Environmental Education and National Parks, a case study of Exmoor.

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Abstract

My research seeks to add the dimension of innate dispositions to the discussion of teaching and learning outside the classroom, drawing on a biophylic approach to environmental education that theorised the experiences I regularly observe with children on Exmoor in my capacity as Education Manager in a National Park.

My emergent model of real experience environmental education involves emotional attachments, both positive and negative, as 'arousal increasing devices' (Swonke, 2000) to hold children’s attention so that a memory germinates. This accumulative model can be returned to at any stage of learning and is at the heart of my conception of how we can influence the learning of our school communities within the National Park. As we see most children many times during their schooling, we hope to reinforce our messages allowing children to progress within the model.

Through a multi-method research involving over 4000 children, I suggest that real experience environmental education within Exmoor National Park Authority does affect children's memories in the short and long term. However, whilst the experiential component is key to unlocking the imaginative and intellectual door and despite the overwhelming belief in care for the environment from the children in my surveys, there is still a gap between belief and action. The fact that nearly all the children believed Exmoor to need no more care leads me to suggest that whilst our education service creates memorable experiences, perhaps environmental degradation is a more suitable site to provoke action.

Introduction

In this paper I will discuss the evolution of National Parks within a historical and social perspective. This discussion will lead into specific reference to Exmoor National Park Authority (ENPA), its management and the role that education has played. Discussion will centre on particular approaches to environmental education that I have cultivated on Exmoor with reference to the literature and data I collected. My research further explores the origins of different ways of knowing and the impacts of various environmental education activities.

National Parks

National Parks (NP) have a fascinating global history of luxury, irony, altruism, and I suggest today necessity as examples striving towards sustainable land and people management. Considering the privileged perspective with which the Great Council in Washington, American of 1877 designated Yellowstone National Park it is hard today not to reflect upon the brutality of the wars with the ‘First Peoples’ who had lived sustainable lives for thousands of years in the very same place. According to Brown (1991),

‘1860 to 1890 was an incredible era of violence, greed, audacity, sentimentality, undirected exuberance, and an almost reverential attitude toward the ideal of personal freedom for those who already had it’ (p. xv).

The words: ‘for the benefit and enjoyment of the people’ are boldly engraved in a stone arch at the gateway to Yellowstone. The parallels around the world are varied but many involving state ownership of the land have similar themes with varying degrees of violence according to
the native culture being imposed upon. The real irony comes when considering the designation of National Parks in the United Kingdom (UK) during the 1950s. Whilst following our American counterparts with purposes of ‘conservation’ and ‘recreation and enjoyment’, I suggest that we learnt the value of local culture and identity and embraced this ideal through the third purpose ‘of due regard for the social and economic wellbeing of the local people’. If not respecting the ‘local value’ the lessons and practicality of removing communities from their land had been learnt through the Highland clearances from 1730 to 1880. Further to this point was consideration of the high population density that already existed in the UK, where NPs are not the wilderness areas common in other parts of the world.

This tripartite balance between conservation, recreation and enjoyment is what makes NP management in the UK unique and one that continues to be challenging. However, it continually generates interest from other NPs around the world as an example of managing this delicate balance with sustainable outcomes. The relationship between my community on Exmoor and the NP Authority in general, I suggest, is amicable, although never perfect, because after all ‘you can never keep all of the people happy all of the time’. In my professional role as the Education Manager for the authority I have had the privilege of 20 years of engagement with local and visiting schools and partnering the Field Studies Council, the Somerset Wildlife Trust and the Somerset Rural Youth Project in inspiring projects. The involvement of children and community in our NP services is something we have taken seriously since the park’s inception. The ‘lived in’ landscape necessitates this communication because without it, very little activity is possible. During my tenure, we have set an educational target of seeing every child during every year of their education on Exmoor, amounting to about 700 annually, and an outreach target of a further 500 children from schools outside Exmoor National Park (ENP). We also own a small residential centre, based on an old Exmoor hill farm that is booked years in advance and sees an additional 1500 children a year. I am under no illusion that these experiences alone are going to change the children’s lives. However, at the least I suggest that our activities do create a lasting memory that can foster a sense of belief in looking after Exmoor and can further prompt triggers to wanting to know more or take further actions. I further suggest that this long term perspective of regular engagement with the young Exmoor community helps to develop relationships and knowledge in the adult community that ultimately shapes the tripartite balance in future decision making.

