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**Innovative Approaches to Early Childhood Education for Sustainability in
England: case studies from the field**

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BIOGRAPHIES

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Pat Black is Head of Initial Teacher Education at Bath Spa University, UK. Pat has been involved in primary and early years teacher education for 15 years; before this she was an early years practitioner. Pat's academic interests include education policy and teacher education.

ABSTRACT

Although there are innovative local examples of projects and programmes associated with ECEfS in England there has been no sustained policy commitment to this important aspect of young children's educational experience. The authors argue that natural play, that is, free play in natural environments, provides the foundations for ECEfS using the metaphor, nature as teacher. Despite England's rich heritage of providing outdoor nature experience for young children, current early years policy negates opportunities to develop natural play and children's engagement with nature. This combined with reduced experience of the natural world denies children essential developmental experiences and the underpinnings of EfS.

Four case studies of early years settings are used to illustrate ECEfS approaches in England. An analysis of documentation and external inspection reports from the settings found four distinctive approaches to EfS including: i] sustained authentic outdoor play; ii] place-based learning; iii] free play and risk-taking in the outdoors; and iv] participation in developing a sustainable school curriculum. It is suggested that staff interest and enthusiasm, children's needs, the local context and external agencies influence the approach to ECEfS adopted by some settings. For each case study there is evidence of positive impact of EfS on children's learning. The authors propose that future ECEfS learning opportunities should incorporate natural play, familiar and unfamiliar environments, participation and models of sustainable living.

INTRODUCTION

This chapter sets out to critique the extent to which the education policy context in England for the Early Years Foundation Stage (0-5 year olds) and the National Curriculum for Key Stage 1 (5-7 year olds) (Box 1) is able to support opportunities for Early Childhood Education for Sustainability (ECEfS). It is argued that in recent years there has been a growing international focus on the importance of ECEfS and ‘the value of starting early with education for sustainability... even if the practice and research is yet to fully emerge’ (Davis 2009: 228). In England, this trend has led to locally inspired ECEfS projects, but there has not been a sustained national policy commitment to this essential phase and dimension of education. On the contrary, it is argued here that the current standards-driven agenda and the framing of the natural world by a readiness for school agenda is undervaluing the importance of children’s access to the natural world and their opportunities to learn and develop relationships (early values) with their environments through natural play. We define natural play as free play experience in the natural environment where the environment stimulates the child to think and behave, as opposed to structured play where adults direct the activity. We consider natural play as the essential foundation for Education for Sustainability (EfS) in the early years. From this standpoint, we argue that the standards and readiness agendas leave little room for considering, with children themselves, how to sustain an environment.

The chapter begins by providing a brief overview of the origins of early years education in England and the opportunities this affords for natural play and education for sustainability. Four case study settings are presented which illustrate the development of distinctive, innovative and effective ECEfS curricula that provide

children with access and opportunity to engage in, and learn through, natural world experiences. The chapter concludes by proposing ways in which the Early Years curriculum in England could be enhanced to secure the essential educational experiences needed to support children's natural engagement with matters to do with environmental sustainability. We use the term natural engagement to illustrate the opportunities afforded to children to access and engage with the natural environment, for example, wild places, urban green spaces or gardens.

Box 1 here

EARLY YEARS EDUCATION: THE FOUNDATIONS FOR EDUCATION FOR SUSTAINABILITY (EfS)

Outdoor Play

The pioneers of early years education in England recognised the importance of outdoor play, in the fresh air, for promoting good health and development; this linked with the the open air nurseries and schools movement which started in the early 1900s and continued to the middle of the century (Cruikshank 1977). The open air schools movement was a public health response to urbanization, industrialization and health issues. At this time the urban poor were living in slum conditions and also suffering from air pollution with consequent affects on children's health in cities. This and other concerns about children's health, such as malnutrition, asthma and eczema led to the adoption of the open air approach, originating in Germany, which combined educational architecture to maximise fresh air alongside the provision of health education through modelling the importance of healthy lives (Hille 2011). Buildings and classrooms were designed to have direct access to outdoor areas with open sides throughout the year. Children played and learned outside and even slept outside

during rest times. One of the early open air schools was established in Peckham in 1914 by the sisters and educationalists, Margaret and Rachel Macmillan. These educationalists were 'strong advocates of fresh air and play in the outdoor environment' (Santer et al 2007:8). In 1928, educationalist Susan Isaacs supported the establishment of the Chelsea Open Air Nursery school, which still functions today and is a case study in this chapter.

