

**Title of Paper: *Playing With Life: Ways of Fostering Environmental Education in the Early Years***

**Paper originally prepared for  
*Educating for a Better World: Vision to Action*  
WEF 40<sup>th</sup> International Conference, Jan 1999  
Launceston, Tasmania  
(minor revisions May 2006)**

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**Abstract**

This paper discusses the importance of environmental education for young children. In particular, it examines the imperative of ensuring opportunities for outdoor play and the development and enhancement of appropriate play spaces for children, in order for them to learn the necessary attitudes and values, knowledge and actions needed to become 'stewards of the earth'. It also looks at a number of projects, in childcare settings and in schools, where parents, teachers and the wider community are working together, with and for children, to envision and implement healthy and sustainable social and physical environments. The concepts of 'health promoting schools' and 'learnsourcing' will be examined.

There is also be discussion of the role of collegial networks in bringing together teachers, parents and others with a strong interest in early childhood environmental education Networks provide opportunities for sharing, supporting and providing impetus for infusing environmental/ sustainability principles into early childhood teaching practices.

**Introduction**

The final years of the twentieth century are a period of increasing uncertainty, instability and rapid change, with mounting concern regarding the consequences of 'development' that continues to ignore or marginalise natural systems. Ultimately it is children, with the biggest stake in the future who will bear the consequences of economic, social and environmental decisions and actions that are currently being made or avoided. One of the greatest tasks of society should be to equip children with the attitudes, values, knowledge and skills necessary to rethink and change current patterns of action and to secure healthy, just and sustainable futures for all (Davis & Cooke, 1998). Environmental education - or education for sustainability as it is increasingly being called - is vitally important for this. Yet, for children in their early years, there has been a major absence from curriculum theory, policy and practice of approaches that overtly foreground long-term environmental perspectives. There is growing recognition and a sense of increasing urgency for children to have 'intractable

involvement' with nature (Hart, 1997; Nabhan & Trimble, 1994; Rivkin, 1995; Suzuki, 1997) as a starting point for developing ideas and actions for sustainable living. Additionally, there is increasing understanding that environmental education needs to be explicitly incorporated into educational programming for children so that they can develop the understandings, values and actions that ensure they become 'stewards of the earth'.

This paper reports on three environmental education project in settings for young children - one is a long day care centre, the other two are primary schools. In each of these settings, educators are actively working to 'make a difference'. Additionally, this paper discusses the value of informal professional networking to raise awareness for environmental education amongst early childhood educators. Networking is seen as having enormous potential for furthering interest in, and advocacy for, environmental education in the early childhood years.

### **Environmental Education for Young Children**

The natural and social systems on which all our lives depend are under threat from human activity as we go about our daily business. We are all ultimately endorsing the poisoning of the environment, the exhaustion of limited resources and the creation of inequitable social relations, through current decisions and lifestyles. Our endless desires for more, for bigger, for growth, coupled with the addition of around ninety million people annually to the world's population, are seriously diminishing the finite resources of the earth, the capacity of the earth to repair, and our capacity for social and environmental justice between people and between generations. We are all responsible for the ecological and social problems that are now part of life on earth. In truth, children are already colonised by exploitative ideas and practices towards each other and the environment. Even in the pre-school years, children are learning to be avid consumers, placing high value on the ownership of the 'right' goods and fashion 'labels' and increasingly seeking to be 'entertained' by their toys, TVs, computers and even the adults around them, rather than learning to be imaginative, self-reliant and resourceful.

We need new ways of doing things that break from existing destructive patterns and which reconnect us to each other and with the earth. We need social processes that look more to the long term, that are about connections and reconnections between people and between people and nature. How do we reorient to this world view? How do we let go of old models? It is our current dated worldview that is a major impediment to a post-materialist world which embraces stewardship of the earth and the needs of future generations. Environmental education is essential in order to change this 'defective worldview that is constantly creating the social world and progressively destroying the natural one' (Slaughter, 1996, p.677).