**Pedagogical approach**

My environmental education techniques are concerned with depicting the countryside as it is; as an immediate and real lived experience representing the relationship between animals, plants and people. When sharing the countryside with children I try to inspire them with its realities and intricacies, in the hope of creating some sort of lasting memory. Remembering encounters during my boyhood that I had personal experience of, I try today to pass on these experiences through physical engagement of touching and feeling whatever is safe. By stirring the emotions through an environmental experience that involves plants or creatures other than humankind I attempt to turn a psychological key that creates memorable emotionally charged experiences. This approach I refer to as ‘real experience environmental education’ that demonstrates and depicts the environment as it is as opposed to that anthropomorphosised or dressed up in any other guise. ‘Real experience environmental education’ involves life and death and everything else on the continuum between: it does not make abstract the
fundamentals of being but seeks to demonstrate these aspects through contextualized real encounters of cause and effect.

Adopting the approach of Cornell (1989), Van Matre (1990), Hodgson and Dyer (2003) the emphasis would be on young adventurers entering an imaginary magical world and sampling the offerings through games and activities that generally position the child with an interface of ‘something’ physical (pen or pot) or intellectual (game rules or simulation) between him or her and the real experience of what ever the environment has to offer. I strongly support Selby (2002, 88) when he suggests that we bring birth and death into the curriculum, particularly when outside the classroom, firstly because examples are nearly always somewhere to be found and secondly because they help to explain the dynamic balance of life.

The use of environmental simulations and games proposed by Cornell can be powerful introductions; however, if over-emphasized there is often a point when the game becomes the focal point and the message is lost. ‘Unless information was directly embedded in the games students found it difficult to recall any specific information four months after the field trip’ (Knapp and Poff, 2001, p. 63). I suggest that the stirring of the emotions through an environmental experience that involves creatures other than humankind forms the key to creating memorable inspirational experiences.

Anthropomorphism can have some simple instrumental usefulness as a means to introduce a subject or to break down barriers when individuals feel uncomfortable with a natural encounter. This might involve appealing to the children’s sense of cuteness or cuddliness with a plastic toy animal in my pocket and directly relating it to the ‘real’ encounter that we might see, or taking the whole group into a dark pine plantation where they are challenged by what they can’t see and what might just be ‘round the corner’. The challenge is to marry and relate children to the reality of the environment and its creatures and, if possible, humankind’s impact on it through facilitating and guiding their first-hand experiences according to what ‘crosses the path’. However, not forgetting that “it is the rare exception that a vivid, provocative image can be found to explain a scientific concept that at the same time engages people emotionally” (Kollmuss and Agyeman, 2002, p. 12).

The demonstrations of humankind’s inconsistencies in the relationship to animals are vast and can be shown to vary from a sense of anthropomorphism with the Wildfowl and Wetlands Trust that involves ‘getting through the day duck style’ to the Royal Society for the Prevention of Cruelty to Animals suggesting that cuddly toys, videos and computer simulations can be as effective as using real animals to teach respect and responsibility. ‘Real experience environmental education’ needs to weave its path between these approaches, without overstating the anthropomorphism aspect and understating the impact that real animal contacts can have. Animals can be powerful communication tools; I never realised how tall a male mute swan stood until it fed out of my hand, thus naturally offering an emotional entrée into a subject as I was slightly stirred by the event. The native indigenous cultures of the world know how important it is for their children to be close to nature believing that respect is transferable from nature to humankind. Thus enabling their children from a young age to start piecing together the web of life; what eats what, and ultimately understanding and demonstrating ecological interdependency. These interactions are also part of the evolution of westernised humankind and, when trying to inspire children outside the classroom, we should not underestimate the power of real experiences with emotional
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attachments: be they positive or negative.

The fascination that children have for animals is clearly demonstrated in Children in Our Charge (1996) edited by Mary John. In this book (p. 135) David Regis of Exeter University describes the development and outcome of a method to consult children on the content of the health education curriculum. Children of nine years old or more were asked how interested they would be in having lessons on each of 43 topics, the options were: Very interested, Quite interested, Not sure, No! The most highly rated topic for all groups of pupils was, ‘Caring for Pets’. Out of 11,262 nine to eleven year olds surveyed in 2002, every single child placed Caring for Pets as their number one, confirming most interesting topic. For boys and girls alike, this ranking decreased through years 7 (age 11), 8, and 9 at school, although still being in the top six of the 43 topics for these years, dropping to 21 by year 10, rising to 12 by year 11. Conservation also attracted much interest from children under 12 years, with 4044 placing it second, 3365 placing it third, 1744 placing it fourth and 1831 placing it fifth. These results are based on those responding that they would be ‘very interested’ in it. To those teachers or environmental educators who are prepared to use animals or pets as a means of communicating, the message from the children could not be stronger.