Commented [EB1]: There are historic photos of open air schools, although it may be too late now to seek permission. Please advise if you want us to explore this

The emphasis on the outdoors in early years education continued with the forest schools movement that had developed in Sweden and Denmark. This rich legacy of open air education in England together with our 'outstanding diversity of wooded habitats' (Plantlife, 2011:5) which are a 'familiar part of the landscape' (6) may have influenced our interest in the forest school concept. Forest schools began to emerge in the mid 1990s supported by the UK Forestry Commission; by 2006 there were 100 in England (O'Brien and Murray 2006). The achievement of this initiative in England and the UK more widely has been significant in encouraging other countries to implement forest schools. The research associated with forest schools has demonstrated the benefits of outdoor learning (O'Brien and Murray 2006) and the forest school philosophy is having a widespread impact on early years philosophy and provision in England (Knight 2009, Maynard 2007).

Today, almost all early years settings provide outdoor spaces for activity and learning. Further, there is a policy requirement for all nurseries to provide an outdoor experience every day, weather permitting; however, the policy emphasis appears to focus more on physical activity than engagement with the natural environment (DfE 2012) (Box 1). Play is recognised as so important to a child's well-being and

development that the right to play is made explicit in the United Nations Convention on the Rights of the Child (UNICEF 1989). The centrality of both indoor and outdoor play in early years learning and development is ‘among one of the fundamental continuities in early years... Play is an almost hallowed concept for teachers of young children’ (British Educational Research Association Early Years Special Interest Group 2003:13).

The concept of play in England tends to be associated with child-centred learning and hands-on experience (Young-Ihm Kwon 2002). Recently, however, play has become a contested concept, both in definition and value; for example, whether to employ child- or teacher-initiated play (free play or structured play) and how play can address educational objectives and outcomes. As such, there is no agreed ‘pedagogy of play’ and ‘play in practice is deeply problematic’ (BERA Early Years Special Interest Group 2003:14). This may reflect, firstly, the variation in professional development opportunities and qualifications held by early years professionals (Siraj-Blatchford et al 2002) and secondly, the differing curriculum requirements within the early years age range.

‘During the Foundation Stage (3-5 year olds), they have many opportunities to learn outside through play ... At age 5 or 6, their educational experience becomes guided by the national curriculum. Opportunities to learn experientially outside become restricted as increasingly teacher-directed lessons focus on prescribed learning outcomes’ (Waite et al 2011:2).

Experience of the Natural World

The value of free outdoor play for child development and learning is widely accepted, not least because ‘the outdoor environment provides unique opportunities for children to relive their experiences through movement, and learn about the natural world’ (Santer et al 2007:41, see also Barratt Hacking, Barratt and Scott 2007). Natural play, free choice activity, and other experiences in the natural environment such as growing plants, making dens, and dam building on streams provide opportunities for children to act independently in the environment, modify it and develop understandings, skills and values. Barratt, Scott and Lee (2011) discuss their research into the impact of sustained experience of growing food in schools; they found it promoted ‘a pro-sustainability disposition: an ethos of care towards the Earth and its peoples’ (36). In one example in an infant school, a parent helper recalls the impact on the children of a broad bean crop being unexpectedly destroyed by caterpillars. At first the children are upset, but then they become fascinated, ‘my five year old ... he’d be telling you all about that caterpillar... It was huge and ... obviously caterpillars are green, the same colour of the leaf... (so) you can’t see them!’ (*Parent interview op cit*: 32). This illustrates how, through sustained nature-based experiences, children can get to know and develop a relationship with the natural world, thus providing foundational experiences for EfS.

