By encoding information in these ways, particularly in a combination of these ways (e.g. so that information might be read, heard and visualised by the reader, perhaps simultaneously), it is possible to provide maximum support to the reader in the decoding process. So, for example, readers who are visually literate might choose to 'read' the information using a series of visual metaphors provided; others might choose to make meaning from reading conventional text, whilst it might also be possible to listen to the same text being read aloud by a human voice. Moreover, it is also thought by some cognitive psychologists that by enabling the reader to have access to two different media forms of the same information (e.g. sound and text) at the same time, the decoding process is made easier (Penney, 1989).

Communication, instruction and knowledge

Whilst multimedia is simply and fundamentally about providing good, effective, communication, much of the research currently being conducted into its use is concerned with identifying the rules that need to be established for this communication. Many of the guidelines or rules already identified and currently applied in educational multimedia derive from attempts in instructional psychology, and particularly the work of Glaser, to provide prescriptive principles of instruction (Glaser, 1987). At the same time others criticise attempts to provide the "prescriptive principles that can guide the design of instructional techniques and materials" (Glaser, 1987, vii), indicating that instructional prescriptions are and will always be elusive (Laurillard, 1993); that, in trying to provide good communication and good instruction, we must turn away from seeking to describe rules and principles and look towards describing interactions—the interactions between the instruction, the learner and the information. In this sense, effective educational multimedia must seek to facilitate interactions between these things—making it easier for young learners to get access to information and to be supported in making meaning from that information.

In the practice of evaluating multimedia it is comparatively easy to recognise what is good—what is good instruction or good communication—but it is much harder to identify what makes that instruction good or that communication effective. It is harder still to take what we think are effective attributes of instruction and communication inherent in the use of one multimedia product and successfully apply them to a different context and a different product. Indeed, it can be argued that when we

get multimedia design wrong, we often get it badly wrong—some of the more serious problems with multimedia products include, on the part of the user, disorientation (difficulty of knowing where one is); navigation inefficiency (difficulty in moving from point to point); and cognitive overload (exposure to an amount of information that exceeds that required).

These problems are ones facing instructional designers for all forms of multimedia. Certainly there are standard and recognised ways of reducing the impact of such problems (e.g. using metaphor to provide meaning and a sense of place) but there remain fundamental issues to be faced in this context. For example, there has been a tendency for multimedia products to be big—in concept, in design, in the amount of information conveyed. But in fact, it may be that encyclopedia and such large scale knowledge or informational systems are not well-suited to multimedia, and that topics with a limited yet clear focus are—such as an interactive reading book. Communication and instruction are more likely to succeed when the topic focus is clear, when the boundaries of the topic are well established and when the information structures of the topic are apparent.

Multimedia for all

Multimedia is different to print and other media—the combination of media allows the communication of whole concepts, whilst ‘hyper’ structures to multimedia facilitate creation of complex networks of information—what might be called ‘information clusters’. One of the challenges in multimedia is to provide the means to navigate these clusters, to provide meaningful pathways through multimedia information-bases. This challenge is perhaps manageable, although no means easy, when dealing with a definitive, static and readily defined amount of material—the situation we have, for example, when producing multimedia on CD-ROM. This challenge is much less manageable when dealing with dynamic information bases, changing information structures and information that is forever growing—the situation we have, for example, when dealing with on-line multimedia, now available to us through the use of networked systems such as the World Wide Web provided on the Internet.

Research and educational multimedia

One of the primary functions of instruction is to promote and guide active mental processing on the part of the student. Dickinson, (in Wild, et al., 1994), describes the sort of mental processing that multimedia might invoke, suggesting that there are probably certain characteristics of multimedia that lead to higher levels of cognitive activity on the part of the learner. Oliver, (in Wild, et al., 1994), reflects a similar sentiment, suggesting that the structures of hypermedia actually mimic at least one type of cognitive processing that learners undertake naturally, thereby making learning more efficient. It is clear, however, that we need to do more research into the effects of multimedia use and into the responses of learners to various instructional forms of multimedia. For example, we need to begin to describe what the criteria are in designing multimedia that allow and stimulate higher-order mental activities on the part of learners.

Conclusion

Multimedia currently represents a somewhat strange and uncharted territory. We have still yet to establish the most appropriate topics and designs of multimedia and to provide the tasks to which multimedia is most suited. We also need to be aware that in a culture that is still dominated by the print media, we probably need to develop new ways of thinking about and evaluating multimedia before we get anywhere near to employing multimedia to the best effect. Just as the novel wasn't envisaged at the beginning of the print revolution in the sixteenth century, so we can't possibly yet know the most pervasive forms of multimedia in education or in society more generally.

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*Environmental activities:
Starting young children on
the road to a lifelong interest*

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Raising children's awareness

Listen to the dewdrops and the stars far away.
Can you listen? Can you listen?
Listen to the dewdrops and the stars far away.
Can you listen?

(Written by a six year old girl). Fortson & Reiff (1995), p.2.

Environmental education is a process which develops awareness, knowledge and understanding of the environment, positive and balanced attitudes towards it and skills which will enable students to participate in determining the quality of the environment. Johnston, (1994).

