

Why indoors?

The role of outdoor learning in sustainability, health and citizenship

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Abstract

This presentation argues a case for a broad concept of ‘education outdoors’ as the natural corollary to ‘education indoors’. In doing so it considers the complexity of learning and decision-making in modern society and argues that outdoor experiential education should embrace this. It argues that programmes should provide independent learning experiences that address the capacities of learners and the value contexts in which they learn; and that taking responsibility for actions should be an important programme focus. Furthermore, realising the limitations to learning through direct experience recognises the role of critical reflection on knowledge, understanding and personal decision-making. To make such experiences relevant to the needs of modern society a focus on education about and action on significant contemporary issues (e.g. global climate change, personal health and citizenship) is an imperative that ‘outdoor teachers’ are well equipped to address. However, action requires knowledge as well as a ‘feeling for the issue’, and therefore programmes require content and opportunities to develop relationships. The contemporary significance of outdoor learning issues to policy makers offers important opportunities for those who teach outdoors to contribute meaningfully to mainstream education.

Personal introduction

My background and my motivations are significant to this paper and a brief outline is necessary for the reader to be able to understand and critique it. I grew up in a small rural town in south-west England in a family where gardening for food; work and recreation in the countryside were the norm. Through my journeys in the countryside I developed a love of such places, the natural world and the community. I further developed these through schooling (and in particular with the opportunities provided by a dedicated teacher) but also a love of learning and a fascination with education. I was trained as a physical scientist, biologist and ecologist, but am also absorbed by the social sciences including the social history and socio-economics of wild land (e.g. the Highlands of Scotland). Much of my career and personal life has been spent in the outdoors and so learning and teaching outdoors has become a natural and central feature. In summary the key themes of people, place and (outdoor) activity together with the educational possibilities of the relationship between these continue to characterise my life.

Definitional issues

The term ‘experiential’ is in widespread use in education in general and is seen as an approach to education, which implicitly trusts the learner’s ability to learn through experience. More broadly, experiential education may engage both the teacher and learner in the same (learn/teach) process but in different roles, with learning taking place in intellectual, physical, emotional, aesthetic and spiritual ways. This accords with the educational aspirations of the ‘progressive’ education movement of the 20th century.

In the UK and in other parts of Europe experiential education is closely associated with outdoor education which arose and became formalised by the ‘educational establishment’ in the UK (partly through Education Acts) as an *experimental* educational endeavour in the

1940s to the 1960s (see Higgins, 2002). This has had an influence on, and has been influenced by the concept of ‘experiential education’. Consequently many outdoor educators work experientially (*the process*), and many experiential educators would naturally use the outdoors (*the place*). Indeed, the term ‘outdoor education’ has its own connotations often associated with education outdoors somewhere distant from the school environment and its locality. Outdoor education might be considered as education ‘in’ (*outdoor activities*), ‘through’ (*personal and social education, therapy, rehabilitation, management development*), ‘about’ (*environmental education*) and ‘for’ (*sustainability*) the natural heritage (see Higgins, 1995 and Figure 1). The intention is to maximise opportunities for pupils to gain knowledge and address their views and attitudes through intellectual, physical, emotional, aesthetic and spiritual development with subjects being addressed holistically with emphasis shifting as opportunities arise. This has much in common with ‘constructivist pedagogy’ where ‘the individual constructs and adds to this knowledge by frequent visits to the real world’ (Dahlgren and Szczepanski, 1998, p. 20). Each aspect of outdoor education is not unique as much as the wide variety and manner in which they are encountered. Learning outdoors contrasts with the ‘classroom’ as the environment is influenced by weather, time of day/year, topography. Areas do not need to be ‘remote’ or ‘wild’; a local urban environment can be equally valuable. The activities are often practical, interactive and reflective with the role of the facilitator being to encourage students to take responsibility for learning.

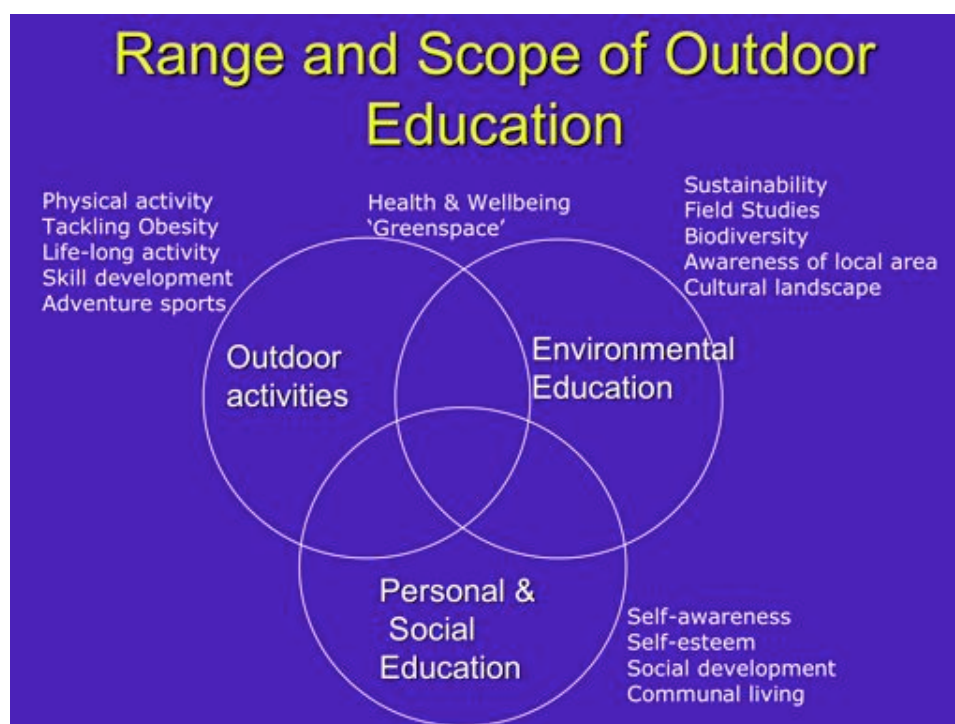


Figure 1

A focus on any or all of the aspects of education outdoors shown in Figure 1 is appropriate and this paper addresses each of the three domains. However my intention here is to place more emphasis on pressing issues such as environmental sustainability, and the response of the education sector and the role of education outdoors in contributing to understanding and stimulating action on these issues. In doing so the article briefly considers the contribution of several influential philosophers to the development of experiential education, and the difficulty of taking an experiential approach when encountering the complexity of the modern world. If experiential outdoor learning provides a significant means of addressing complexity and environmental sustainability, it is important that the approach becomes more widespread and integrated with mainstream education. Therefore, issues of curricula and educational policy also constitute a theme of this article. Furthermore, practical ways of

addressing the complexity of environmental sustainability are required, and so the issue of carbon dioxide (CO₂) emissions and carbon cycling is used here as an example.