There is an acknowledged role for education (Lowe, 1998; Slaughter, 1996; Suzuki, 1997) to help make the break from current and past models that maintain short term, fragmentary thinking. Education needs to be transformative to overcome the patterns and lifestyles that support exploitative relationships between people, between people and the natural environment and between current and future generations. Education for sustainability needs to be an essential component in all levels of education *now* if we are to give children the knowledge, skills, strategies and values to ensure sustainability. Environmental education, with its focus on democratic, integrated, interdisciplinary - indeed transdisciplinary approaches (Fien, 1993; Tilbury, 1995; UNESCO, 1997) - has the potential to deliver this kind of education. However, education and schooling have developed as part of the dominant worldview and, indeed, help perpetuate it. We need changes in education that make a break with the past and make it more responsive to the challenges ahead.

What does this mean for those of us who live with, work with and care about the lives of children, both now and in the future? Whilst amongst environmental educators the need for environmental education/ education for sustainability is blatantly apparent, there continues though, to be a major absence within mainstream education, from early childhood through to the tertiary level, of curriculum approaches, theory, policy and practice that overtly foreground environmental perspectives. However, at least conceptually, some of these ideas are beginning to be considered. Embedding environmentalism into education though is more than tinkering with programs. Environmental education challenges the 'status quo' - the 'usual way of doing things - and implies real reform and innovation.

Obviously, we cannot expect children to be fixing things up now but neither must they be left with the legacy of current problems to fix up 'in the future'. As we are all responsible for the ecological and social problems that are part of life on earth, we must all be part of finding sustainable solutions. Children need adults - their parents, teachers indeed the wider community, to work with them *together* in learning to seek sustainable solutions to problems, to become action-oriented for change, and to respond to and recognise the vital importance of our 'place in nature'.

### **Importance of Outdoor Play and Play Spaces for Environmental Learning**

One vital facet for reform relates to outdoor play and learning and the need for children to have 'intractable involvement' with nature in the company of adults who are informed and caring about the natural world (Hart, 1997:19). Unfortunately opportunities for this are rapidly diminishing as over half of all people throughout the world now live in cities, with the largest growth in urbanisation occurring in 'developing' countries. In much of this urban living, there are profound schisms between human beings and nature. City habitats are 'radically diminished biologically'. Opportunities for connecting with other species are often highly contrived and constrained - such as gardening, keeping pets, visiting zoos or having the Mobile Animal Nursery visit the local kindergarten for nature experiences (Nabhan & Trimble, 1994; Suzuki,1997). Further, the view that children intrinsically have a closer, more caring relationship to nature is easily debunked by observation. Contact with nature alone is not sufficient as anyone knows who has seen children 'playing' with (capturing and torturing!) lizards or frogs, stoning fish in the local creek or pulling off the only bloom on the bush. Not only does urbanisation distance us from nature, but it encourages humans to believe that we are no longer subject to the same requirements as other life forms. This makes us contemptuous of the life support systems of the earth; to view natural elements as simply potential resources for our own use; to use the air, water, soil as sewers; and to ignore the loss of other species as having no relevance at all for humans.

Hart (1997) states "We need to find ways for children to observe, imitate, talk with, and walk alongside adults who actively demonstrate knowledge of, and caring for, the environment" (p.19). Adults, too, need to *deeply* understand that we are "stewards of the earth" and to educate children explicitly for this. In all early education settings, and schools, there needs to be a recommitment to outdoor play and learning in 'natural' settings, not just for the well recognised benefits in developing children's physical, social, emotional, cognitive and communication skills, or for utilising the outdoors as a source of ideas, inspiration and materials for the creative arts. There are significant environmental lessons to be learned about sharing nature with other species, nurturing plants and animals that share habitats with us, and taking responsibility for maintaining and protecting non-human elements. Maximising opportunities for playing outdoors, experiencing and exploring the world of nature help provide children with an awareness of the interrelationships that exist among all living things

and assist in overcoming the belief that humans are ‘separate from’ rather than ‘a part of’ the world of nature (Wilson, 1994:5). Additionally, children can learn to be ‘environmental activists’ in their familiar ‘habitats’. They can learn sustainable practices through gardening, composting, repairing erosion spots and adopting water use minimisation routines. They can extend these outdoor practices in conservation by also engaging in energy efficient practices, waste recycling and waste reduction in the indoors, too. Children, with their teachers and carers, can learn to become resource conservers rather than resource consumers.