The above statement covers the three aspects of concepts, skills and attitudes which teachers need to consider when planning activities for young children. These aspects can be readily developed through the medium of environmental studies- even in the early years. Not only can they be developed but educators should see the importance of future generations having the skills and desire to make sound environmental decisions and to behave in ways that safe-guard the natural world.

Any teacher of young children knows they are fascinated by the world around them, eager to explore, discover, touch, investigate and talk about their experiences. Educators also know that it is in the early years that attitudes of caring, nurturing, concern, and responsibility are initiated and can be readily fostered. Problem-solving skills and strategies begin to take shape during early childhood and therefore the earlier we begin to introduce children to caring for the environment the greater likelihood of producing an environmentally aware and educated society. As Peter Garrett (1991, p. 5) says,

pre-school children are naturally curious about the natural world. The child's immediate environment provides important early learning experiences. The smell of plants and flowers, the texture of soil and animals and the sound of the wind and rain hold endless fascination for young children. Environmental education for pre-schoolers can harness and extend this naturally occurring process.

If we accept our responsibility to extend and enrich young children's understanding of our world we must ensure that the experiences we offer them are meaningful, worthwhile and child-appropriate. If our aim is to educate children to be informed decision makers who act positively for the environment we should encourage and develop a strong knowledge base about the environment in ways that will further their innate interest and foster an early empowerment- that individuals can make a difference.

Any environmental education program is seen by Murdoch (1992) as having three characteristics. It should be

1. in the environment;
2. about the environment;
3. for the environment.

For teachers of young children the implications are that young children must have direct experiences with their environment to focus the idea that it is a place of learning and enjoyment. Teachers must also plan what they want children to know about the environment, and children must have opportunities to use their knowledge constructively. This latter point will, naturally, be at a simple level for young children.

Factors relevant to the developmental characteristics of young children must be considered in the planning of any learning experiences. Those that impact on environmental work include the importance of the senses to young children's learning. Their awareness is raised through touch, smell, sight and hearing- and sometimes taste! Just talking about rain is nothing like feeling raindrops on your face, watching raindrops roll down the window pane, drinking rain water... The need to provide

children with sensory encounters means often an unplanned event triggers the experience. A sudden cloudburst, a torrent of hailstones, a mother bird seen feeding her baby, a lizard slithering across the playground, can all cause a spurt of interest, a discussion, a story, incidental teaching. As Fortson and Reiff (1995, p.11) say, "a teacher's question or comment can heighten awareness, challenge powers of observing and thinking and stimulate a desire to find out more."

Young children are immensely interested in their immediate surroundings. Field trips do not have to involve a day visit to a distant area- there is enormous potential for exploring the school grounds which can happen without all the involvement of organising and planning a trip to a remote venue. The role of the teacher is to awaken children's interest in the everyday, the common, the easily recognised- those objects that have familiarity but about which only surface knowledge, if that, is known. Consider collecting fallen leaves and comparing them, studying the flowers of the school ground, the mini beasts in the leaf litter, the weather patterns over a term, the amount of rubbish thrown away...

The science skill of observing can be readily developed through environmental activities. The provision of magnifying glasses, collecting jars, and tape recorders can assist in focusing on natural objects to study details and extend understanding. The *simple science table* which contains a range of interesting natural objects, changed regularly, and displayed well, can attract children and encourage them ask questions and share ideas.

Providing children with real objects and experiences is essential. The opportunity to manipulate, pull apart, match and test are necessary if children are to use all their burgeoning skills and developing understandings. If, at times, direct experiences cannot be carried out then teachers should consider using drama, music, literature and picture talks to initiate interest and learning. Environmental activities for young children should start from their natural interests, awareness and curiosity and be based on helping them know and understand the surrounding world. The teacher must seize opportunities but also plan for learning encounters that promote sensory awakening, problem solving, questioning and the desire to learn more. Scientist Rachel Carson, writing in 1965, said:

If a child is to keep alive his inborn sense of wonder... he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.

You may be the person who, for a time, opens the eyes of a young child to the wonders of the natural world, and triggers a life time of interest and care in our environment.

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*Lessons from a Western
Australian pre-Primary
family literacy project*

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Introduction

In this paper we examine the concept of family literacy, which has been called “the buzzword of the last 10 years” (Auerbach, 1995) and we look at some related research. We then describe a family literacy project that is taking place in a Perth pre-primary centre which is attached to a PSP school.

What is family literacy?

Over the last few years, there has been a large amount of interest in the concept of family literacy with, in 1995, four publications on the subject by the International Reading Association. In addition to the two books *Family Literacy* and *A Survey of Family Literacy in the United States*, the April editions of the *Reading Teacher* and the *Journal of Reading* were themed issues on the topic. Further, here in Australia, the November 1994 issue of the *Australian Journal of Language and Literacy* was also devoted to family literacy.