Philosophical antecedents

Depending on where one lives various educational philosophers and protagonists seem to have provided arguments for an experiential approach to education. The outdoor education sector in the UK often refers to the contribution of a German emigré, Kurt Hahn (1886–1974) who was central to a number of significant educational initiatives and institutions, notably Gordonstoun School (and the Round-Square Schools Association) and Outward Bound. In America John Dewey (1859–1952) provided a robust philosophical basis for experiential education that has achieved international respect. Scotland has its own protagonist, Sir Patrick Geddes (1854-1932) who was a true polymath (biologist, sociologist, town planner, educational philosopher, diplomat, peace campaigner¹). Geddes was a man of prodigious talents but perhaps his greatest contributions were in thinking of people living and working in harmony with their communities (he used the epithet '*place, work, folk*') and also the role of education in holistic development. His philosophical arguments also led to the development of the concept of 'environmental sustainability'² (even though he did not use that term), and notably the sentiment much beloved of environmentalists, to *think global, act local* which pervades his arguments in his major work, *Cities in Evolution* (1915). However, both were influenced by other educational philosophers of considerable stature. The spheres of influence of these individuals is also evident in that Geddes also knew Dewey (and it seems likely that they each had an impact on the other's thinking). Geddes' contribution to educational thinking and practice has recently been reviewed by Higgins and Nicol (in press).

In common with other educational philosophers like Comenius (1592-1670) and Pestalozzi (1746-1827) Geddes' holistic approach to education was based on learning *via* the 'three Hs' - 'Heart, Hand and Head' (Boardman, 1978, p. 224) rather than the 'three Rs' (Reading, wRiting and aRithmetic). Geddes' 'three Hs' related to affective, physical and intellectual development (insisting in *that order* of priority), a framework that fits well with experiential education.

What is experiential education good for?

I can swim – I just don't know how yet
(Jamie (9-years-old) when asked if he could swim)

Learning is messy ... we rarely learn anything by proceeding along a single path to pre-determined outcomes
(Scottish Consultative Council on the Curriculum, 1996, p. 9)

Our individual success in surviving the many developmental challenges of our early years, by guided discovery of the world through our senses, is testimony to the power of experiential learning. There are also many aspects of 'school-work' which lend themselves to experiential learning and teaching, notably art, music, elementary science etc; though it is important to remember that such approaches are also used by teachers of other disciplines from mathematics to history³.

¹ See Boardman (1978), Meller (1990) and Stephen *et al.* (2004) for recent biographies and critiques of Geddes.

² In doing so he placed himself amongst a number of influential Scottish environmental thinkers including John Muir (the pioneer of the national parks system), Frank Fraser Darling (nature conservationist and human ecologist) and John Smyth (ecologist, environmental educator).

³ For examples see Wurdinger, S. (2005) 'Using experiential learning in the classroom'.

In the early years of a child's development they see no subjects or boundaries; for example an event may involve verbal, visual, auditory, tactile or a mixture of these. In schooling a variety of subjects may also be taught holistically in a child-centred way, though usually within the confines of the classroom. In later years the curriculum is often divided into subjects on the premise that at higher levels the subjects are more technical (and hence a specialist is required) and manageable. When student knowledge is assessed this generally occurs within subjects rather than in integrated project work.

Recent research in Scotland (Mannion *et al.*, 2007) indicates that such an approach in an outdoor environment resonates with young people who valued the interaction of a wide range of school and residential outdoor experiences, but notably those which were new, enjoyable, multi-sensory, 'hands-on' and enabled them to enjoy being close to nature and 'free' in the outdoors. Incidentally they were perceptive of the limited nature of outdoor education experiences at school and impact of some of the issues reported by teachers (e.g. the climate of 'Health and Safety' – see below).

So interdisciplinary and holistic learning through various senses, dealing with the complexities of the social and physical world around us seems to be what experiential learning is good for. If this complexity characterises the modern world is why isn't all education experiential? And equally importantly, why is most formal education confined to the classroom rather than out in the 'real world'?

The limits to experiential education?

It is tempting for advocates of experiential education to posit the view that if there are limits to experiential education it is the result of the approach taken to narrow forms of discipline-based teaching in schools. Hence the lack of experiential approaches is not so much a lack of imagination as a tendency of the system.

However there are 'knowledge issues' which require us to ask if there are limits to what we can know experientially? For example Dewey (in 1938) pointed out that clearly we cannot know 'the past' experientially (Dewey, 1963, pp. 22-23) and that if we reject this form of knowing we cannot use it to inform the present or future. Where would we be without knowledge of the past to inform the present?

Furthermore our lived experience makes it abundantly clear that there are many complex issues to be dealt with in our personal and professional lives. Consideration of facets of this complexity and the inter-relationship between these offer insights into the limits of experiential education (see Higgins, 2003). For example individuals with different backgrounds and experiences still learn to communicate with each other (an example of 'social complexity'). Similarly learning to kayak in turbulent moving water situations is an example of 'complex physical skills'. Whilst these skills are learnt experientially (perhaps with support from a skilled educator or coach) there are many facets of modern life for which experiential learning is not realistic. For example, complex scientific and technological developments, the pressure of global marketing or of the politics of the modern world? In such cases it is very difficult to 'know' the issue or argument experientially. And yet information is more easily than ever before and increasingly through the 'world-wide-web'.

Daily we are faced with choices in what we eat and drink. For example what is the social and environmental impact of drinking coffee (where does it come from, how is it grown, what is the impact on the landscape and community, at what environmental cost does it arrive in our shops etc). Similarly, a can of tuna with the comforting if meaningless slogan 'dolphin-friendly' presumably reduces the accidental killing dolphins. But what is the effect on other species (are seabirds, notably albatrosses, killed by the switch from nets to baited long-lines)?

(Chapman, 2001; Friends of the Earth, 2005). Perhaps more fundamentally why is ‘tuna friendly dolphin’ not on our supermarket shelves and how would we react if it were?

Factors such as the environmental and social impacts of production of goods and services, and the invisibility of these because of our separation from what is usually a distant production (and disposal) process add to the general complexity of modern life. Also the cumulative effect may not be evident until much later. We are unlikely to understand such issues ‘experientially’ so what learning strategies are appropriate?

Perceptions are not always reality

Our experiences can be misleading if the information available is limited or incomplete. In such circumstances we may not know that we lack some vital piece of information, as in the case of this person who wrote to a local newspaper about the local drought.

‘We are told that the water levels in our reservoirs are dangerously low. I just cannot understand what all the fuss is about. Why not simply fill these reservoirs up from the mains?’

Letter to the Poole Daily Echo newspaper (April 1997)

Whilst the flaw in this is obvious if one has basic knowledge of the water cycle, it seems probable that this author does not. Such an understanding can be gained partly by experience if for example one has the opportunity to visit water treatment works etc. or access to information, but it does expose a limit to experiential learning.