My research on memorable experiences

This connection with animals was reinforced by a survey of memorable experiences of 1805 9-12 year olds in eight different National Parks receiving a broad range of random environmental activities. This is clearly shown in Fig. 1 with 1017 children reporting a ‘wildlife memory’. The question asked of the children was: what did you remember most? Other memories revolved around the views, the weather, lunch time, being tired or something factual.

I collected further data on memorable experiences from Exmoor (Fig. 2) samples totalling 946 KS 2 children. Again, this was to qualify and extend the national data collected in 2001 surrounding children’s memories after their visit to a NP in Wales or England. Interestingly, wildlife/animal-life/bird-life in its many forms was again strongly featured as the most memorable experience. Where my Exmoor data differed from the all NP data was in the physical recollection of the activity; through words such as being ‘tired’ ‘exhausted’ ‘it was hard work’. The children on Exmoor had these as their second most common memories. This was an interesting finding for me because whilst I do believe in embracing a physical component to all my activities; it was only a subtle emphasis that I suspected but had never actually tested.
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Figure 1

Responses to question ‘What did you remember most?’ from all English National Parks

Source: All NPs pilot data (survey A; 1805 children); 2001 (for all activities1-4)

Key: 1 = Views/natural/weather; 2 = Views/manmade; 3 = Wildlife/deadlife/birdlife; 4 = Physical recollection of the activity; 5 = Factual/intellectual statement; 6 = Picnic/food/sweets

I suggest that reliance on information that is largely second-hand about ecological and environmental issues removes us physically and emotionally from the issue and is thus highly likely to cause children conceptualisation problems when relating the simulation to the real issue. I understand that in many ways having a prepared simulation activity is safe from an organisational, intellectual and fun point of view, which is great for a first foray into the countryside for teachers or leaders ‘getting their bearings’. I have accompanied many such events, but those most inspiring to the children always involve a sense of adventure, of perceived risk and an experienced teacher who will go beyond the simulation game. During autumn 2007 I led over ninety, year four children with many adults and the deputy headteacher with whom I had worked many times. At mid morning snack on the edge of a thin pine wood some thousand metres from a small lane ‘Mr L’ thought it a good idea to let the whole lot go off and hide, count to one hundred, then all the adults would come looking. The event is still talked about in school, as the whole wood was quiet and all the children had disappeared. The risk that ‘Mr L’ had taken seemed to give the children a sense of adventure that tested their comfort zone and became a bonding, and shared experience that the headteacher struggled to believe as the children relayed their stories back in school.
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Figure 2.

Responses to question ‘What did you remember most?’ from Exmoor National Park

Source: Exmoor Data (surveys B, C, E; 913 children); 2001/2 (for all activities1-4)

Key: 1 = Views/natural/weather; 2 = Views/manmade; 3 = Wildlife/deadlife/birdlife; 4 = Physical recollection of the activity; 5 = Factual/intellectual statement; 6 = Picnic/food/sweets

To learn from real experiences, I suggest that we need to see ourselves as connected to something larger, without necessarily defining the something, but accepting that its totality is difficult to comprehend. For some, the ‘something’ might have a spiritual connotation, for some mystery, for some, a sense of awe and wonder; it is not for the teacher to define but for the individual to experience. What is important is appreciating the connection between human and animal/vegetable/mineral kind and the impact we as humans can have emphasising ecological interconnectivity based on the environment as it is.

Stories and mythologies certainly are important in creating an atmosphere, but we do not need to invent circumstance to explain natural phenomena and we do ourselves no favours by dressing them up and over-anthropomorphising nature. Perhaps the reason why the western world has become so detached from its environment is that it has hidden behind an artificial approach to environmental education that has failed to tell children about life, death, reproduction and consumption as it is, and not as it was when societies did truly live in a sustainable way and did need abstract ways to explain what was beyond their comprehension.