So what do we mean by family literacy? The definition of the International Reading Association (Morrow, Paratore & Tracey, 1994) begins, “The term family literacy

describes a complex concept that has not been clearly defined...Family literacy encompasses the ways parents, children and extended family members use literacy at home and in their community". Examples of family literacy activities that are given in this definition include reading, writing, homework assignments and reading books to children, as well as activities which may be initiated by outside institutions and agencies that support the acquisition and development of school-like literacy behaviours. It is also acknowledged that family literacy activities occur within a social context and may reflect the ethnic, racial or cultural heritage of families.

What does research tell us about family literacy practices?

The origins of family literacy may be found in various areas of research. There is a wealth of research which shows a strong relationship between parents sharing books with their children and children's later literacy development (for example Bus, Ijzendoon & Pellegrini, 1995; Spreadbury, 1995; Wells, 1986). Hewison and Tizard (1980) claim that the results of their research in the UK show that parental help with reading was a better predictor of reading achievement than IQ and that this effect was independent of socio-economic status and the language of the home.

In *Ways with Words* (1983) Shirley Brice-Heath used ethnographic research to describe the literacy practices of communities in the US which she observed over a period of 9 years. She suggests that for the children in two of the communities, Tracton and Roadville, there was a mismatch between the literacy practices of the home and those of the school. This finding has been used in some cases to justify programs in which parents have been taught to use school-like activities at home.

However, the results of an extensive research project in Western Australia, which was designed to examine the literacy practices of schools and families from a range of communities (Breen et al., 1994), suggest that in Australia the picture is extremely complex. Analysis of 23 case-studies, which were not ethnographic, but based on interviews, observations and audio-tapes in homes and schools, showed that families were engaged in a wealth of literacy-related practices which were deeply embedded in the social fabric of everyday life. Compared to the rather limited set of literacy practices found in schools, there was evidence in the homes of a culturally diverse range of literacy practices. Further, there were differences between the similarity of home and school literacy practices within linguistic, cultural and socio-economic groups. Some low socio-economic families seemed to

engage in few school-like practices, but for other low socio-economic children the culture of the home was very similar to that of the school, with parents taking a great deal of interest in reading to their children, providing reading and writing instruction and taking them to museums and libraries. Findings were similar within cultural and linguistic groups. For example, the Kuhn family, from a low socio-economic SE Asian background engaged in many school-like literacy activities in the course of their religious practices, whilst in the Kha family from the same cultural background, the parents spoke little English and only the father had some reading and writing skills. Nevertheless, the parents in this family encouraged their children to work hard at school and their children were indeed progressing very well academically. It seems therefore that in Australia, it is inappropriate to construct parent education programs based on the premise that all parents within a low socio-economic community need to be initiated into the ways of the school.

What sorts of family literacy programs are there?

In regard to possible cultural mismatches between home and school, Cairney (1994) has asked whether we should take a deficit view of families and educate parents about the cultural practices which enable them to cope with the limited cultural and literacy practices of the school, or whether we should find ways to help schools recognise the cultural practices of the home and allow for better communication between the two. Many programs have been implemented in the US: in 1993 Nickse estimated that there were about 500 and more have begun recently. Auerbach (1995) describes how, as part of a grant awarded to her research group in 1986, she and her colleagues examined the family literacy programs in existence at that time. Many seemed to be based upon the deficit model in which illiteracy is seen to breed illiteracy, a “disease” which is transmitted from one generation to the next.

A different view of family literacy programs is taken by Harrison (1995). In his review of research he sees family literacy as being “all the literacy activities that occur in families”, and family literacy projects as “augmenting what is already there, rather than as filling a vacuum”. He describes several projects from the UK which involved partnerships between parents, teachers and other community members, all of which were apparently successful in increasing the frequency of parents reading to their children.

In the next part of the paper Sue describes the family literacy project which she initiated in her pre-primary centre. She subscribes to Harrison’s vision of family liter-

acy as a partnership between teachers and parents: "Today teachers acknowledge that the role of parents is crucial, and many actively support each parent's unique and valuable contribution to the partnership of developing his or her child's literacy" (Harrison, 1995, p. 234).

A family literacy program

Michael enjoyed the book. When I read the book the second time he asked me to change the characters to members of our family.

Enjoyed the book. Talked about how one feels left out, and the others are getting all the attention.

Talked about what nocturnal means.

Read it just about every day, Tom shows everybody his book and his Library Bag He thinks he is all grown up like his BrotheR.

These comments were written by parents whose pre-primary children participate in the I Love Books Club, which encourages parents to read and talk about books with their children. I believe that it is the interaction of teachers, parents and children in schools and homes which leads to Heath's (1991) statement that, "It has been the continued learning and creating of opportunities to expand with others what one has read through talk, action, and reflection that has formed the core of the sense of being literate since the classical era of Greek civilisation" (p.22).

I will explain how I identified a need for this project at the pre-primary level and how I obtained the materials and human resources to allow it to happen. My aim was to increase parents' awareness of ways in which they might, if they wished, support literacy development before and after children start school. I hoped that with this information, parents would be better equipped to become involved in their children's literacy development, by using a variety of activities they may not have known about before participating in the program.