Connections and consequences

I have argued elsewhere (Higgins, 1996a/b) that developing a connection with place is an important aim of outdoor experiential programmes as it provides a start point for relationships (connections) with people within a community allowing further developmental outcomes such as understanding the consequences of one’s actions and an ethic of citizenship and care (see Figure 2).



Figure 2

Paradoxically many outdoor programmes take place somewhere distant (often in the countryside) from where the participants live (often in a city). In these situations building a sense of ‘connection’ and ‘consequence’ may be difficult to achieve. Indeed efforts to do so may even be counterproductive as the participants develop relationships with some place other than ‘their own place’ and with people they may never see again. This places a responsibility on the educator to plan and arrange such learning experiences (see later) carefully and thoughtfully to engender as great a sense of authenticity as possible.

The explicit suggestion in Figure 1 is that if these *connections* can be made and understanding of *consequences* to actions is developed, an ethic of *citizenship* (where rights and responsibilities are understood and exercised) and *care* (for self, others and the environment) may result. The dominant ethic implied by this model is one of ‘taking responsibility’ (see later).

Like other educational aspirations this deserves considered input from skilled educators, including or perhaps particularly those who teach outdoors. Whilst understanding of these ‘five Cs’ may be difficult to include in programme design it is perhaps no more so than many other aspirations educators have for their students, and in my view should be a priority in location selection and for and programme organisation.

Maintaining a ‘critical guard’⁴

Experiential education often has a reflective element which allows the learner (and the educator) to review the experience, for example what is often referred to as the ‘Kolb Cycle’ (Kolb & Fry, 1975). Although this may have philosophical inconsistencies and practical difficulties (e.g. see Webb, 2003) it is nonetheless much beloved by experiential educators. In this context reflection/review requires examining experience to aid learning. Taking a critical approach is even more relevant to things that are difficult or impossible to know experientially.

In examples cited above (e.g. air travel, coffee, tuna, global warming and others such as ‘healthy eating’) the consequences of actions are not immediately evident, and in order to understand the processes and implications we must rely more on critical examination than experiential processes. Many ‘modern’ issues are also difficult to fully understand because they are obscured, hidden or may even be subject to forms of misinformation (either deliberately or inadvertently) by those with vested interests or just a different perspective. In such cases it may not be possible to truly ‘know’ what it is one is seeking to understand, though that should not stop us trying to do so. Getting as close to an understanding of major issues (e.g. the causes and reality of wars, claims of politicians, the nature of religious fundamentalism etc) is in my view a responsibility of us all as citizens, educators and parents. To do so we have to weigh up the information, evidence, the trustworthiness and authority of the sources, and that requires careful critical examination of the issue.

Rather than see this as ‘sidelining’ experiential education I think it provides a guide to one way in which experiential education is carried out; by generating opportunities to engage with broader issues; and to develop critical thinking skills valuable throughout life. Some issues lend themselves to one approach or the other, but many (if not most) will profit from a balance (weighted in favour of the experiential in some cases and the critical in others) of the two. So if experiential education is good for some things and less good (or inappropriate) for others, and if we cannot always trust perceptions, does experiential education have a more extensive role than it seems to have at present?

⁴ This is an exhortation my colleague Dr Barry Smith used regularly when teaching students

It is clearly a responsibility of all educators to engage in this critical process concerning our own work. That there has been so little good quality research in outdoor and experiential education is unsurprising considering that such approaches are not considered ‘mainstream’, and so funding is scarce. If we consider *learning outdoors* (where much experiential education takes place) *as the corollary to learning indoors* the comparison is stark in quantity and depth of research - but the possibilities are considerable. However we should take note of the research that does exist about experiential processes in whatever field the research was carried out, as collaboration with specialist researchers would open up fruitful possibilities.

Health and wellbeing – a new understanding of the role of ‘greenspace’⁵

For those people (and there are many) for whom being outdoors and in ‘greenspace’ offers a sense of wellbeing and satisfaction elusive in other aspects of their lives, it will come as no surprise that there is a growing body of research evidence to support this view (see Bird, 2007; Bell *et al.*, 2008 and Sustainable Development Commission (2008) for recent reviews), and increased political interest. The health benefits of physical activity are well known and so one theme of the research in this area relates to the relationship between physical activity and greenspace. The other key issue is the relationship between health, wellbeing and greenspace in and of itself, independent of physical activity.

In the UK greenspace is very significant in physical activity and there is evidence that ‘accessible, attractive greenspace is associated with autonomous physical activity’, and that ‘people are more likely to engage in frequent physical activity (with a lower rate of obesity) in locations that have high quality greenspace’ (CJC Consulting *et al.*, 2005, pp. i-iii). In light of the range of health benefits of physical activity, it seems probable that stimulating and encouraging the use of greenspaces could improve long-term population health and reduce the incidence of chronic medical conditions (e.g. coronary heart disease, obesity, diabetes, strokes etc). This could have major financial implications too as CJC Consulting *et al.* (2005) argued (albeit cautiously) in a report for the Forestry Commission, suggesting that as greenspaces encourage physical activity, ‘there would be substantial health and hence economic benefits (around £1.44bn) through their increased use’.

What appears to be an innate desire to relate to the natural world (particularly noticeable in young children) is commonly referred to as ‘biophilia’ (Wilson, 1984). There are several theories invoked to explain this phenomenon which are summarised Bird (2007). There is also evidence that early ‘significant life experiences’ (particularly outdoors) are important in stimulating interest in greenspaces and in environmental orientation (e.g. Kaplan & Talbot, 1983; Palmer & Suggate, 1996; Palmer, 1998; Hungerford & Volk, 1990). Providing children with opportunities to play freely outdoors and explore the natural environment is essential for healthy development. But in general such opportunities are decreasing (discussed below). This is a particular concern for those young people who are ‘disadvantaged’ as they have lower access to both greenspace and physical outdoor activity than their more affluent counterparts (Wikeley *et al.*, 2007).

Recent Scottish studies indicate that many young people in Scotland do not meet current physical activity guidelines suggested to benefit their health (Bromley *et al.*, 2005; Currie *et al.*, 2004). The long-term consequences of this are significant and so there is policy interest in adult physical activity patterns in the population. Many adults engage in activities such as walking, and providing opportunities and encouragement for young people as well as adults

⁵ The term ‘greenspace’ is now widespread and often used to identify parks, play areas and sports fields as distinct from areas such as streets etc. However, clearly young people in rural areas also make use of greenspaces. CJC Consulting *et al.* (2005, pp. 2-3) suggest a broader view, namely ‘those (spaces) that provide for frequent use in terms of physical activity and/or more passive use (including visual use)’. This is essentially all of the ‘non-built environment’.

to do seems likely to have sustained impact on the whole populations. Recent reviews detail environmental characteristics which may be important including attractiveness of the local area, mixed land use, trees etc, but also good local access including safe footpaths and easy access to public transport (Bird, 2004; Humpel *et al.*, 2002; Owen *et al.*, 2004). A recent review (Foster & Hillsdon, 2004) found evidence to support the influence of environmental change on physical activity behaviour but highlighted the need for further research to explore the relationship between the environment, physical activity and health.

