

# THE DESIGN OF CHILDREN'S OUTDOOR ACTIVITIES: SUSTAINABILITY AND EARLY LEARNING EXPERIENCES

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## ABSTRACT

There is little doubt that the objects and daily patterns of children's play are changing, often to the detriment of outdoor activities. This occurs at a time when we need more understanding and appreciation of the natural world in order to live sustainably. It is now widely acknowledged that outdoor education contributes significantly to children's physical and mental health as well as enabling them to develop as successful learners, confident individuals, responsible citizens and effective contributors to society whilst also enhancing environmental awareness (Scottish Executive, 2004).

This research project is at the interface of children's play, learning, nature and sustainability. It is one of a portfolio of design research projects (MPhil and PhD) being conducted by The Centre for the Study of Natural Design at the University of Dundee and Scottish Outdoor Education Centres (SOEC). This paper describes 'a day in a life' of children at one site operated by SOEC with a view to understanding the relationships and patterns of child's play. Based on early findings, the authors reflect on what needs to be done next before moving towards designing and developing a range of outdoor learning activities. The paper concludes with a discussion on the choice of research methods which might prove useful in exploring these active situations in a more holistic manner.

*Keywords: play, sustainability, activities, children, outdoor education, design*

## 1 INTRODUCTION

More than ever before, children are being severely and sometimes unfairly criticised for their aberrant behaviour. This can range from vandalism to random acts of violence. Much of this is inexcusable but poorly understood. Some of our best intellectual youngsters can succumb to the pressures exerted by family, friends and society as a whole. In this 'hothouse' environment many youngsters end up on drugs, prescribed or otherwise, in marauding gangs or ultimately 'go postal' kill and even commit suicide (Quart, 2006). Many children have been divorced from or deprived of the very skills and experiences now needed to face up to and challenge the many crises in the world, including, climate change, loss of biodiversity, social inequity and so on (Brown, 2007). Without these early skills and experiences, the problems are denied or circumvented with diversionary tactics and the world becomes a worse place for their future. Many diversionary tactics find their catalysts in the world of designed artefacts and powerful advertising (Underhill, 1999). From an ecological perspective, children are becoming alienated from nature, suffering from what Louv (2005) refers to as 'nature-deficit disorder', just at a time when we need to be more connected in order to understand and correct the problems we ourselves have created in an unsustainable world. One wonders how this will affect our society when children, in such a world of disarray and destruction, have no connection with the outdoors, no love for the smell of the sea, the sound of the trees or the mud on their boots. Sad times indeed!

## 2 CHILDREN'S EARLY LEARNING AND OUTDOOR EDUCATION

Outdoor learning is the oldest and most basic form of learning (Peterson, 1988). The survival of primitive mankind and their societies depended on it and the relationship with nature was one of awe and respect. Co-evolving a sustainable future will require a resurrection or re-emergence of biophilia (Wilson, 1986). For this to emerge most effectively, it will need to be encouraged in children where it is being lost to the modern technological alternatives of computer games, television and material consumerism, nearly all of which occur indoors (Louv, 2005). These 'plugged-in' environments (Sobel, 1996) also have their

negative effects on health (poor diets and obesity) lack of exercise and often trivial intellectual pursuits many of which are anti-social. Such activities additionally encourage rivalry in the young, accidentally or intentionally and often with the serious outcomes of depression, suicide and unprovoked acts of violence (Sobel, 1996). Outdoor education can make its contribution to a recovery from these currently unacceptable outcomes and help to restructure a new way forward (Ministry of Education, 2004). For example, Hattie *et al* (1997) concluded that adventure programmes can have a major impact on the lives of participants and that this has a lasting effect. It clearly depends, however, on the design and effectiveness of the programmes.

Nevertheless, children's fundamental relationship with nature is declining. This innate biophilia is becoming increasingly recessive just at a time of a major sustainability crisis, when the relationship should be enhanced (Wilson, 1986). Driven by this need for a more sustainable world for the future adults of our society, the Ministry of Education (2004) reaffirmed that outdoor education can play an important role in enabling children to develop as successful learners, confident individuals, responsible citizens and effective contributors to society whilst also enhancing environmental awareness.

So, this research project explores whether new activities for outdoor education can be designed which seek to embrace these deeper aspects now sought by political, social and environmental change that are considered necessary as a basis for a future sustainable society. This paper describes the first stage in moving towards this goal through observing and analysing a sample spectrum of children's play in outdoor education on a site specific basis.

## 2.1 Children's Play in Outdoor Education

Children's play embraces the educational, recreational and communicational rights of a child (Sobel, 2004, James *et al.*, 1998, Nabhan and Trimble, 1994). It is a multidimensional concept. For instance, according to Holloway and Valentine (2000), it is the freely chosen activity "necessary for children to grow up into robust, well adjusted adults." For others, it is simply a "method of relaxation" (Goodfellow, 2008). However, play is not limited to humans. For example, Power (2000) remarks that "many young mammals and birds also play, often in ways similar to the play of children". Much can be learned from these analogous behaviours.