Yet there is evidence that children’s experience of the natural environment is reducing in terms of time spent outdoors and the quality of children’s experience. We have reported previously on this trend (Barratt Hacking, Barratt and Scott 2007) including reasons - such as parental anxiety, increased traffic, children’s growing engagement with virtual worlds and the commodification of childhood and play - as adversely affecting children’s experiences of the outdoor environment. Underlying this trend is

the destruction or modification of urban and other habitats, for example, through renovation, infill or new developments, so reducing natural diversity. England's flowering plants, for example, are reported to be decreasing by 60% per year (RSPB 2013). On the local scale, Pyle (2007) suggests this results in the 'extinction of experience' (157) with reduced opportunities for children to experience wildlife and specific species in their locality. Further, a recent study in England drawing on 43,000 interviews with families, including those with young children, has identified different behaviours by social groups in respect of the natural environment (Stewart et al 2013 reporting on MENE project data¹). Data analysis revealed that, amongst people with children in their household, ethnicity and socio-economic group were the demographic variables that had most influence on visit frequency; with members of the Black, Asian and Minority Ethnic population and people in the lowest socio-economic groups being the least likely to take visits frequently, compared to the rest of the population. A small qualitative investigation to explore these quantitative findings observed that aspirations for visits to the natural environment may be different between adults and children, many parents seek leisure experiences which provide a product that has been 'commoditised' (pxx) and which will keep children occupied. This contrasted with the views of some of the children interviewed who perceived a visit to the outdoors as an opportunity for an unstructured experience to 'explore a less familiar environment, such as the beach, farmland or woodland, without necessarily knowing what might lie in store' (op cit, pxxx). These findings suggest that young children may prefer

¹ The Monitor of Engagement with the Natural Environment (MENE) project aims to provide baseline and trend data on how people (including children) use the natural environment in England. For the purposes of this project the natural environment is defined as the green open spaces in and around towns and cities, as well as the wider countryside and coastline (Stewart et al, 2013). <http://www.naturalengland.org.uk/ourwork/research/mene.aspx>

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unstructured, natural play, although this may not be available to them. Concerns about the loss of children's independent outdoor experience are shared by a range of researchers, practitioners and policymakers in England, 'children today have fewer opportunities for outdoor play than their predecessors. ... In play children seek out risks... Adult caution and fear reduce children's opportunities to set themselves challenges and take risks' (Santer et al 2007, lxiii).

Early Years' Policy: Opportunities for Natural Play and Engagement

Given these trends, it is clear that early years education in England has an important responsibility to ensure all children, no matter what their background, have regular opportunities for natural play. The evidence suggests that children living and attending educational provision in areas of the greatest social and urban deprivation have the most to gain from natural play opportunities. This is not only because of the dearth of local natural habitats, but also because these are the groups that are least likely to have opportunities for regular natural play. There seems, however, to be some misalignment of policies with respect to these opportunities. On the one hand, the Natural Environment White Paper (2011) promotes outdoor experience: 'as well as having important health benefits, access to the natural environment can also improve children's learning. We want to see every child in England given the chance to experience and learn about the natural environment' (Department for Environment, Food and Rural Affairs 2011:47). One of the four key reforms set out in the White Paper for reconnecting people and nature is 'action to get more children learning outdoors, removing barriers and increasing schools' abilities to teach outdoors' (op cit: 45). On the other hand, successive education policies have challenged

opportunities for free play in the early years and added pedagogical, curricular and assessment requirements; increasingly these policies permit limited time for play.

In recent years, government intervention in early years education has increased significantly in order to raise standards and improve readiness for school. Readiness for school is, however, a contested concept. The traditional view of this concept is about developing social and communication skills that will help a child to learn (Whitebread and Bingham 2011). The government's current view seems to relate readiness for learning to literacy and numeracy skills;

‘This leads to a situation where children's basic emotional and cognitive needs for autonomy, competence and relatedness, and the opportunity to develop their metacognitive and self-regulation skills, are not being met. The problem is not that children are not ready for school, but that our schools are not ready for children’ (Whitebread and Bingham 2011:4).

The greater emphasis on school readiness is reflected strongly in the England Early Years Foundation Stage statutory framework (DfE 2012) which sets the standards for all English Early Years settings. The framework focuses on learning, child development, and health and safety. Importantly, it highlights that settings must promote a model of teaching and learning that ‘ensures children are ready for school,’ and further, enables children to ‘learn the skills...and provide the right foundation for good future progress through *school* and life’ (DfE website)².

² All settings are subjected to inspection by the independent regulatory body, Office for Standards in Education, (Ofsted) who through their inspection framework, 2012, are required to grade each setting in respect of the Early Years Foundation Stage statutory framework.