In light of the health and indeed potential financial implication of these findings it is perhaps unsurprising that access to greenspace, especially for young people, has become a significant policy concern in Europe and for both the Scottish and Westminster Governments. In Scotland a Strategic Framework for Environment and Health in Scotland (Scottish Executive, 2006) now links policy commitments on health, equalities, environmental justice and sustainable development (Morris, 2007). This interest has led to a public consultation on ‘open space and physical activity’ (Scottish Government, 2007).

Whilst the significance of these issues is clear; and these and related issues of environmental sustainability awareness, an over-cautious approach to risk and a lack of curricular learning outside the classroom are all of interest to policy makers the role of outdoor learning in schools has not been made explicit. Outdoor learning seems to be the only current commonly used means of engaging young people in all of these significant developmental activities. Surely it is time for the outdoor learning community to recognise this and re-orientate their programmes and for policy makers to provide support.

You cannot own the land – the land owns you⁶

As is clear from the above, our relationship with land and landscape is deep, complex and also seems to be culturally contextualised. In the UK at least the ownership of land (often a home) is a cultural norm. ‘The landscape’ is of course the place where much outdoor learning occurs, and understanding something of that landscape and its potential for education is clearly of value and perhaps even an imperative for outdoor educators.

In the UK in general and Scotland in particular, the combination of variable climate, geological, social and cultural history and the resulting topography provide both the physical circumstances for outdoor recreation and educational possibilities for outdoor education. The pattern of land-ownership is also more concentrated than anywhere else in the Western world (Wightman, 1996) and much of it is held as ‘sporting estates’ (for hunting deer, grouse, salmon and pheasants) with a low human population density. Since early in the 20th Century this landscape has been well used by the proponents of education outdoors, and consequently Scotland was one of the first places in the world where outdoor education became formalised. Indeed the 1944 Education Act and the 1945 Education (Scotland) Act encouraged the use of the outdoors for environmental and nature studies. Consequently this landscape provides both a stimulus and a ‘curriculum’ with considerable potential for interdisciplinary study. These Acts emphasised the value of outdoor experiences and encouraged Local Government to establish appropriate ‘camps’. During the 1970s they did so and many bought and converted old mansions as residential bases for outdoor activities and field studies. Most Councils offered extensive and progressive outdoor educational opportunities and Lothian and Strathclyde were world leaders. Outdoor education teachers organised activities from schools and used centrally funded staffed and un-staffed residential centres. To meet the demand for teachers and instructors, outdoor education courses were established in UK colleges, and in 1973 the first specialist courses in Scotland at Moray House and

⁶ This is a line from a song (Solid Ground) by the Scottish singer Dougie Maclean on his album ‘Real Estate’ (Dunkeld Music). The song is about his love of his home in Central Perthshire and the nature of the landscape.

Dunfermline Colleges were the precursors of the current University of Edinburgh Masters programmes. (For further details on the development and history of outdoor education and the contemporary situation see Higgins (2002) and Higgins and Nicol (2008)).

The ownership and management of land in the upland areas Britain (particularly the Highlands of Scotland) and specifically access to it has long been a contentious issue (Wightman, 1996). Whilst this has often generated problems for those who wish to access the land for recreational or educational purposes it does offer valuable opportunities to reflect on and educate about 'sense of place', the nature of ownership and power relations as well as the more obvious issue of the natural heritage. I and other authors have argued elsewhere (Nicol & Higgins, 1998; Higgins, 2002; White, 1998) that this should be a central feature of outdoor education in Scotland and to fail to do so misses significant opportunities to help students to understand their culture and develop a connection to place. This approach has been advocated overseas (e.g. in Australia – Brookes, 2002; Martin, 2004; Wattchow; 2007), by PhD graduates of the School of Education (e.g. Takano – indigenous cultures in Alaska and Arctic Canada; Kandemiri – Zimbabwe) and is the topic of a current PhD study (Harrison).

Whilst there has been a customary tradition of access to the countryside (land and water) in Scotland it has only recently been enshrined in law through the Land Reform (Scotland) Act (2003) and the resulting Scottish Outdoor Access Code. Following considerable effort educational as well as recreational access to the countryside was included in the Act. Whilst some tensions still exist with land managers or owners there seem to be few problems. The positive consequences are significant for outdoor education, outdoor recreation and the economy. For the outdoor educator the issue of 'conflicting' rights and responsibilities in the countryside (linked to contested notions of ownership etc) offer valuable educational opportunities (Higgins *et al.*, 2004).

Taking responsibility – learning 'citizenship'

Implicit in the 'critical thinking' argument above is that any mature educational process should help students learn how to make judgements about the validity of evidence (in part based on the value-base of the sources) and their own experience. In this process educators are forced to consider the relationship between experiential education, critical evaluation and personal value systems. Whilst I have argued elsewhere that we should not impose a value system on students (Higgins, 2000) and that the development of and critical reflection on one's own values is a fundamental part of the process, the development and adherence to values is a key issue in education. Without this the intent and direction of experiential and indeed other approaches to education is not transparent and the outcomes unpredictable.

For example how many experiential and adventure programmes assert that they develop self-esteem in those they work with? In my experience this would certainly be a majority. But take for example the case of a young-person stealing cars for the purpose of 'joy-riding'. If he (and it usually is 'he') is good at it he will enjoy his success, his friends will recognize his skills, their respect will re-enforce these feelings and he will experience enhanced levels of self-esteem through this activity. What is missing from this process is for the learner to be able to distinguish between something educative and (in Dewey's terms) something mis-educative (Dewey, 1963, p. 25). Simplistically seeking to raise self-esteem through experiential programmes may well be hazardous, and there it is important for the teacher/facilitator to provide a structure to help young people learn from their experiences in a way that the values context is not left to chance. In essence this dimension of the learning process is a willingness to address values issues and to encourage individuals to take responsibility for their actions. What we should of course be trying to do is raise self-awareness as this is the means by which we become fully aware of what we do, why we do it and confront ourselves with the positive or negative effects of one's actions on oneself, others or the planet.

These key issues in personal and social development have long been the focus of attention of many outdoor education providers such as traditional outdoor centres and Outward Bound. There has been an increasing appetite amongst these providers for research on their programmes. For example in one of the largest studies of a programme ever carried out (a two year study of over 800 14-16 year old pupils) Christie found that the Outward Bound course included as part of the North Lanarkshire's Aiming Higher programme led to modest development in young people's personal and social skills.