The project took the form of a book borrowing system, which provides guidelines for parents to use before, during and after reading a book, in order to increase the involvement of child and parent and to enhance the child's language development and comprehension of text. This system is reinforced by a program in which I discuss with parents the importance of their involvement in their child's early literacy and how they can provide a reading role model at home. It also attempts to extend communication between the parents and myself.

Background to the project

In my work as a teacher in a WA pre-primary centre catering for 3, 4 and 5 year olds, I have been particularly interested in early intervention in the area of literacy and the potential for parental involvement. At the beginning of the project I had been at this pre-primary centre for 2 1/2 years. It is an off-site centre of a P.S.P. (Priority Schools Program) primary school with a high proportion of students who are identified as being disadvantaged. In 1994, approximately 32% of the children were from single parent families, 44% of the families were receiving welfare benefits, 16% of the children were of Aboriginal or Torres Strait Islander descent and 15% were from non-English speaking backgrounds. Many of the families live in Home-swast flats or houses and there is a high transiency rate. For several years, language and literacy have been identified as the main areas of need in the school and additional funding has been provided to address this need through extra teachers' assistants, incursions, excursions and books.

In 1995, I had become concerned about the high proportion of children enrolled at my centre who had speech and language problems, language delays or special language needs. There were 70 children enrolled; 10 turning 5 who attended 4 mornings a week and 60 turning 4 who attended 2 sessions a week.

What I found

Through parent interviews at the children's enrolment I had been able to identify those children who had English as a second language, those who were late to start speaking and those whose parents were concerned about their speech. At the initial interview I had asked a range of questions about each child and his or her development, including whether the child was interested in books and stories, knowledge of the primary colours, how many hours of T.V. were watched on average each day, what sort of things the child enjoyed doing and which languages were spoken at home.

I learned that many children had suffered from recurrent ear infections; several already had grommets; several had been receiving speech therapy or were waiting for treatment through Child Health and GP referrals. Some parents expressed concern about their child's speech; others claimed not to be concerned about it, but later, during the course of conversation, stated that other people had difficulty understanding their child.

Once the children began to attend the Centre I observed that many of them did not seem to communicate with adults or peers and they did not initiate conversation or participate in dramatic play. They appeared to lack confidence and spoke softly, if at all. Few children spoke in sentences and many were apparently unable to repeat a simple sentence or to follow more than the most basic instructions. Further, many appeared to have a limited vocabulary and were not able to name farm and wild animals and simple household items.

At storytime, when I read to the whole group, I noticed that some children displayed little interest and I was unable to maintain their attention on the story. Some appeared to be unfamiliar with handling books and had a very selective interest, or needed one-to-one attention from an adult to draw their attention to the pictures. After listening to a story, many seemed unable to answer questions about what had happened in the story, or to predict what might happen next, or what might happen if..... For example, when asked what Hairy MacClary was afraid of, John answered that he had a dog at home. Few children seemed to know the common nursery rhymes and classic fairy-tales by the time they entered pre-primary education.

For the children from non-English speaking backgrounds, the languages of home and school were very different. Those children who did not speak English were completely dependent upon the pictures in storybooks to give them clues as to the meaning of the text. It was difficult for them to maintain attention to the book, let alone follow the meaning of the text. Books in their mother tongue were not available at school and books in English or their mother tongue may not have been available at home.

The beginnings of the I Love Books Club

I decided to initiate a book borrowing system, whereby the children could regularly take home a book to share with their parents/carers. In order to ensure and increase interaction between parent/carer and child around the book, I thought it appropriate to provide parents with some suggestions and questions to refer to when reading the books. However, I didn't, as yet, have any books.

I encouraged and helped the parent committee to write an application to the Lotteries Commission for a grant to set up a borrowing library at the centre. We were able to apply for a maximum of \$1,200. The application was made in December and approved in the following February. The parent committee had changed by the time the grant was received. Nevertheless, the new parents were enthusiastic about the

books and offered their help. I was very grateful when one of the mothers offered to cover the books for me. She also tackled the task of cataloguing over 100 books with my assistant.

To select suitable books I obtained lists of suggestions from a speech pathologist and a book shop and I added my own favourites. I chose a range of culturally diverse books including cardboard picture books, non-text books, very simple stories, fairy-tales, poetry, non-fiction, books with tapes and more complex story-books. I needed to cater for a wide range of developmental levels in the 3 to 5 year age range. I also needed to budget for enough books for all 70 children to have a pool of books from which to choose.

I had no idea how I would manage to get questions or suggestions written specifically for the 100 books. This problem was solved for me by a lecturer from Edith Cowan University who was supervising a teaching practice student at my centre. She suggested that it would be an ideal project for her Graduate Diploma students.

Formulating the questions and suggestions for parents

The Graduate Diploma students interacted with, and read to children at my centre and at the on-site pre-primaries before formulating the questions and suggestions. This gave them an opportunity to assess the language skills of the children in our centres and to find out what sorts of things interested them during a book reading.