It is argued that this, overtly school-framed agenda for the early years, narrows the curriculum on offer and limits the development of meaningful outdoor and natural play curricular experiences for children which are based upon reliable UK and international research (see, for example, Palaiologou 2009). What appears to be undervalued are the notions that i] best practice in early years foundation stage learning is premised upon the capacity of the curriculum to be predicated on children's play (Garrick et al 2010); and ii] outdoor play is a fundamental dimension of a child's life experience as proven by England's long tradition of pioneering and researching its impact. To reduce the opportunity for outdoor play seems to be inconsistent with an international agreement (UNICEF, 1989) and offers a limited educational experience. Opportunities for ECEfS are not specified in the statutory framework (DfE 2012), nevertheless settings could, and some still do, provide outdoor natural play curricula that focus on children's interests in sustainability.

Opportunities for Early Childhood Education for Sustainability

We argue that natural play and other experiences in the natural environment provide foundational experience for ECEfS; if a young child becomes familiar with a natural environment, observing changes over time, they can begin to understand the rhythm and cycle of life; in this way, nature becomes a teacher. The metaphor, 'nature as teacher', is offered by Webster and Johnson (2008) as a way forward for EfS. They explain this as 'In nature, 'waste=food'. Natural systems are self- sustaining and abundant. ... Everything connects and is closed loop, circular feedback mechanisms help to ensure a dynamic balance and continuity in the system' (15).

Therefore, if young children can understand the idea of life cycles and that in nature waste is recycled, this may also help them to understand recycling in the nursery setting, and thus the idea of living more sustainably. Further, facilitating other experiences in nature such as making secret dens, building shelters and overnight camping extends this by developing skills for sustainability and providing a glimpse of what it means to live sustainably, to depend on what is around you in the environment whilst sustaining it for the future. This suggests a plan for early progression in EfS; firstly, getting to know, understand and connect with natural environments in the locality (and elsewhere) and secondly, beginning to think about how to protect and sustain such environments. Simply, spending sustained periods of time outdoors, engaged in the challenge of interacting with the real-world would lead to an authentic curriculum experience. There is much to learn here from the Place-based education movement (Gruenewald and Smith 2007; Sobel 2004; Barratt 2011) premised upon the interactions of people with their locale. This would include the interest in indigenous knowledges in contexts such as Canada, Alaska, Australia and African countries (See also, Bates 2009; and Nakashima et al 2000).

Opportunities for ECEfS: The Policy Context

The curricular frameworks for this age range provide some limited opportunities for EfS. The early years framework for birth-5 year olds requires schools and early childhood settings to provide activities and experiences for children relating to a number of areas, including ‘understanding the world’ (DfE 2012). ‘This involves guiding children to make sense of their physical world and their community’ (op cit 5) ‘and talk about changes’ (op cit 9). For 5-7 year olds the demise of the former government’s sustainable schools framework (Box 2) in 2010 led to a reduction in

emphasis on EfS in schools, resulting in ‘increased uncertainties amongst educational institutions and practitioners about how much emphasis to place on sustainability within teaching and learning’ (UNESCO 2013: 17). The remaining EfS requirements for 5-7 year olds are the National Curriculum references to ‘environmental change and sustainable development in the local area’ (geography), ‘living things in the local environment’ (science) and ‘care for the local environment’ (science).

Box 2 here

The development of EfS is now, therefore, largely a matter for individual settings to decide upon thus depending on staff commitment to EfS and the contribution of EfS champions³. The champion can be from the staff, children, parents or other community members). There are examples of good practice across early years settings in the form of small-scale projects or programmes and regional initiatives. The impact of the former sustainable schools framework, together with the work of environmental organisations, has been significant in stimulating this work, for example, Eco-schools claims considerable reach into English schools (eco schools website). The inconsistency of EfS in early years settings and schools in general, however, has been evidenced in a meta analysis of research which ‘suggests that there is a big difference in practice between those schools identified as actively engaged with sustainability and the majority of schools for whom it is not a high priority’ (SEEd 2008). UK UNESCO believes that the widespread adoption of EfS requires ‘an overall strategic framework which puts it firmly at the core of the education

³ Champion is used here in the sense of championing a cause. The term is used in corporate sustainability literature on the role of individuals as environmental or social champions (or change agents) for corporate sustainability (Visser and Crane 2010). In corporate sustainability champions can be sustainability managers or any other individuals working in an organisation with a commitment to sustainability.

policy agenda’ in order to provide ‘coherence, direction and impetus to existing initiatives and ... build on existing good practice’ (2013:4; see also the SEEd website).