Linking many such experiences with the literature, it was Swonke’s paper (2000) that helped formulate my own beliefs and practices within a research framework. He argues that: ‘the roots of aesthetic sensitivity have existed long before the evolution of human culture’ (p. 260). He further discusses ‘arousal increasing devices’ (AID) ‘that represent a direct link between visual stimuli and actions and courses of actions’ (p. 261). The emotional attachment, be it positive or negative,
is used as an ‘arousal increasing device’ (p. 262) to attune the children’s senses – to hold attention – so that a message can be conveyed. The message needs to relate to the experience and might be about the object of the experience, why it is where it is, how it relates to its habitat, or how it is looked after. What is important is that it comes during or directly after the arousal, when interest is at its maximum and the children’s focus is intense.

Visual prejudices such as for trees and for running water, for affection towards the (sexual) partner and for a child; pleasant emotions when looking at symmetrical structures etc, are contrasted with dislikes, such as those for spiders, snakes, loud dogs or threatening grimaces. (Swonke, 2000, p. 261)

These visual preferences are often immediately expressed, positively or negatively, although the expresser is often unable to articulate exactly why he or she is fascinated by something, but instead just quickly and spontaneously makes a judgment.

Further reading of Wilson (2005) reinforced my conception of ‘real experience environmental education’ that largely takes an objectivist/behaviourist position but embraces perspective and emotional attachment. I acknowledge the tensions between nature and nurture approaches, as I am supporting genetic determinism and the biophylic position of Swonke and Wilson but also suggesting that individual change is possible through experience. These tensions I explain by embracing genetic determinism as the root cause of children’s immediate response to many occurrences that stir their emotions. However, these are subsequently socially and culturally manipulated and cause the experience to be assimilated into the child’s memory that affects their future experiences of the same.

Wilson (2005) exemplifies the biophylic position by drawing attention to the disparity between the impact of the human genome as the code of human identity and it’s nurturing through a culture:

The disparity between our genetic and cultural evolution is the root of the problems of civilization. It has made modern humankind a potentially self-destructive chimera, a creature of hard-wired Paleolithic emotions and medieval political systems that are empowered by godlike science and technology. (p. 8)

The key point is that all these actions need consent and willingness to act (involving all of the above) and the strategy relies on the belief that action is more likely after an integrated intervention, than after no intervention at all. This belief is largely the same for the achievement of ENPA’s education objective: “To encourage understanding of the purposes and special qualities of NPs and the environmental issues they face and to develop a sense of responsibility resulting in behaviour and attitudes which sustain such qualities” (ENP Management Plan 2007-12, 07, pp. 43-45).

Accumulative psychological models (Kolb et al., 1981) that relate learning styles to simple brain research provide a useful theoretical application to any learning activity and have similar resonance and progression with the Exmoor Model. This is only slightly different in that it allows children to rejoin the learning situation at their own level after their many and varied day and residential experiences with ENPA education staff.

Waite (2007) makes an interesting comparison between adult and children’s memories of their outdoor experiences and learning. Children’s recollection of residential experiences had a strong sense of challenge and achievement.
This positive view (of the children) could be attributed to the experience being more recent, but this theory would not account for the strongly emotional content of the distant adult memories collected. Many of these shared positive emotional content with children’s reports returning from their residential visit. (p. 343)

My own research would support Waite’s suggestion that memory for outdoor experiences does endure and often has an emotional route which highlights the authenticity of the learning. The Exmoor Model involves emotional attachments, be they positive or negative, as ‘arousal increasing devices’ (Swonke, 2000) to tune the children’s senses – to hold attention – so that a message can be conveyed. The message needs to relate to the experience and might be about the object of the experience or a related effect. The Exmoor Model is the delivery framework I have evolved to match children’s learning with the NPs’ vision of communities with attitudes and behaviours which contribute towards sustaining Exmoor’s special qualities. The conception of ‘real experience environmental education’ is the title I have evolved to embrace my model of delivery as well as its grounding in the academic literature and my experience.

**Figure 3**

**The Exmoor Model of delivery (evolved during the current research)**

This is purely my own representation that I have evolved and practised during my time on Exmoor and one that I have applied to all the groups of children that are involved in this research; it is not meant to imply that it is adopted by all providers of environmental education on Exmoor. The solid arrows imply the cycle of the model; the broken arrows the fact that the process does not have to be completed and that different children can reach different points during the same activity. This model is cumulative and can be returned to at any stage of learning and is my theoretical conception of how we can influence the learning of our school communities on
As we see most children many times during their schooling on Exmoor, we would hope to reinforce our messages allowing children to progress around the model.