Outdoor experiences have also been a key feature of 'therapeutic' programmes. In particular organisations such as Fairbridge and the Venture Trust have a strong reputation for their work with homeless young people, young offenders and those with alcohol or drug problems or at risk of offending. The Venture Trust in particular has commissioned studies on their programmes (e.g. Newman *et al.*, 2004) and the ability to show that their proposals are evidence-based has probably been a factor in their recent success in attracting funding for a range of creative programmes such as three-week entirely outdoor-based courses, the development of mobile as well as their traditional centre-based programmes, and a 10-year project with Scottish local authorities through the 'Inspiring Scotland' scheme.

These and other such programmes focus on 'taking responsibility' as a central theme and then to promote this as an approach in other aspects of life. In particular raising awareness of the consequences of actions and taking responsibility for them is vitally important in both local and global citizenship. This is essential for personal development (e.g. citizenship and personal health) but also pertinent to 'big issues' of the modern world (e.g. sustainability). This approach has recently become a feature of a new curriculum in Scotland.

Following a recent national review of education the Scottish Parliament has through its educational advisory agency (Learning and Teaching Scotland) embarked on a major initiative – 'A Curriculum for Excellence' (ACfE). In future much less emphasis will be placed on a subject-oriented curriculum and in preference the personal skills and attitudes of young people are to be the central theme, encouraging young people to develop the capacities of 'successful learners', 'confident individuals', 'responsible citizens' and 'effective contributors' (Learning and Teaching Scotland, 2008).

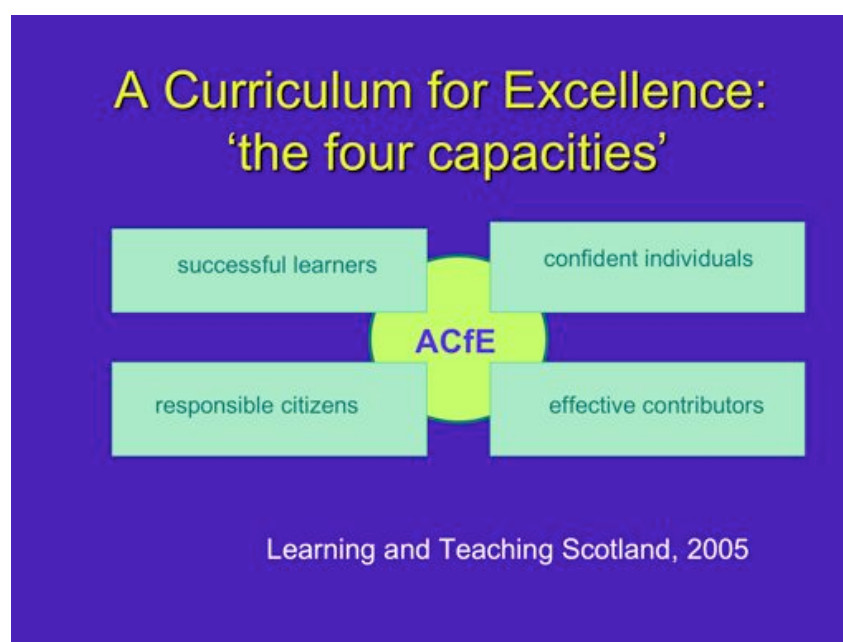


Figure 3

The development of such capacities is clearly difficult for schools to deliver and demonstrate. There is clearly a similarity between the claims made for outdoor education and these ‘capacities’ and so the Scottish Government funded an initiative called ‘Outdoor Connections’ and a major research programme (which we at the University of Edinburgh and others) have recently completed (see University of Edinburgh Outdoor Education (2009) website for details and Nicol *et al.* (2007) for a summary). As part of the work of the ‘Outdoor Connections’ programme (Learning and Teaching Scotland, 2009) staff have, through analysis of this and other research identified ways in which outdoor learning might deliver these kinds of developmental outcomes. However it is not clear how this will be encouraged, what the expectations of Government would be and what would constitute good practice. However, what is clear is that the flexibility of Curriculum for Excellence would allow schools to arrange much of their teaching outdoors if they wished to do so. This approach has been convincingly advocated by Beames *et al.* (in review) who argue that Curriculum for Excellence challenges the ‘dominant, fragmented model of learning’ and ‘legitimises the kinds of cross-curricular, autonomous learning that may be offered by theoretically-driven educational opportunities outside the classroom’. They also provide an example of a cross-curricular, place-based programme that is designed to do this (Outdoor Journeys, 2009).

How do we develop young-people’s skills in ‘taking responsibility’?

Rubens (1997, 1999) conducted qualitative research on links between outdoor education, adventure and learning, and set his findings in context through a comprehensive review of the educational and psychological literature. He argued that the literature on motivation in learning suggests the value of a ‘mastery’ approach and contrasts ‘narrow’ and ‘broad’ views of adventure. ‘Narrow adventure’ experiences are of short duration and focus on high thrills (zipwires, ropes courses, abseils, gorge jumps) but require minimal effort from the student who takes little responsibility for their actions. He contrasts this with ‘broad adventure’ which provides the converse, requiring the student to take responsibility for their actions and sustain effort. Such activities are characterised by, for example, journeys (e.g. by canoe or on foot). Rubens makes a strong case that ‘broad adventure’ encourages a ‘mastery’ approach to education which leads to a willingness for students to take responsibility for their actions in later life. From his review ‘narrow adventure’ appears not to produce such benefits.

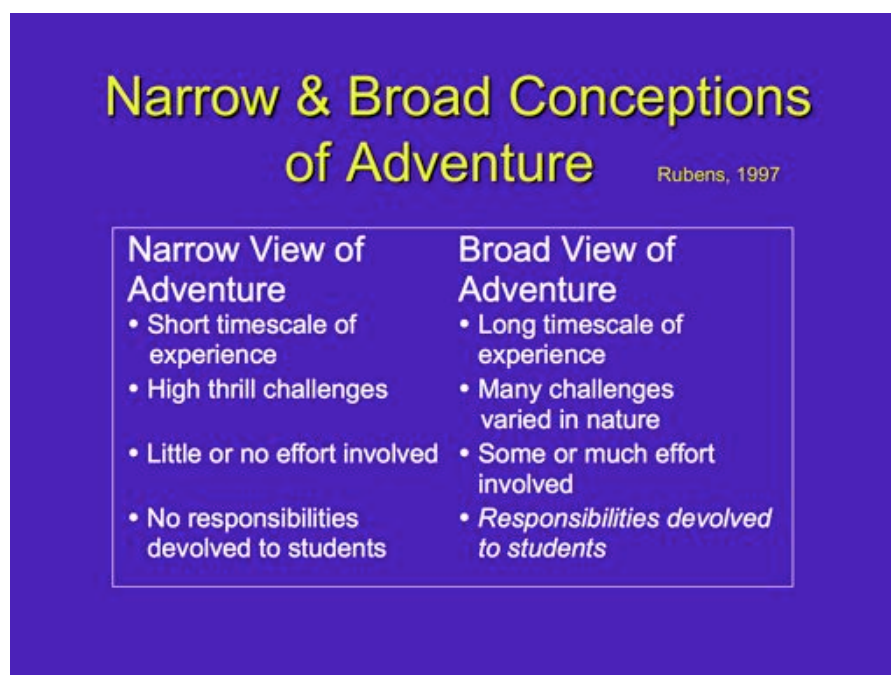


Figure 4

This is not an argument that says that all experiential education activities need to be based on ‘broad adventure’, but it is a challenge to ‘narrow adventure’. It does however suggest that if ‘taking responsibility for one’s actions’ is an educational goal then adventurous experiences which are broad in nature are better than those which do not have these facets. (For a more detailed discussion of this see also Higgins, 2003). Until recently there appears to have been no empirical research on the relative merits of ‘narrow’ and ‘broad’ outdoor experiential activities. However in a recent study Tay (2006) found that students on such a programme reported the experience of lighting a fire and cooking food on it as being far more challenging and educationally worthwhile than what he termed ‘adrenaline activities’ such as ropes courses.