CASE STUDIES

Approach to the Case Studies

The following case studies illustrate how different early years settings have successfully provisioned for outdoor play, including meeting a sustainability agenda within the current statutory framework. All four settings are graded as ‘*Outstanding*’ the highest grade awarded by England’s independent auditor of educational standards, the Office for Standards in Education, Children’s Services and Skills⁴ (Ofsted, see the Ofsted website). These setting have been selected for analysis due to their educational interest in the natural environment and/ or EfS.

An analysis of Ofsted inspection reports forms the basis of these cases together with evidence from the setting and its EfS project documentation and websites. The subjective nature of inspection suggests the possibility of bias in this evidence. Nevertheless, Ofsted claim independence and rigour in moderating all inspection assessments before confirming their reports. A four year research study has shown recently that: ‘the inspection system appears to be effective... inspectors produce ratings which are valid and... they are able to identify poorly performing schools’ (Hussain, 2012). Given that OFSTED inspection reports are on-line and freely

⁴ Of inspections in 2011-12, 12% of early years registered provision was outstanding, 62% good, 23% satisfactory and 3% inadequate (Ofsted website). Ofsted is an independent organisation which reports to the Parliament in England. Ofsted inspects and regulate all services that care for children and young people as well as educational and skills providers for learners of all ages. All inspection reports are made public.

available to the public the consequent scrutiny of inspectors' grades and evidence may increase their validity. Hence, the analysis of Ofsted reports in the case studies attempted to i] verify the evidence obtained through setting documentation and ii] identify the impact of EfS in the setting.

Each case study includes an introduction to the setting and its local context, how EfS originated in the setting, how EfS is developed including its underpinning rationale, the approach to EfS with children and evidence of the impact of the approach on the setting and on children's learning and development. The findings of the analysis have been summarised in a statement that describes the distinctive approach to EfS adopted by each of the settings as follows:

- sustained authentic outdoor play leading to sustainable learning
- using Place-based learning to support education for sustainability
- valuing the outdoors, fresh air, free play and risk-taking as a foundation for sustainability
- advancing a participatory framed sustainable school curriculum.

These statements appear at the start of each case study along with the URL for the setting website.

Case study 1: Redcliffe Children's Centre and Maintained Nursery School

http://www.redcliffechildrenscentre.ik.org/p_Home.ikml

Distinctive approach to Education for Sustainability

Sustained authentic outdoor play leading to sustainable learning.

Introduction

Redcliffe Children's Centre is a National Teaching school⁵ with 86 full time equivalent places for children aged Birth-4 years. It holds the highest grade of 'Outstanding' awarded by Ofsted (2011a); this judgment included evidence of the success of the forest-based curriculum.

Context

This Local Authority children's centre is located in the south-west of England in an inner city area of Bristol. 'The nursery building is set amidst a group of high rise flats close to the city centre... The Centre is in the 30% band of the most deprived areas in England' (Redcliffe Children's Centre website).

'Nearly two-thirds of the children are of ethnic minority backgrounds; this is well above the average for England. The largest ethnic group is Black Somalian. Twelve different languages are spoken at the centre and nearly all of the children are at the early stages of learning to speak English. Just over a tenth of children in the centre have special educational needs and/or disabilities. Their needs include autism, speech and language disorders, complex emotional needs and physical difficulties. A quarter of the youngest children have special educational needs and/or disabilities; this is above average. The range and nature of their needs includes Down's syndrome, cerebral palsy and autism'

⁵ 'Teaching schools are outstanding schools with a strong track record of supporting other schools' (National College website). Any phase or type of school in England, including nurseries, can apply for this national initiative, however, there are stringent criteria and schools must demonstrate successful experience in providing support to other schools. Teaching schools provide school-to-school support for school improvement. At the time of writing there are more than 360 teaching schools designated in England.