The fundamental issue is that behaviour needs consent and willingness to act and in environmental education we have to believe that action is more likely after regular and coordinated visits to the countryside than after ‘one off’ events. The fact that ENPA has an educational target of seeing every child during every year of their education on Exmoor gives the children a chance of progressing within my model.

The main lessons for facilitating children’s experiences of environmental education in the field I suggest, relate to the use of animals instrumentally as a communicating tool because of their appeal and their relation to other conservation issues. This appeal and desire to know more has the potential to act as a catalyst that might foster an interest or a practical interpretation. The literature would seem to highlight the experiential component and a sense of ownership as being very important in unlocking the imaginative and intellectual door for children. This further helped to give academic rigour to the ‘Exmoor Model’ and reinforced the necessity of real experiences that can be related to and accumulated, and that often have a strong emotional and visual bias. The challenge is to make ‘the experience’ so memorable that ‘future practice’ might relate concretely or subliminally to the environment and thus re-engages the disassociation between ‘belief’ and ‘practice’; Wells and Lekies (2006) call it ‘participation with wild nature’ (13); either way the evidence would seem to support these approaches.

Implications for policy and practice

The Exmoor model is a useful tool that gives a simple representation of my theories when talking to colleagues within environmental education and links with the NP management plan of regular contacts with local schools. If I was involved in the management plan for a new NP I would certainly encourage an approach that followed this model, firstly because it secures education within the heart of the process, but more importantly in the long term children grow up into the adults that can have strong impacts within our communities and also affect how the NP is run. I suggest that other NPs do not adopt the Exmoor model because of the high commitment it places on education services, and that Exmoor is lucky with only having two schooling feeder systems in a relatively captive area. However, I do sense that in some NPs education is still a ‘cinderella subject’.

I am confident that our NP education service will be trusted in the future and that enlightened teachers like Mr. L will keep coming forward with their children. The UK Children’s Secretary, Ed Balls, commented at the launch of ‘Out & About’:

> it is wrong to wrap children in cotton wool as they grow up. Trips and getting out of the classroom should be part and parcel of school life and always form people’s most vivid childhood memories. ([http://www.lotc.org.uk](http://www.lotc.org.uk), accessed 20.10.08)

I can’t help feeling that these sentiments have been echoed many times over the last forty five years since Darling wrote:

> The urge is there all right, and a lot of first-class scientific data, but not enough people, either in or out of power, nor do those in development industries have a sufficient sense of
urgency to value and preserve our remaining bits of wilderness for their beauty, their air- and water-purifying action, or their value as study areas. (Darling, 1964, p. 54)

Mr. Balls goes on to say of the Learning Outside the Classroom Manifesto:

it is a massive step forward to making it easier for teachers to take pupils out of the classroom - giving them the confidence and tools to organise outside the classroom environment; cutting paperwork and red tape on visits; and breaking down the fear of litigation. (http://www.lotec.org.uk, accessed 20.10.08)

I’m not sure ‘it’ is such a massive step forward; Mr. L, as I have discussed, Mrs. B, Mrs. W, Miss. V, Mr. G, Mr. D, Mr. A and Miss. E to mention a tiny sample, all have equal passion and belief to make things happen for their children outside the classroom regularly, without this manifesto. I put my faith in humanity and passionate people; because process and bureaucracy will never commit the meaning that is essential if we are to really make a difference.

Conclusion

Our environment once offered all children the delights of the natural world, today it still does, but it is our lives that have changed and become more structured, supervised and scheduled. If it wasn’t for the teachers above, many of their children actually living on Exmoor would probably not venture beyond the bus stop as their physical boundaries have shrunk. It is time this was changed. A substantial body of knowledge indicates that an empathy with the countryside, along with later positive environmental behaviours and attitudes grow out of children’s regular contact with the natural world.

Whether we use the word ‘story’, ‘experience’ or ‘interaction’, the recollection is from a memory and those which have an emotional attachment of threat or pleasure or fatigue, for example, seem to be imprinted for the long term. Embracing the concept of biophilia, I have attempted to illuminate the association between memory and living organisms other than humankind, as a mechanism to develop a lasting sense of care for the environment. Many of the children I have observed demonstrate this biophylic tendency to explore the natural world: however, the key for its lasting effect is in further opportunities for it to flourish. Imparting knowledge and responsibility of our natural environment before a relationship with it exists is like building a boat before experiencing the sea.

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