I wanted to use the books to provide opportunities for shared enjoyable experiences for parents and children. I hoped that the questions would help the children to: develop a knowledge of the characters, plot and sequence of events in a story; increase their vocabulary, awareness of print and text structure and, most importantly; relate events in books to their own lives. I suggested to the students that there should be two levels of questions, one for young children and one for those who were older or familiar with the book. In this way the parents could ask one set of questions to help the child think about and recall events in the book. The children's answers would indicate how well they had understood what was happening. The parents could then ask the more difficult questions after subsequent readings. In addition to helping their children relate items and events in the book to their own lives and environment I also hoped that the parents might become involved in activities which could extend and reinforce what had been learnt from the book.

After much discussion, redrafting and soul-searching about ways in which they could present their suggestions to parents in an appropriate format, the student teachers produced a range of questions and activities that I could not have anticipated! Their questions followed a before, during and after format and they often gave suggestions for follow-up activities such as cooking. Some even produced questions in other languages, translations and book readings on tape. The questions were typed and laminated and presented to me five months after having the grant approved.

Preparation for borrowing the books

I talked to the children about the I Love Books Club for a week, in preparation for the exciting day when they would finally take a book home. I sent home a note stressing the valuable role that parents or caregivers could play in literacy development, by reading and talking at home. Several mothers volunteered to sew library bags.

In order to help prepare the parents for the library books with the question/suggestion sheets I asked them to come in small groups 15 minutes before the end of the session on a specific day. I spoke to them about the importance of reading to their children and how they could help their children's developing language skills by asking questions and generally discussing a book. I stressed that what was important was to talk about the book, that even if the story was not read word for word it was still valuable to discuss what the child could see in the pictures. I stressed that the book could be read by a grandparent, aunt, uncle, neighbour, babysitter or sibling. I borrowed some books in Vietnamese and one in Spanish from an Intensive Language Centre and asked the school's Vietnamese assistant to translate my note and some of the questions. I asked parents from these and other non-English speaking backgrounds and two parents who had told me that they had not learnt to read, if they wanted to borrow books or taped stories. I encouraged them to talk about the pictures in the books, even if the text was too difficult for them or their child to understand.

I gave each child a folder, in which was to be recorded the title of the book that had been borrowed, the person who had read the book and comments by the reader. Inside this I stapled a piece of paper with three columns ruled: one to record the name of the book borrowed; one to record who participated in the book reading; and one for comments. I told the parents that their comments were important and that I was interested to know what they and their children thought of the book. I

also thought it important that the communication be a two-way process and accordingly I planned to reply whenever possible.

What happened

The response was wonderful! Parents came to tell me how much they had enjoyed reading the books and what pleasure they got from hearing the child answer questions such as, "What do you think invisible means?" Several parents said that they read the book more than once and the children were keen to tell me about the book that they had borrowed, remembering the title and characters.

Many children have wanted to change their book each session (and have) and some have wanted to keep the book longer and read it again. Some have asked for a particular book again a few weeks later. During the first 8 weeks the majority of children "read" or had read to them at least six books. The written parental feedback has been very valuable as a record of the progress of each child's interest, attention span and comprehension. It has also provided another channel of communication between parents and teacher. The non-reading parents have expressed enjoyment from listening to the taped stories with their children. Their children have been excited about borrowing, have been able to recall events and characters in the story and have been keen to borrow a tape every week. One child who has a non-reading parent takes her books and tapes to family daycare where her carer puts a lot of effort into reading to the four children in her charge and then sends me a detailed written report of the children's responses.

From comments recorded by parents, relatives and caregivers in the reading diary and the continued enthusiasm for books and borrowing, the program seems to have been successful in several ways.

The children have shown:

- increased interest in books;
- positive interest in books in the classroom;
- positive interest in taking books home;
- improved comprehension (they are better able to discuss events and characters);
- more attention at storytime;
- more frequent use of the book corner;

- more frequent role-play reading;
- more talk about books;
- enthusiasm to dictate stories about their drawings and paintings.

Many of the parents seem to:

- have a greater awareness of the importance of reading with young children;
- see themselves as reading role models;
- read more often to their child;
- have learnt more about their child through observation and conversation about books;
- have interactions with the teacher through oral and written responses;
- be more involved with their child through shared follow up activities;
- have improved self-esteem through being valued by the school;
- have gained pleasure from reading to their child or family group.

As the teacher, I have gained:

- closer relationships with parents;
- more knowledge about reading strategies and the value of books and parental involvement;
- job satisfaction.

Although the I Love Books Club has only been recently established, the early results of this program seem to be similar to those achieved by family literacy programs in the United States and the United Kingdom. My observations are not quantifiable hard data, but have certainly justified to me the importance of teachers nurturing the very important contribution that parents make to their children's literacy development and the pleasure to be gained by parent and child in the process. Hopefully, by continuing to foster their children's interest in books and reading, these parents will increase their children's potential to become successful and enthusiastic readers.

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Accreditation standards for Child Care Centres

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Do accreditation standards for child care centres ensure children with special needs are included?