(Ofsted 2011a: 3)

How education for sustainability started

The forest experience was established in 2006 due to the commitment of the head teacher who believed in introducing children to the natural world because they lived in a built environment. The head teacher and staff recognised that ‘children living in the high-rise flats had low levels of physical development as they did not have access to the outdoors’ (Ofsted 2011a: 7). In 2011, a minibus was purchased to facilitate ease of travel to the forest; three locations are used each of which is a few miles away.

How Early Childhood Education for Sustainability is developed

The centre focuses on outdoor play and ‘wild experience’ (setting website) as an opportunity to develop EfS; its statement of beliefs includes, ‘outdoor experiences are as important as indoor experiences. We need to look after the earth to survive’ (setting website). The setting’s principles are illustrated through weekly forest experiences for every child, which provides ‘awe inspiring matter, challenge, adventure, and ecology’ (setting website). The forest is also brought into the classroom; logs and leaves can be seen inside. The setting views the forest experience as beneficial to children as well as their families and parents/carers who are invited to join the forest experience at any time. This reflects the centre’s commitment and contribution to education within the wider community. These aims and commitment to outdoor experiences move well beyond the curricular expectations of the national Early Years’ Foundation Stage. This setting also sets out to promote children’s physical development and risk-taking through forest experiences, thus supporting the children’s confidence in, and enjoyment of, natural environments. This is seen to be especially important by the

staff because, as mentioned earlier, many of the children live in high-rise flats and/or have little opportunity for adventurous play in natural environments.

Approach to Education for Sustainability

All children spend one day a week in one of three forest sites ‘finding freedom and adventure’ (setting website) and using their senses to get to know the forest in different seasons and weather conditions. A child-initiated and ‘hands-on’, experiential learning approach is adopted with an emphasis on ‘exploration, experimentation, observation, problem solving, prediction, critical thinking, decision making and discussion’ (setting website). The approach could be described as providing authentic learning experiences (Rule 2006) in which learning occurs through collaborative real world experiences involving children and adults.

Evidence of impact

The centre staff report that children benefit from regular experiences in the forest in that they become familiar with it and observe change over time. They identify how children begin to appreciate the changes in the natural state of the environment throughout the year and as the seasons change in relation to colour, smell, sound and touch. The staff also identify that, through regular experience and opportunities to explore freely, the children become familiar and develop a personal relationship with the forest. Ofsted (2006) describe the forest as: ‘an excellent outdoor classroom where children develop their love of nature and sense of responsibility for the environment. This makes a very positive contribution to their spiritual, moral, social and cultural development’ (Ofsted 2011a: 6).

Further, Ofsted report that the outdoor experience contributes to children's physical development and resilience where:

'children demonstrate a very keen sense of adventure, tempered by a sensible approach to risk taking. This enables them to understand the concept of safety and to develop highly complex problem-solving skills. For example, wanting to climb a tree, two boys figured out that by leaning sturdy branches onto the trunk they could climb up into the tree and be 'owls'' (Ofsted 2011a: 5).

Case study 2: Bishop Sutton Primary School <http://www.bishopsutton.bathnes.sch.uk/>

Distinctive approach to EfS

Using place-based learning to support education for sustainability.

Introduction

This is an Ofsted-graded (2012) 'Outstanding' primary school with children aged 4-11 years. The Ofsted report contains evidence of the place-based learning project referred to in this case study. The school 'has been at the heart of village life since it was built in 1842' (school website). It now consists of Victorian buildings, newer extensions and outdoor spaces including a field in which the school has developed 'a conservation area with a pond, and a variety of trees, shrubs and plants' (school website). The school is located in an area of outstanding natural beauty including a lake that serves as a reservoir for neighbouring villages.

Context

The school is situated in the south-west of England in the rural village of Bishop

Sutton with approximately 1,200 people. There is less social and economic deprivation than average for schools in England. Almost all of the pupils are White British with the proportion of disabled pupils and those who have special educational needs well below average for England. There are four mixed-age classes in Key Stages 1 and 2 and a Reception class.

How Education for Sustainability started

A significant focus on EfS was inspired by the school's involvement in a place-based learning project with Bath Spa University designed to integrate place-based learning into the curriculum. The school was interested in developing EfS in the context of the local environment and its rich ecological and historical heritage. Prior to the place-based project, the school had not focused, in any depth, on EfS. However, with the support of the head teacher, an enthusiastic early career teacher became involved in the project supported by a university teacher educator.