The issue of outdoor play goes far beyond the provision of quality programs that encourage children to play outside, however. In some situations, ‘natural’ play settings barely exist at all. In some childcare centres, where children may spend more time before starting school than in their entire primary and secondary schooling, attention to the playgrounds comes as a last priority, and some centres have virtually no access to natural elements at all! The increasingly litigious nature of our society is further limiting outdoor activity. Rather than letting children visit ‘the great outdoors’ beyond the confines of the centre, teachers, carers and policy makers are *acting safe* and avoiding these outdoor experiences altogether, rather than seeking safe and precautionary ways to expand children’s experiences.

These proscriptions are not happening just within the education field. Many places for outdoor exploration have already gone, are fast disappearing or have become too dangerous in our cities and suburbs. Parents are fearful of letting their children play in the local parks, creeks and bushland concerned that children will step on glass or discarded syringes, taken by abductors or knocked down by cars. When coupled with the fact that children are increasingly being offered play alternatives that encourage indoor, sedentary behaviors (TV and video, computer, Nintendo and Sega) or outdoor play that is highly organised and supervised (football for the under fives) concerns about children’s lack of positive experiences with nature become very real. As Dighe (1993: 62) says “one can hardly imagine a generation of persons with neither interest in nor knowledge of the outdoors making responsible decisions regarding the environment”.

Children need both educational and community settings where they can explore and get dirty, touch living plants, care for and learn about insects, fish, birds, worms and spiders. They, and their parents and caregivers, need places where they can meet, make friends and interact informally. We adults need to advocate for children’s right to play outside by insisting that schools and centres create and utilise inviting outdoor play and learning environments; that urban developments ‘calm’ traffic; that communities protect green spaces, and that these are safe and accessible. We all need to help create safe and inclusive communities.

### **Exemplary Projects in Environmental Education with/for Children**

While it is relatively easy to talk about what is needed to move us towards sustainability, it is another matter to suggest how this might actually occur, and quite another again to make changes that do ‘make a difference’. Following are overviews of three projects in educational settings, which highlight the efforts of children, teachers/carers, parents and the community in creating social and ecological outdoor environments that are intrinsically interesting for play and learning. In each of these settings, children are provided with diverse opportunities to interact with nature, while at the same time, being encouraged to develop ideas and competence in taking actions that support sustainable living.

#### **1. *Sustainability in a child care centre***

This project was developed in 1997 in a long day care centre, catering for children aged 15 months to around six years. The centre is situated within the leafy grounds of a Brisbane university. The project was created, initially, as a staff team-building exercise with the focus, *Sustainable Planet*, growing from the needs of staff seeking greater complementarity between their personal and working lives. A shared interest for staff was ‘the environment’ which led to individual staff members ‘adding value’ to their work as teachers and carers by including their personal interests of gardening, wildlife conservation and recycling in their day-to-day work at the centre. The resultant *Sustainable Planet* Project involved staff members working on smaller self-selected sub-projects leading, in particular, to the enhancement of the children’s outdoor playspaces. Initially, this included the establishment of permaculture gardening, planning for a frog pond, improving waste management and water conservation strategies, regenerating the ‘rainforest’ and suspending colourful, aesthetic ‘hangings’ from trees and structures.

Not only has the outdoor environment of the centre benefited from the project. Inside the buildings, office practices have been changed to minimise paper wastage and to increase materials reuse. Office records and document drafts are now copied onto ‘used’ paper. Centre staff instigated a ‘litterless lunch’ program to reduce the amount of rubbish coming into and leaving the centre. By working to change the behaviors of parents when packing lunches, and by changing its own ‘housekeeping’ practices, the centre has been able to reduce waste from two wheelie bins/day to half a bin/day.

Children are also given explicit opportunities to discuss and learn about caring for their environment, including ways to protect the gardens, mini-habitats and their inhabitants. They learn about important ecological concepts, such as how plants grow and the nature of the water cycle, utilising real-life experiences and making links to appropriate children’s literature to support this learning. Children assist in the planting, maintenance and harvesting of their ‘crops’, take responsibility for watering plants and have made scarecrows for their gardens. The children’s parents are involved in many activities connected with the project, particularly the development and maintenance of the ‘no-dig’ gardens. In the past year, a worm farm has been added and the centre now has three compost bins. The frog pond, with tadpoles, has been installed. A possum-house, donated by a parent, now has a resident possum.