Teaching today? Have you left your ego behind and brought your plan with you?

There are implications for those who choose to work on these broader educational outcomes (‘the five Cs’ and ‘taking responsibility’). It requires a willingness to trust in our students; to depend less on simplistic models of input, process and predictable outcome; to accept uncertainty and to be ‘small people in a big (educational) landscape rather than the converse. There is no role for a ‘big ego’ in any teaching situation; the focus must be on *the learner*, as Paulo Freire argues ‘the important thing is to educate the curiosity through which knowledge is constituted as it grows and redefines itself through the very exercise of knowing’ (Freire, 1998, p.31). Such an approach characterises education as moving from dependence towards independence.

But it also demands that teachers or instructors plan their students’ learning experiences carefully. It is vital that all ‘providers’ have a clear understanding that pupils on outdoor courses are there for *educational* rather than *recreational* purposes and that they are trained to deliver these, including meeting the expectations of the Curriculum for Excellence. Consequently in the design of programmes it is always important to consider the *aims*, *assumptions*, *methods* and *content*, before any *evaluation* allows *claims* to be made (Nicol, 2001). In essence providers should repeatedly ask themselves the questions:

- ‘why am I doing *this* activity with *each one of these individuals* at this time?’
- ‘what does *theory* and *experience* tell me about the choice of activity and what the participants are learning?’
- ‘how do I know if I have been successful in achieving my stated aims?’
- ‘have I carried out proper pre-course liaison and planning, and will there be careful post-course follow-up which I will consider in planning future courses?’

Without a careful process like this it is easy to jump from ‘*aims* for the programme’ to ‘*claims* about the effectiveness of the programme’. To avoid this Nicol (2001) and Higgins and Nicol (2002) have suggested the provider should be able to complete the following table for any outcome they claim to be able to develop:

	Aims	Assumptions	Content	Methods	Evaluation	Claims
<i>Insert ‘developmental outcome’</i>						

This requires a certain degree of clarity about the specific outcome sought. So for example and as indicated above simply inserting ‘PSD’ is not adequate and it is too broad. In preference, specific PSD learning outcomes (e.g. raising self-awareness) would be inserted. This is also the case for other intended outcomes, for example for a gorge-walk the table might look something like this:

	Aims	Assumptions	Content	Methods	Evaluation	Claims
PSD (e.g. self awareness)	Response to dealing with success or failure at times. Awareness of anxieties (slips, heights, water, cold etc).	Needs to be developed. Linked to other activities, e.g. walking, climbing skills	Half-day – Gorge walk. Instructor organised but students often leading	Give support when needed. Ask each to lead stages. Ask them to consider rest of group	Peer review at end of walk/day	Change in self-awareness? Anecdotal Temporary?
Environment (e.g. sustainability, biodiversity)	Water cycle; erosion; sensitivity of ecosystem; photosynthesis is CO ₂ & climate change	Basic knowledge Theory covered at school	Questions: Where does water come from & go to? Is weather the same as climate? Impact of groups.	Issue/problem based discussion over lunch, and at times during trip (content & values)	Raise issues again during canoe journey and rock climbing.	Level of knowledge & understanding. Temporary?
Physical skills (e.g. motor control, fitness)	Confident walking, scrambling. Aerobic	Students are 'capable' based on observations on previous local walk	Discuss foot placement, pace etc	Individual input during walk	Ask students to consider long term fitness	Anecdotal Temporary?

Another way, and indeed the traditional way of looking at this is simply ... '*We have programmed the group for a gorge walk*'. Whilst for a range of practical purposes this may be appropriate, if learning outcomes are intended (rather than just providing recreational activities) it is important to think of these (and state them) *first*. In other words the activity is subordinate to the learning outcomes. If students are engaged in an educational process that meets the expectations of Curriculum for Excellence and the broad educational ambitions outlined above, such an approach is essential for planning and evaluation; and of course for appropriate claims to be made and to enable the process to be understood by educational policy makers. This is vital for both credibility and support.

The politics of teaching outdoors

Developing an approach 'taking responsibility' in 'early years' education seems a realistic ambition but from the early 'teens' subject specialisms become a central feature of schooling. Here subject content matters, and experiential approaches will have to fit in with the disciplines. If experiential and outdoor educational approaches are to prove influential these may at some stages of schooling be a radical alternative, but at others complementary to mainstream education. In Scotland any lobby seeking political support for outdoor learning will require to develop mutual understanding and collaborate with mainstream education communities to have any hope of gaining ground.

In England too there is increasing support for education outside the classroom, and in the past few years there has been a Parliamentary enquiry and an active 'Real World Learning' campaign. Political interest has been stimulated in part because of public perceptions that children are increasingly separated from the natural environment, that they have little opportunity to learn to deal with risks, that they exercise less than they should, and that personal and social development as well as health and wellbeing would be enhanced by such experiences. The campaign has involved the sector working with politicians and civil servants to produce a 'manifesto' for 'Learning Outside the Classroom' (Department for Education and Skills, 2006). Support for such developments requires consensus-building across a range of communities of interest. In the UK this has involved those who work inside

and outside the classroom, their professional organisations, politicians, policy-makers and influential charitable bodies.

There are also real benefits in collaborating for mutual skills development between schools and other experiential education providers. For example in a recent research project in Scotland (Higgins *et al.*, 2006) we found that (amongst other factors such as cost) many teachers were concerned about safety issues and lacked the confidence to take children outside the classroom whereas they were confident in pedagogy and relevant curriculum. Perhaps not surprisingly specialist 'outdoor providers' on the other hand were the converse (Nicol *et al.*, 2006a). If these two groups, both involved in the common aim of educating young people were able to work more closely together and build staff-development partnerships there would be mutual programme design and teaching benefits and probably also lead to a stronger political consensus.

The extinction of experience?