Accreditation in Child Care (National Childcare Accreditation Council, 1993) is designed to improve the quality of services delivered to children and families. This paper will examine how the Accreditation standards relate to quality Child Care for children with special needs and their families. It is argued that the child care industry has a wonderful opportunity to demonstrate high quality care for children with special needs because of the flexibility and individualised planning approach demonstrated throughout the document. However, the overall impact of the document serves to reinforce existing stereotypes that place children with special needs on the periphery of community and neighbourhood services.

Before beginning the discussion it is necessary to pause to define what I mean by 'children with special needs'. One could argue that all children have special needs of one kind or another however, for the purposes of this discussion, children with special needs will be used to refer to those children who have disabilities. Children from non-English speaking backgrounds, Aboriginal and Torres Strait Islander children and talented or gifted children could also be defined as children with special needs but will not be included in this discussion.

Our beliefs and values about disability influence the way in which we plan and deliver services. Services offered to children in the past reflected the belief that a disability meant an absence of an ability to learn. Children were physically cared for and expected to perform hard labour. There were even many institutions where physical care was minimal because disability was perceived to lessen humanity. For example, institutions for children with disabilities up until recent years were built with 'abuse-resistant' materials because children were expected to behave like untamed animals (Wolfensberger, 1975).

Today, with our concern for issues of human rights, there is a recognition that people with disabilities are people too who should therefore have the same rights as other people in the community (Fullagar & Hardaker, 1993). For children, this means the right to use usual community support services such as child care. The normalisation and Social Role Valorisation Principles popularised by Wolfensberger (1980, 1991) provide an ideological basis for much of today's service delivery models.

As we all know, being in a community and neighbourhood service does not guarantee that children with special needs will be the recipients of quality service. Stainback and Stainback (1990, 1992) and Stainback, Stainback and Forrest (1989) discuss three levels of service delivery and clearly identify only the last as quality service provision:

Mainstreaming. Placement in a community-based service alone will meet the needs of children with special needs

Integration. Services need some modification to ensure integration. Children with special needs require active assistance to be involved in activities and routines.

Inclusion. Services are planned to reflect the diversity and difference that exists in each community. There is no need to plan how to adapt the programme to include anyone, as no-one is left out from the beginning. Difference and diversity are a valued part of all communities and services reflect this.

An integration model assumes that staff offer a quality programme to children who function within a 'normal' range (for ability, for ethnicity, for any type of difference) and that any difference outside of that range requires specialisation. Our attitudes towards difference...

...derive from the Platonic notion that goodness, truth and beauty are related to each other, and that deviations from norms (truth) are "errors" that, by analogy, must be related to evil and ugliness. (Wolfensberger, 1975; p 3)

We see children with special needs as deviant, and feel that in order to handle deviance within a 'normal' setting we need specialist support. We often think of that support as another adult such as a teacher's aide, although it can, of course be a range of other options such as specialist advice or specialised equipment. We also assume that the more support offered, the better the quality of the programme. I believe it is most unfortunate that the Accreditation principle specifically relating to children with special needs (National Childcare Accreditation Council, 1993; Principle 32, p 84-85) should reflect that assumption. It states that whilst good quality service requires the provision of necessary resources, high quality service requires resource people to be consulted regularly to revise and update planning for children with special needs. This implies that staff in child care can not provide a high quality service in this area; they need to call in experts to assist.

I am not arguing that it is inappropriate to use specialist advice (for example to receive training from the physiotherapist on how to position this particular child who has cerebral palsy is entirely appropriate and necessary). It is not appropriate, however, (nor, I believe, an indicator of a quality programme) for the planning for children with special needs to be undertaken by a resource person rather than the staff member running the group. The staff member running the group knows when it is the most appropriate time of the day for a child to stand in a standing frame (which the expert has provided along with training on how to use it and recommendations on how long the child should use it every day). The staff member knows when it would be most appropriate to offer a child a range of movement opportunities (which have been provided by the specialist who has trained the staff in implementation). The requirement for staff in high quality programmes to use resource people more extensively is disempowering and I see it as a major barrier to improving professionalism in the industry. I also see it as a major barrier to improving service delivery in Child Care to children with special needs as it implies the children's needs can only be addressed when the expert is present. As this can not possibly be all day every day, there must, therefore, be times when children with special needs attending the centre are not having their needs addressed at all. This is an huge waste of available learning opportunities and, to me, reflects a level of service delivery more appropriately labelled 'mainstreaming'.

Mainstreaming, according to the earlier definition given assumes that it is sufficient for children with special needs to be in community and neighbourhood services. It assumes that it is not the responsibility of staff in those services to offer any special learning opportunities to children with special needs or to take account of any additional or special needs the children might have beyond 'managing' them from day to day. Proponents of mainstreaming suggest either that children with special needs will learn incidentally—just by being there—(which is clearly not the case; for

example, Guralnick, 1990; Odom, McConnell & McEvoy, 1992), or that they will not learn at all and that does not matter. I consider it most unfortunate that centres can receive an acceptable accreditation rating whilst offering this level of service to children with special needs. The basic level of accreditation (National Childcare Accreditation Council, 1993; Principle 32, pp 84-85) requires that children with special needs are accepted into a centre but are not provided with any individualised programming. There is no emphasis on including any learning experiences for children with special needs in the programme nor are there any attempts to facilitate their interaction with the other children in the group. In contrast, children without special needs in child care will receive developmentally appropriate experiences in a range of areas as this is required in the core principles (for example Principles 17 to 23). If the needs of children with special needs were addressed under these core principles then the requirements of Principle 32 would be achieved at the quality level. The fact that Principle 32 offers such a powerful contradiction to the other principles suggests that the National Childcare Accreditation Council never perceived that children with special needs would be considered under any principle other than Principle 32.