The commitment of staff, management, parents and children to the *Sustainable Planet* idea has resulted in an increasingly diverse and stimulating play space. Experiences with nature are easily facilitated and, even though the project ebbs and flows according to staff changes, varying energy levels and the impacts of other responsibilities, in essence most of the ‘environmental actions’ are now part of the daily routines of the centre. This project is an inspiring example of an early childhood community deliberately engaging in pro-people, pro-environment, pro-futures actions for sustainability.

## **2. ‘Health promoting schools’ project**

*Health Promoting Schools* is a process for change that seeks to develop schools, not simply as places where health is learned about, but as sites where health is created. A health promoting school strives to put into practice the action directives of the World Health Organisation’s (WHO, 1986) *Ottawa Charter for Health Promotion*. These are to: build healthy policy; create supportive environments; strengthen community action; develop personal skills; and reorient services. In general, a *Health Promoting School* acknowledges the influence and inter-relatedness of three main components: the explicit school curriculum, the school

environment and school-community partnerships. In adopting a *Health Promoting Schools* approach, a school begins by critically examining its own culture and environment. It proceeds in explicitly democratic and inclusive ways to change to safer, healthier, more supportive and sustainable practices. This includes actively participative methods focusing on the real concerns of students (Davis & Cooke 1998). Because the approach centres on school communities determining their own needs for reform, there are multiple entry points into the process. As can be imagined, there are numerous examples of the *Health Promoting Schools* approach being applied to develop or redevelop school playgrounds.

At this inner-city primary school in Queensland, the *Health Promoting Schools* approach was introduced by parents in 1992. The focus was on sun safety and the redevelopment of the school grounds, particularly those for the younger children in the school. These junior playgrounds had become severely degraded physically and also were not meeting the social needs of many of the children. With the project, the grounds have been gradually transformed so that they are now much happier, safer and more stimulating places both for children's informal play during lunch breaks and before and after school. They are also 'outdoor classrooms' where a range of formal curriculum activities across learning areas take place. Additionally, there are a range of exciting student-focused projects underway in a number of classrooms, which have resulted from teachers' further engagement with the principles and practices of *Health Promoting Schools* and democratic health education approaches. These projects use the four-step IVAC model, where children are engaged in conducting *investigations* into their selected issue/problem; creating a *vision* of how they would prefer the situation to be; engaging in *actions* to 'make a difference'; and *considering* their actions and *communicating* what they did. The projects involve groups of children conducting their own investigations into a wide variety of self-selected social/health/environment topics such as: *Dirty Creeks, Litter in the School, Bullying, Crime in the Suburb, What Pocket Money Means for Kids, Active Girls, Hygiene in the Preschool, Image Isn't Everything( but almost!), Lunchbox Food, Are Backpacks a Problem?, Injuries and Children's Sport.*

Overall, the physical changes in the grounds have meant that children's (and teachers') immediate social, emotional, and physical needs have been much better met. The curriculum innovations have made for much more meaningful and engaging teaching and learning. However, the inclusive action research/*Health Promoting Schools* approach (Davis & Cooke, 1998) that was adopted for this project has also developed within the school community, knowledge, attitudes, skills and relationships that help both adults and children to see themselves as 'agents for change', contributing to positive educational, health and environmental transformation in the longer term.

### **3. *Learnscape project***

Another concept that is gaining importance as a means for incorporating principles of ecological sustainability into educational settings is *learnscape*. *Learnscape* blurs the boundaries between a school's physical landscapes and its teaching and learning. It helps to make the most of a school's physical assets, particularly its outdoor environments (Lucas, 1997). *Learnscape* is about extending the classroom so that what is outside the door becomes an 'outdoor classroom'. Where better to study and learn from nature than where children spend such a large part of their time. School gardens and landscapes become both the physical sites for playing, learning and teaching as well as providing stimuli, props and resources. While designing and creating *learnscape*s can be a powerful educative experience for school communities, grounds are not *learnscape*d until learning experiences are designed for it (Harwood Island Public School, 1996). Designing and implementing creative integrated

programs for children based on the school's own grounds represent real opportunities for children and teachers to have positive experiences in 'natural' settings, to gain knowledge about the local environment and to learn to take responsibility for it.