The increasing tendency for young people to spend very little of their life outdoors has become a concern of UK policy makers. Lack of physical activity and its attendant health implications, lack of skills in risk evaluation and lack of understanding the natural heritage and environmental sustainability are common themes (e.g. see above for reviews). This is not confined to the UK, and for example Louv (2008) has written at length on the subject in North America. He points out the particular concern that if the present generation of parents and educators don't engage children with the natural heritage they are unlikely to do so when they become parents. He calls this 'the extinction of experience'.

Despite such concerns amongst policy makers, strong positive encouragement from Government and arguments such as those outlined above, informal opportunities for young-people to be outdoors are minimal. A number of barriers to engagement with outdoor spaces have been identified including traffic and road safety concerns, fears of bullying, criminal threat and stranger danger, lack of investment, overcrowding and poverty (Thomas & Thompson, 2004). McKendrick (2005) found that school grounds are significant locations for informal recreation yet 19% of Scottish secondary schools have lost grounds in the last ten years, 29% are too small and 92% of the 'hard surface' type. Further he found that school grounds are a low priority or not referred to in 57% of school development plans.

Outdoor learning experiences are in decline (e.g. Higgins, 2002; OfSTED, 2004; Rickinson *et al.*, 2004; Amos & Reiss, 2004; Dillon *et al.*, 2005). In a recent study we found that some schools provided extensive and diverse experiences but many offered few or no opportunities (Higgins *et al.*, 2006). Whilst residential provision is still widespread those school pupils who do have outdoor learning opportunities may experience just three to four days in their school career (Higgins, 2002). In a recent study of 51 Scottish Primary, Secondary and Pre-schools in the 2006 summer term (Mannion *et al.*, 2007) found that provision (opportunity, duration, location) was variable. Whilst generally Primary children's opportunities were greater than secondary pupils many of latter had no outdoor learning during the survey and the average for those that did was 13 minutes/week. For many young people their experience of outdoor learning is more or less confined to a residential course and the overall scale of provision in Scotland is significant at around 300,000 student-days/year (Higgins, 2002). However, most young people now pay significant charges for such courses (not solely for food and accommodation) raising ethical issues associated with equity and opportunity in public education.

The perception that outdoor learning carries substantial risks to health and safety of pupils seems highly likely to have been a major cause of a decline in school-based and residential outdoor learning provision (see the study on teachers' perceptions by Higgins *et al.*, 2006), but there have been other factors. Changes in local government, in funding and staffing, have

led to a decrease in qualified school-based staff (Higgins, 2002). Most Local Authority Outdoor Centres have reduced central funding and have taken a more commercial approach (Nicol, 2002), and commercial and charitable–trust centres and freelance providers vie for ‘business’, providing more days than Local Authority centres (Nicol *et al.*, 2006a). Furthermore, a recent study of Local Authority approaches to the provision of outdoor learning (Nicol, *et al.*, 2006b) found it to be highly devolved within and between Local Authorities, within departments in each authority and between individuals of varying degrees of seniority. Although in many it is provided by the Education Department, provision and management are not straightforward. In some, outdoor education is cross-departmental (education, community and children’s services); delivered by different people (teachers, rangers, instructors, youth workers) and takes place in different settings (school grounds, field visits, centres). Though its potential relationship with Curriculum for Excellence is widely acknowledged outdoor learning is not consistently understood by Local Authorities, and whilst one or two Councils have made new investments the majority have reduced provision.

Why indoors?

Yet despite all the arguments and political support it remains very difficult to make the case for outdoor learning. For example I have never heard of anyone involved in the education system in the UK being asked the question ‘why do you want to teach indoors?’, whereas every teacher I know who has suggested taking their students outdoors has been asked why they wanted to do so. I make this observation to suggest that we should apply critical thinking to the *assumptions* of teaching and the *status quo*. If there is a widespread assumption amongst teachers, teacher-trainers, Local Authorities, politicians and society that all teaching (with a very few exceptions such as PE) always takes place indoors, then it will seem odd if anyone questions this. It will simply not occur to anyone to ask the question ‘why indoors?’. If we do not ask this question evidence suggests that there will be a general assumption that the issue is not important. It becomes, along with a number of other ‘invisible’ assumptions about teaching, as Eisner (1985) suggests, part of a *null* (i.e. not acknowledged and not valued) curriculum. Imagine the impact of every aspirant trainee teacher being asked at interview to explain why they wanted to teach indoors!

Curricular priorities and the role of outdoor learning

In the same way as we tend to assume that education should take place indoors those involved in education as providers or receivers can be excused for thinking that ‘the curriculum’ is stable and subject to as little change as possible. However, when major changes in society occur curricula do change (e.g. in response to the development of information and computer technology). We are now entering a period of unprecedented human-induced global climate change which is widely acknowledged by scientists in the field as the biggest issue we as a species have ever faced. In my view (and I have been of this opinion for many years) this should be the central priority of any contemporary education system and the major focus of the curriculum. So, what is the role of outdoor learning in helping young people address this issue?

I should of course examine my own assumptions about sustainability issues and in particular, global climate change. Space and time does not permit a lengthy discussion but I can say that throughout my career (initially as an environmental scientist) I have tried to adopt a critical stance and have made a point of examining and understanding the science of this issue; I have examined a number of reports and listened carefully to the arguments when I have heard them. The reports of the Intergovernmental Panel on Climate Change (IPCC) (2007) and the ‘Stern Review’ on the economics of climate change (HM Treasury, 2006) make convincing and alarming reading. In the case of the Stern Report much of the content is economics so I must rely on the ‘expert source’, Sir Nicholas Stern who is the former chief

economist of the World Bank. He was commissioned by the UK Government to assess the economic consequences of inaction and action on global warming. In essence the report asserts, as climate scientists have been arguing for some while, that climate change is real, and human-induced and that the consequences of inaction to tackle it now will lead to disruption and economic collapse comparable to global war. Similar warnings were issued by the IPCC in 2007. As significant as the Stern Report is it seems ironic and tragic that a generation of scientists have been so poorly heard until an economist reviews and publishes their work.

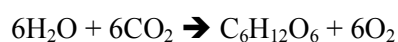
We are the generation of educators who must decide if we will address this issue. It is not for me to say what any individual or organisation should do, but in my own practice I have, over many years, given this considerable thought and emphasis. In doing so I have found a wide variety of educational opportunities which are stimulating and meaningful for students (see for example Higgins, 1996b). The Scottish Government (2006) is of a similar view, placing emphasis on the role of outdoor education in meeting its educational targets during the UN Decade of Education for Sustainable Development (2006-2016).

A practical example of outdoor learning

In order to provide an example of a way in which outdoor learning can help in understanding and thereby perhaps help in developing values and attitudes to sustainability I find myself drawn to another elegant example of Geddes' prescience. A century ago he made the point that '*by leaves we live*'

... this is a green world, with animals comparatively few and small, and all dependent on the leaves. By leaves we live. Some people have strange ideas that they live by money. They think energy is generated by the circulation of coins. Whereas the world is mainly a vast leaf colony, growing on and forming a leafy soil, not a mere mineral mass: and we live not by the jingling of our coins, but by the fullness of our harvests.
Geddes (1919)⁷

Photosynthesis in plants absorbs the carbon dioxide (CO₂) we breathe out and produce through burning fossil fuels, and releases oxygen we need to breathe.