Play allows children to express their emotions and deal with everyday situations (James *et al.*, 1998). Indeed, Petersen (1988) has suggested that children who have had little opportunity to play can develop serious behavioural problems later in life, such as, "stereotypes, phobias and learning disabilities".

Play has long been recognized as an important aspect of a child's learning and development. There are three pre-determined requirements of play according to Wilkinson (1980); learning, development and recreation. In other words, children must learn *and* enjoy their experience for it to be termed play.

From an outdoor education perspective, play may be framed in two ways; (1) 'Child-Directed Child's Play' - child influenced play, free from adult instructions, influence or observation; and (2) 'Adult-Directed Child's Play' - observed, influenced or instructed child's play. This latter type of play tends to feature Informative Play and Trained Play. This is primarily based on learning and development and can change from play to participation if the child is not enjoying the experience, and thus is not involved recreationally.

A common feature of both these types of play is the use of games. Whilst external influences suggest that games require boundaries (pre-defined rules), Goodfellow (2008) suggests that they will also require competition.

A further category, unique to Child Directed Play, is Imaginative Play (IP). Whilst Imaginative Play integrates the three pre-determined requirements of play (i.e. learning, development and recreation), it also requires psychological boundaries for children to develop their own rules for time, place and people. For example two children may imagine they are living amongst the trees of a jungle, surrounded by wild animals, whilst playing in the garden.

## 3 RESEARCH PROTOCOL

This research study was located at one of the four centres of SOEC - the largest provider of residential outdoor education in Scotland. In this exploratory phase, an observational approach was used to study

‘a day in the life’ of children at SOEC. In order not to interfere with the children’s daily itinerary, the observations were conducted at a distance (Farrell, 2005). Due to ethical considerations, no direct communication could be made between the children and the researcher during this stage of the study. The research sample consisted of a group of twelve children (seven males and five females) aged between seven and twelve years. In order to protect the participants’ identities, all names mentioned have been altered. The observations were conducted on the participants’ second day of a week long stay at SOEC. On this occasion, this was a dry Thursday in June 2008, on which children were involved in four programmed activities. A typical programme for a day at SOEC is illustrated in Figure 1.



Figure 1 - a programme for a typical day at SOEC

#### 4 RESULTS AND DISCUSSION

Our preliminary observations clearly indicate that, on the day we studied, children were involved in both Adult-Directed and Child-Directed Play (Figure 2). Table 1 provides further details of the Adult Directed Activities conducted on this particular day.