It seems to me that the Accreditation document is suggesting that it is acceptable for children with special needs to be in services but that it is not necessary for staff and centres to make any effort to meet their needs. Only high quality centres will attempt to do so, and they will do this by calling in outside resource people, not by their own efforts. This emphasises the difference between children with special needs and children without special needs. It implies that diversity and difference are something unfamiliar, something that needs to be avoided rather than something to be openly embraced. I believe child care can potentially provide quality programmes for children with special needs and is in an ideal situation to do just that, so it is unfortunate that the value placed on diversity and difference by Principle 32 does not convey this message.

I will now examine just what I believe is special about child care that places it in the position of being able to offer an ideal environment for children with special needs. Programming in child care is focused on the level of individual development and individual needs. There is a great amount of flexibility to enable children to work on a wide range of developmental learning goals within a range of activities at any one time. The role of adults in child care is also flexible and adults can combine roles such as developing shared meanings with individual children with overall group management and act as the provider and facilitator of quality physical and social environments with ease.

Developing a quality programme for all children is a four-step process: assessment, goal-setting, implementation and evaluation as I have described elsewhere (Sims, 1995). I will now examine each of those steps briefly and relate each step to the standards set out in the Quality Improvement and Accreditation Handbook (National Childcare Accreditation Council, 1993). In doing this I am arguing that quality programmes for children with special needs are quality programmes for all children; children with special needs do not need a different approach than other children, they simply need professionals who are good at providing quality services for all children.

Assessment is what staff do to find out what children do in the environments in which they participate. I remember in years past ticking off items on a checklist and believing that I was 'doing good assessment'. I found, though, that knowing that Johnny can stack three blocks for example, didn't assist me much. I set out blocks for Johnny only to find that Johnny didn't like block play nor could he stack three blocks of the type we had available. I learned useful assessment is not an abstract "what the child can do"; it must be an applied, realistic "what the child does in this environment under normal, daily circumstances".

Beaty (1994) argues that assessment information is best collected in a variety of ways to create a rounded picture of the child participating in his or her usual environments. The kinds of information that may be collected in an assessment portfolio are: samples of children's art work; records of their favourite books and songs; observations of interactions with other children and with materials and routines; tape recordings of language; photos of children; observations of their interests, friends, favourite activities and foods; and observations of their handling of emotions. After all this information is available, staff may decide they have a particular need for a checklist or a part of a checklist for a specific child. However, they may find it more useful to summarise the child's development in another way.

All children have an easily accessible file of up-to-date assessment information, (children with special needs are part of the all children) and information is added to this file regularly. Staff who collect quality assessment information on all children will be collecting quality information on a child with special needs. It does not take a specialist to observe that Johnny can not step over the lip of the sandpit because of his leg braces, or that Freda can not get to the block corner independently because there isn't a clear route around the walls she can trail and she is not sufficiently confident to strike out across open spaces.

Assessment is addressed in Principle 17 of the Accreditation document Handbook (National Childcare Accreditation Council, 1993; p 40). Principle 17 states:

The program incorporates learning experiences appropriate for each child, as indicated by individual development records maintained by the staff.

This is a core principle (core principle means for centres to achieve the lowest level of accreditation they must demonstrate good quality in relation to their assessment process). Good quality in Principle 17 requires:

Developmental records are maintained and used as a basis for planning learning experiences for all children as individuals. (National Childcare Accreditation Council, 1993; p40)

This is exactly what I have just been talking about. You can see that this good quality standard therefore meets my requirements for quality service delivery to children with special needs. The next level, a high quality standard, (comprehensive developmental records, and records that identify progress) improves the assessment process for all children and makes planning easier.

Now we know how children are functioning in the child care environment, the next step in quality programming for children with special needs involves setting individual learning goals. There is no specific principle in the Accreditation document that requires individual learning goals in child care programmes. However the principle I have just been discussing, Principle 17, implies that such individual learning goals exist. The discussion on Principle 17 says "...learning experiences planned for individual children..." (National Childcare Accreditation Council, 1993; p40). This suggests to me that, as learning experiences are required at an individual level, there must be individual learning needs identified.