This equation represents one of the most fundamental processes sustaining life on Earth. Without plants (on land, in freshwaters and the oceans) converting water and CO₂ into glucose and cellulose (plant structure etc) and oxygen, we would have no air to breathe, and indeed would not have evolved. The fundamental importance of this process passes most of us by and we could probably name only a couple of trees or other wild plants, and yet would instantly recognise global brands such as 'Nike', 'The North Face' or 'Snoopy'. So clearly educators have an important and urgent job to do if we are to address global climate change.

The great educational potential of dealing with such an issue experientially in the outdoors (carbon cycle, wood cutting and fire-making, tree-planting, prose and poetry etc) is obvious. For an example of such prose see the chapter entitled 'Good Oak' in A Sand County Almanac (Leopold, 1949):

⁷ From 1888 to 1919 Geddes was Professor of Botany at the University of Dundee (Scotland). He was only required to lecture during the summer term of each year and he spent the rest of the time travelling and working all over the world. This passage is from his final lecture in 1919. It was published in a reprint of *Cities in Evolution* in 1949 (p. 216).

Fragrant little chips of history spewed from the saw cut, and accumulated on the snow before each kneeling sawyer. We sensed that these two piles of sawdust were something more than wood; that they were the integrated transect of the century; that our saw was biting its way, stroke by stroke, decade by decade into the chronology of a lifetime, written in concentric annual rings of good oak.

Experiential educators can make a significant contribution to understanding the carbon cycle and our dependence on it, particularly through the outdoors by helping their students to develop a connection to place and to understand the consequences of their actions, but there is *knowledge* and *content* too, and we must not imagine we can engender real understanding through the ‘affective knowing’ alone (for similar exercises see Higgins, 1996b).

In summary

There are many facets of outdoor learning theory and practice that sit comfortably alongside modern progressive educational policy and provide realistic opportunities for educational development. For a movement that started out as a radical educational experiment to make its contribution to addressing the urgent educational, social and environmental priorities of the day it needs to do so with integrity. To gain respectability it must not provide simplistic recreational activities that to any outside observer would just appear to be fun without substance or depth.

I have put forward several models which are tempting to adopt as recipes for delivering educational programmes but these are, as Geddes called them, mere ‘*thinking machines*’ (see Meller (1990) and Stephen (2004)) designed to prompt creative acts, and not the ‘black boxes’ seen in many books. The goal of the teacher must be to sensitively respond to the learning needs of their students.

There is knowledge and understanding to be gained and this takes effort on behalf of the students and the teacher/facilitator. Practitioners and policy makers as well as those who research in other educational fields (e.g. mainstream education, psychology, sociology etc) will only take those of us who work in outdoor learning seriously if we do so and we can be seen to be engaging with significant issues.

Therefore I need in my own work at least to review my priorities and make choices. To do so I have my own version of the ‘three Rs’. My work has to be *Real and relevant* (to students, colleagues and politicians), help develop *Relationships* and a willingness to take *Responsibilities*. In doing so I must carefully select appropriate experiences for my students.

My own priorities ensure that a central focus of these *Real and relevant* issues are global environmental issues, and my approach is to encourage students to develop relationships with place, people and planet, and to help them develop confidence and drive to take responsibilities for their actions. In my view this is the way true leadership over this issue (and indeed many others) may ultimately come to make a difference. If I exclude such issues from my teaching, evidence suggests my students will assume that they are not important. They become, as Eisner (1985) suggests part of a *null* (i.e. not valued) curriculum, and students will assume that because I don’t value them they are not important. Eisner suggests that students are just as aware of this value position as they are of the ‘explicit’ curriculum we do teach. I cannot ask anyone else to make these their own priorities, but I can suggest that teachers (whether outdoors or indoors) consider the ‘three Rs’ above (*Real/relevant, Relationships, Responsibilities*) in their practice.

Since the development of the concept of ‘outdoor education’ it has been considered an innovative and creative approach to education. However, in the absence of any clear guidance from politicians, inspection by schools inspectorate or professional organisation

there is no guarantee of focus on specific learning objectives or discipline in delivery. In my view we improve the chances of 'learning outdoors' making the significant contribution to society it seems to be ideally suited to if we focus on 'the big issues' of the day. Surely the freedom outdoor educators have to devise and deliver their courses and our responsibility to the young people we work with demand it. It must be a central expectation of a professional educator that he or she is able to explain to a student, parent, teacher and politician *why I am doing this activity with this activity with each of these young people here now*. If outdoor educators and indeed the educational community can do so, there will in future perhaps be no need to have to routinely answer the question 'why outdoors?'

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Useful websites

Many of the documents referred to can be found on the University of Edinburgh outdoor education website. The home page is: <http://www.education.ed.ac.uk/outdoored/>
Books, Research Reports and key Government and other publications are in 'Resources': <http://www.education.ed.ac.uk/outdoored/resources.html>

See also the staff publications lists (by name). Most of those listed below under Allison, Beames, Higgins, Lugg, Nicol and Wightman are downloadable from the outdoor education website: <http://www.education.ed.ac.uk/outdoored/staff>

See also the MSc and PhD abstracts downloadable from the outdoor education website: <http://www.education.ed.ac.uk/outdoored/research.html>

For publications on child and adolescent health in Scotland see Child and Adolescent Health Research Unit (CAHRU) <http://www.education.ed.ac.uk/cahru/>

Outdoor Journeys project (under development): <http://www.outdoorjourneys.org.uk>

For publications on inclusive access to outdoor environments see OPENspace at <http://www.openspace.eca.ac.uk/>

For information on Scottish and International Perspectives on Land Tenure, Land Reform, Land Use and Social Land Ownership <http://www.caledonia.org.uk/land/>

Learning and Teaching Scotland – Taking Learning Outdoors
<http://www.ltscotland.org.uk/takinglearningoutdoors/index.asp>

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Study opportunities

The Moray House School of Education of the University of Edinburgh has the longest tradition of such provision in Higher Education in the UK. For over 35 years it has provided courses which balance theory and practice, and has an international reputation as one of the leading providers of outdoor and environmental education in the world. The University offers a range of courses for undergraduate and postgraduate students as well as extensive opportunities for doctoral research and beyond. In particular there are full-time and part-time postgraduate programmes in three areas of outdoor learning:

- Postgraduate Certificate/Diploma/Masters (MSc) Outdoor Education
- Postgraduate Certificate/Diploma/Masters (MSc) Outdoor Environmental and Sustainability Education
- Postgraduate Certificate/Diploma/Masters (MSc) Personal and Social Outdoor Education

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