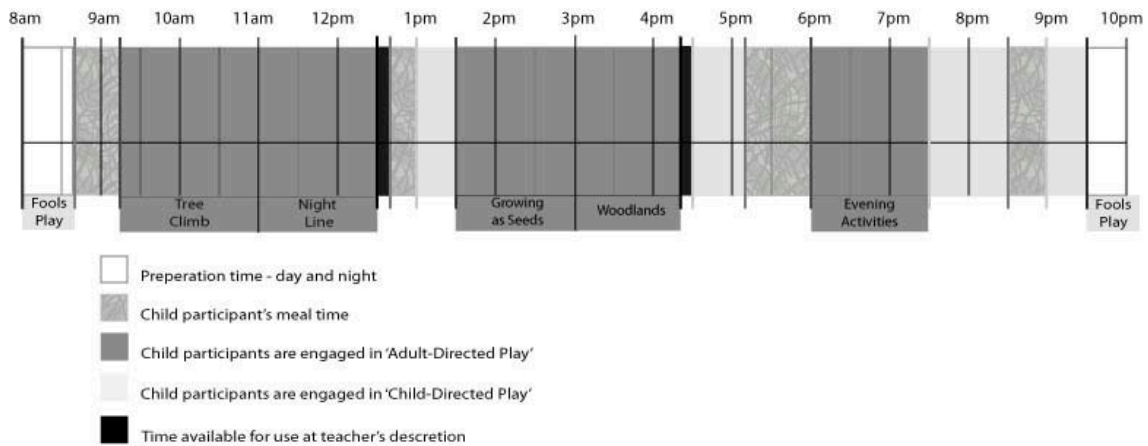


Figure 2 - a child's actual daily activities at SOEC

Table 1 - Details of Adult-Directed Activities

| <i>Activity</i>    | <i>Total Duration of Event</i>        | <i>Description</i>  |
|--------------------|---------------------------------------|---|
| Tree Climb         | 09.15 - 11.00<br>( 1 hour 45 minutes) | Participants are guided by an instructor to climb a tree using a harness. This activity aims to build confidence and push children beyond their usual comfort zones.      |
| Night Line         | 11.00-12.40<br>(1 hour 40 minutes)    | Working as a team, blindfolded participants guide themselves around an obstacle course. This activity is designed to build confidence, trust, communication and teamwork. |
| Growing as Seeds   | 13.30-15.00<br>(1 hour 30 minutes)    | This activity uses empathy to illustrate the requirements of plant growth.  |
| Woodlands          | 15.00-16.30<br>(1 hour 30 minutes)    | The children are encouraged to search woodlands for bugs, plants, leaves and so on.   |
| Evening Activities | 18.00-19.30<br>(1 hour 30 minutes)    | This involves indoor group activities based on building confidence, trust and teamwork.   |

In a twenty-four hour period, SOEC's programme accounts for fifty-eight percent of the children's time. The children are woken at 8am for breakfast. During this time children are engaged in situation-dependent, unorganised child-directed play. This is their first opportunity to engage in play and is repeated at 9.30pm when preparing for bed at 10pm.

Breakfast is scheduled for 8.40am, with all children, teachers and instructors eating at the same time. This is one of four meals they will consume that day, with the others being lunch, dinner and supper. These occupy twelve percent (3 hours 15 minutes) of the daily programme. During this time, however, the children also engage in Child-Directed Play - those finishing their meal quickest gaining more time for play. This is particularly evident during lunch time - the only meal the children are able to enjoy outside. Surprisingly, however, Child-Directed Play occupied a very small amount of their scheduled time (nineteen percent) and even when time was available for the children to play freely, other than that set aside at meal times, the teachers would engage them in Adult-Directed Play (games). It seemed as though the intention was to control the children as much as possible during the daily programme.

Periodically children would freely engage in Child-Directed Play, out with the formal programme. Even then it was performed only by some individuals, often it would seem, as a means of distraction or perhaps a response to boredom. For example, Alice, whilst waiting to perform an activity, would wonder off and perform cartwheels for her own enjoyment and, it would seem, for the amusement of the others. Only on rare occasions did fleeting examples of Child-Directed Play involve direct engagement with nature. Arthur, for example, whilst sitting on his own during a period of oral instructions by an instructor, would play with leaves, twigs, earth and so on. Interestingly, the instigators of individual play were predominantly male. Females on the other hand favoured group games near the centre's buildings. These activities, though Child-Directed Play, often occurred during Adult-Directed Play (training), accounting for sixty-one percent (7 hours 55 minutes) of the children's daily programme. During Adult-Directed Play the intentions of instructors and teachers are to instruct, influence and observe the presentation of activities directed to building confidence, team-work and communication. On some occasions, an instructor would involve a child in assisting with the exercise to be performed by the group. Brian, for example responded well to instructions, engaged well with the others in the group and also assisted the instructor in fitting safety harnesses to other participants. He clearly learned more than the others (James *et al.*, 1988).

It is disappointing that, although being outdoors, the children rarely used the natural environment to enhance their play. On some occasions this was because the adults continued to direct their play. According to Sobel (2004), it is beneficial for children to engage with nature through: (1) empathy in their early childhood (aged 3-7 years); (2) exploration and play during their middle childhood; and (3) social action in their late childhood (aged 12-18 years). So, it seems that although Adult Directed Activities were used to build empathy, in doing so, they limited the children's opportunities for exploration. Perhaps this is due to the following reasons. Firstly, parents have paid for their children to be taught activities by professional instructors at the centre and therefore it is understandable that Child-Directed

Play may be limited. Secondly, allowing children the freedom to play in a natural environment also introduces elements of potential risk.

Despite the fact that Child Directed Play only accounts for about 19% of SOEC's programme, in any Adult Directed Activity like 'Tree Climb', the individual child may be only occupied for 5-10 minutes (less than 10% of the activity time). This clearly allows more time for observation and instruction on the activity but might also be used for other play whilst the child is waiting. Signs of inattention and boredom occur at this time.

## 5 FURTHER WORK

These initial observations provide a sample picture of the daily structure and play patterns at Scottish Outdoor Education Centres. Now that ethics approval has been received, further studies of daily activities will be conducted, supported by interviews and focus groups with children, parents, teachers and instructors.

However, it is clear that activities involving small groups of children are interconnected and complex and as such techniques for studying the whole aspect are required. Ethnographic studies are permitted but the duration of observation, participant or otherwise, is limited to 5 days with any group. We are looking at a technique called "Free-Choice Profiling" (Wemelsfelder *et al.*, 2000) developed by Francoise Wemelsfelder for the analysis of the behaviour of pigs, which retains a more holistic approach. This technique uses a mix of qualitative and quantitative methods.

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