How Early Childhood Education for Sustainability is developed

The school motto is 'learning together for tomorrow'. One of the school aims is to develop a positive self-image in children – respecting themselves, others and the environment and 'a sense of awe and wonder in the world' (school aims for the early years, school website). The development of EfS in the school has largely been as a result of a place-based learning project. The school has therefore developed EfS through the local place and by using an integrated approach to learning across subjects in the curriculum.

The school's involvement in a project to develop a community place-based

curriculum through science, technology, sustainability and the environment (Bath Spa University, funded by the AstraZeneca Science Teaching Trust, 2010-12) has made a key contribution to its EfS work. The purpose of this project was to research the benefits and impact of place-based learning (PBL) on children's education.

Approach to Education for Sustainability

Children's interests provided the stimulus and on-going direction for the place-based learning project; the project focused on the, 'Life of the Lake', through a local reservoir, Chew Valley Lake. The project also involved an investigation of environmental changes in the local area and their impacts (including before and after the building of the reservoir) and to identify the distinguishing characteristics of the locality / village identity by asking questions such as, what does it mean to be a Bishop Suttoner? The project approach was place-based, that is, designed to develop learning with the community that is grounded in the locale. Local community partners included historians, villagers and older people, parents/carers, farmers, a community farm and Avon Valley Wildlife trust. Activities with villagers included planning and hosting a community tea party to gather local perceptions and experiences of the village and lake. Activities with the wildlife trust included 'a day of environmental studies where the children used their science skills to carry out ... surveys and pond dipping activities in both the lake and our school pond' (project teacher) (Bath Spa University, Children Environment Research Centre Bath Spa University, Children Environment Research Centre, 2013).

Although the emphasis of the project was to develop EfS through science, environment, and technology this has been a genuinely integrated cross-curricular

approach with EfS being supported through mathematics, English, music, art and history.

Evidence of impact

The Ofsted school report included reference to the place-based project in its report:

‘the exceptionally well planned creative curriculum inspires learning, motivates pupils and staff and makes a very strong contribution to pupils’ outstanding spiritual, moral, social and cultural development. This can be seen in the exceptionally high quality work arising from the Lakes project. This project exemplifies the school’s use of links with other organisations to extend opportunities for learning as it was carried out in partnership with other schools and Bath Spa University. It also enabled pupils to work alongside experts such as artists and scientists from the community’ (Ofsted 2012a: 8).

As a result of the project, the school has established new relationships within the community and with other organisations and has further recognised the opportunities and value of intergenerational learning. In the ‘end of project’ interviews the project teacher reported that, ‘children are ‘empassioned’ about the location and lifestyle... there was a sense of excitement’ (Bath Spa University 2012: 11). Through this project, the school considered the relationship between the school curriculum (National Curriculum subjects and dimensions) including science and technology, and the local environment/ community. The school believe that student progress and achievement in numeracy, literacy and science was enhanced by their involvement in this project. The project teacher cited the motivation of the children involved and how

their standards improved. Interestingly, the teacher (who was not from the local area) also developed sophisticated understandings and respect for the value of the local environment as a learning resource. Place-based learning is now being embedded across the school curriculum

‘The project has raised the profile and significance of local studies and curriculum topics within our school. It has proven that learning about your local area need not be dry or un-ambitious and that children really do have a genuine fascination and interest in learning about their local environment’ (end of project teacher interview, Bath Spa University 2012: 16).

The evaluation of the project by the Bath Spa University researchers (op cit 2013) found evidence that the children in the project developed:

- deep learning
- new enquiry skills as active researchers (e.g. using data loggers, science software, developing a digital archive and questionnaires and online surveys)
- personal engagement with the local environment and community
- personal aspirations for their local environment and community.

Case study 3: Chelsea Open Air Nursery and Children's Centre

<http://www.chelseaopenairnursery.co.uk/>

Distinctive approach to Education for Sustainability

Valuing the outdoors, fresh air, free play and risk-taking as a foundation for sustainability.

Introduction

The Chelsea Open Air Nursery is internationally recognised for its ethos and focus on indoor and outdoor learning. This is a community nursery with 59 children and has an extensive outdoor space (gardens). It has been graded, ‘*Outstanding*’ by Ofsted (2012). This nursery has a rich heritage having been established in 1928 by an American, Natalie Davies, with the involvement of the educationalist Susan Isaacs. The early principles of the nursery were to ‘combine a healthy and invigorating lifestyle with the most recent discoveries in child development’ (Chelsea Open Air Nursery and Children’s Centre, School website). Susan Isaacs inspired the nursery with her child-centred approach to education and belief in the importance of fresh air for young children.