Children function across a range of environments: the child care programme, the home environment, and perhaps Sunday School, grandparents' house, friends' houses, and so on. Learning in any one of these areas needs to be generalised into the other areas. If Johnny learns to go to the toilet at the centre, he also needs to be able to transfer that learning to his home, his grandparents' house, etc. We assume that children without special needs generalise their learning automatically across these different environments. Unfortunately, much of the context specific training of children with special needs by past generations tended to inhibit the generalisation of skills. This training did emphasise, however, the importance of involving people from those other environments in the learning planned for children (Harbin, 1993) in order to assist the generalisation of skills. Generalisation does not require an exact duplication of learning opportunities across environments (after all, every home can not have a child-sized toilet) but it is important that learning goals are valued and supported by all the environments in which children participate. This creates strong links between different environments which serve to enhance chil-

dren's development (Bronfenbrenner 1979). Thus quality programmes for children with special needs involve other people in the goal-setting process. At the very least parents are involved. If children participate in other environments then people from these need to be involved as well. If Johnny goes to grandmother's house every second weekend and stays overnight, then it is appropriate to involve grandmother in goal-setting. However, if Johnny visits grandmother perhaps once a month for an hour or so in the company of his parents then it may not appropriate to involve grandmother unless the parents specifically request this.

Involving a team of people in setting individual learning goals for children is always a complex process of negotiation. Meetings between those involved are essential. These meetings aim to create a set of mutually-agreed, learning goals for the child (usually referred to as the IEP - Individualised Education Plan, the IPP - Individualised Programme Plan or the IDP - Individualised Developmental Plan). Such meetings are not required in the Accreditation standards but Accreditation does require that staff regularly discuss children's development with their parents (National Childcare Accreditation Council, 1993; Principle 11, p 33). The Good Quality standard requires that this interaction be private and confidential, and the preamble to the Principle suggests that meetings need to be more frequent if children have special needs. Thus, quality service delivery for children with special needs is achievable within the parameters set by the Accreditation standards for child care. Principle 11 defines the need for parent/staff interaction specifically aimed at discussing children's development. Determining learning goals is a logical outcome of this discussion.

Now that we have developed goals for all children, it is necessary to use them to plan a programme. Individual needs of all children in the group (children with and without special needs) are incorporated into an overall group plan which provides opportunities for learning (independent, discovery learning and scaffolded, interactive learning). Learning opportunities will be maximised if children are free to choose to participate in activities provided (Bricker & Woods Cripe, 1992); the skill is in providing activities that you know (from your assessment) children will choose to play, and in playing, practise the skills you have targeted. This need for choice and self-initiated play is reflected in Principle 18 of the Accreditation document (National Childcare Accreditation Council, 1993; p 41). Staff need to know from their programme plan which children need to be left alone to explore particular activities, and which children need what kind of scaffolding at particular activities.

Activities provided for all children are appropriate for children with special needs; the learning opportunities arising out of activities depend on how the activities are used. Playdough can provide one child with a tactile experience, another with grip-

strengthening exercise, another with practice at using a knife, another with dramatic play experiences and another with language (as s/he asks for tools to be passed and participates in conversation). For children to actually experience their specifically targeted learning goals staff's ability to interact with them whilst playing at the playdough table is as important as the actual utensils and implements available at the table. Programming for learning includes not only the provision of activities but the interactions that take place during activities.

Professional caregivers evaluate the service they offer. There are three levels of evaluation (Bricker and Woods Cripe, 1992): the regular, ongoing evaluation that is used to help plan next week's programme, the medium-term evaluation that determines if learning goals need modification, and the longer-term programme/service level evaluation. The first two of these levels is addressed in the Accreditation document in Principle 33 (National Childcare Accreditation Council, 1993; p 86).

Good Quality requires that evaluation occurs regularly, is related to the goals of the centre and focuses on the children's short-term objectives (i.e. medium-term evaluation using the Bricker and Woods Cripe scheme). High Quality requires that the results of evaluation are used to inform further planning for children (regular, ongoing evaluation), and that evaluation focuses both on outcomes for individual children and the group. A high quality accreditation rating would ensure that the evaluation of planning for children with special needs would adequately inform programme development.

Including children with special needs in the school system faces problems not present in child care, particularly in relation to adaptation of the curriculum (Slee, 1993). This is because child care has a focus on individualised planning with individualised outcomes for all children. There is not a set curriculum for all children of the same age. Child care professionals therefore have a wonderful opportunity to develop a model of service delivery that is responsive to diversity and difference. The Accreditation document can be seen as a framework, encouraging and supporting this. High quality child care services are those in which:

- staff observe and collect information on all children;
- individual learning goals are set for all children;
- developmentally appropriate activities are offered for all children;
- staff interact with the children in a way to facilitate their learning;
- parents are actively involved in their children's learning;
- on-going evaluation always ensures that the best possible service is being offered to children and families at all times.

The processes are in place in the Accreditation document to successfully include all children, irrespective of how different their needs are.

To ensure the same quality standard of care is offered to children with special needs as to other children, Principle 32 needs to be rewritten. Principle 32 needs only to focus on equal access to, and participation in, child care for all children. Within Principle 32 it can be stated that the same standard of care then applies to children with special needs as to all other children (and that these standards are addressed in the principles set out in the Accreditation document). As services become more skilled in achieving these appropriate quality standards for all children, the child care industry will contribute to the goal of advancing "...the status of Australians with disabilities, where they are generally accepted as valued and respected fellow humans, for their own sake..." (Leipoldt, 1993; p 13).

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