This school is a medium sized primary school, located in a 'koala corridor', on the southern outskirts of Brisbane. The school has an innovative approach to education generally - it operates a multiage approach throughout the school - and has already a well-established reputation for its environmental programs, particularly in relation to koala conservation and habitat protection. It is the winner of a number of state and national awards for environmental education. In 1996, the school sought to develop a 'whole school' curriculum based on its new landscaping and grounds redevelopments which saw the development of nine 'theme' gardens: scent; colour; line and shape; texture; the koala corridor itself; rainforest and habitat, (two existing gardens developed by earlier 'Project Club' initiatives); Aboriginal food garden and a 'growing garden' (shade house/nursery). The intention was to create an integrated *learnscape* curriculum, where the grounds become 'outdoor classrooms' and where teachers and children could engage in enjoyable and meaningful learning and teaching experiences that enhanced contact with nature and provided a basis for developing 'stewardship'.

In 1997, in conjunction with a story-teller, all classes and children in the school were involved in writing 'environmental stories' that related specifically to the school setting, its gardens, people and events within the school. This represented the first phase in creating explicit links between the school grounds and the teaching and learning program. 1998 saw the further development of these links and involved the writer of this paper in facilitating a 'whole school' professional development project, focusing on the teachers as curriculum writers for the *learnscape* program. Over the period of second semester, teachers worked in self-selected groups to develop a number of programs relating the school's gardens to teaching and learning. They were supported by enthusiastic leadership, a culture of collaborative projects in the school, and by being granted significant amounts of student-free time, during school hours, to work together. There are now the beginnings of a series of Maths Trails, a language program utilising a range of settings in the grounds, an Outdoor Arts program, a Colour and Scent Trail and the beginnings of a science/ environment program based on the shadehouse and various habitats encompassed by the gardens. At this stage of the project, the main aim has been to develop teacher interest and competence in working outdoors with children, as a 'first step' towards fostering the values and ideas of 'stewardship of the earth'. The continuing developments of the school's *learnscape* program and its broader environmental education programs and policies ensure that this school continues to be a leader in innovative futures-oriented educational practice.

### **Spreading the word: Teacher Networking for ECEE**

Even though environmental education for young children is a field in its infancy, one of the recent positive signs indicating expanding interest is in the growth of teacher networks. In Australia, there are at least two early childhood teacher networks supporting the efforts and interests of teachers, carers, parents, owners, directors and others seeking to apply environmental perspectives into their teaching. The *Environmental Education in Early Childhood Network* has been operational in Victoria since June 1992. Indeed, this group was the inspiration for the establishment of the *Queensland Early Childhood Environmental Education Network*, founded in late 1995. This latter network was a response to a perceived need amongst teachers, parents and others with an interest in sustainability/ environment matters to meet, share ideas and resources, and to discuss issues and strategies for getting started or furthering existing environmental education programs. Knowledge of the network,

*Environmental Education for Preschoolers*, in the United States, was also a motivator for the establishment of this network. Networking, which reinforces nonhierarchical, democratic, collaborative ways of working together - principles that are the hallmarks of quality practice in both early childhood and environmental education - offers hope for building momentum for early childhood environmental education and ensuring its continued development. Continuing expansion of networks and the creation of links between networks both within Australia and overseas, give hope and increasing confidence that the early childhood education sector can and will play an growing role in education for sustainability.

### **Conclusion**

These examples – of children engaging in environmental education projects and of teachers engaging with each other - are just a few of the expanding range of initiatives that recognise the rights and needs of children to ‘play with life’. It is obvious that some teachers, parents, and community members are already serious about guiding children towards sustainability. The creation of ‘environmentally educated’ development adults, the development of ecologically-oriented teaching and learning programs, and the enhancement of play and learning spaces where children have significant experiences with nature and can learn to be sustainable, represent thinking and actions that are not only good for the present, but are vital for the future. Rethinking more fully the health, safety and security of children so that ecological perspectives are deeply embedded is a major challenge, but one that cannot and must not be ignored.

*Unless we change,  
we'll get where we're going.  
(Anon, quoted in Birch 1993:107)*

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