Context

This nursery is situated in the inner city of London in the affluent area of Kensington and Chelsea. There is a diverse range of children with ‘one third of children ... of White British heritage and the remainder come from a range of minority ethnic backgrounds’ (Ofsted 2012b: 3). Evidence of social and economic deprivation is lower than average for England. At the time of inspection there were three children with Special Educational Needs (SEN). ‘Children enter the nursery with levels of skills, knowledge and understanding that are below those typical for their age’ (Ofsted 2012b:4).

How Education for Sustainability started

The nursery has a history of outdoor play and learning beginning with the

contribution of educationalist, Susan Isaacs and the open air philosophy.

Susan Isaacs believed that the 'outdoors was as valuable a learning environment as indoors. The Open Air philosophy, also, recognised that many city children did not have enough access to fresh air, sunlight and exercise for healthy development (Chelsea Open Air Nursery and Children's Centre Prospectus, no date). The head teacher has a special interest in outdoor learning and has had several articles on outdoor play published (see, for example, Solly 2007) and is completing her first book about adventure, risk and challenge in the early years.

How Early Childhood Education for Sustainability is developed

The 'open air philosophy' combines with indoor activity to provide 'a complete and balanced learning environment' (school website) with a combination of free play and structured activities. Risk and challenge is seen to be 'a strong ethic for children's learning and play, and this is reflected in how the provision is run' (Play England website, case study).

Amongst the aims of the nursery are for children to:

- have free access to outdoors
- play in an environment which stimulates the imagination and allows reasonable risk-taking
- explore, discover, experiment and plan to be independent, creative and inventive learners
- make their own choices and decisions
- experience privacy and seclusion, joy and celebration
- develop an appreciation of beauty as perceived through all the senses

- develop a love and understanding of nature, the local community and the world further afield.

Approach to Education for Sustainability

The nursery adopts a play-based approach to learning with a balance of free play and structured activity. ‘A child’s play is work. Young children learn through play by active investigation and exploration’ (school website). There is a great deal of choice and space for children to play, both indoors and outdoors; ‘children are encouraged to play outside and make the most of the outdoor space, which contains various play structures, flowerbeds, trees, a hut and a sand-filled pirate ship’ (Play England website). Children are also involved in gardening and growing food that they then have the opportunity to cook and try, for example, ‘using the juicer, growing beans, making soup’ (school website).

Both inside and outside areas of the nursery are seen as learning spaces, or ‘workshop areas’, ‘the outdoor area is ... carefully planned to offer children... a variety of learning opportunities appropriate to the weather.’ As well as outdoor activity in the school grounds the nursery provides ‘expeditions’ into the local environment, for example, ‘going on an expedition to Holland Park Ecology Centre, Natural History Museum and Albert Bridge’ (school website).

Evidence of impact

‘The strong focus on outdoor learning all year round and the ‘expeditions’ to places beyond the school are very special and very effective features of provision’ (Ofsted 2009:4). Children are encouraged to explore, investigate, experiment and above all

question (Ofsted 2012b:4). Children feel very safe in the nursery, ‘they are confident to take risks in the outdoor area, but listen carefully and respond to adults when they feel children are entering an activity that is potentially dangerous’ (Ofsted 2012b:5).

Case study 4: Emscote Infant School

<http://www.emscoteinfants.co.uk>

Distinctive approach to Education for Sustainability

Advancing a participatory-framed sustainable school curriculum.

Introduction

Emscote Infant school is a smaller than average infant school in England with 157 children aged 4-7 years. It has continued to improve, moving from Ofsted ‘*Good*’ to ‘*Outstanding*’ between 2009 and 2013. The school has been awarded the Eco Schools green flag.

Context

A large majority of children are of White British heritage. The school is situated in Warwickshire in an urban area. It has average numbers for England of i] children with Special Educational Needs (SEN) and ii] children from backgrounds with social and economic deprivation.

How Education for Sustainability started

The focus on EfS arose from the work of a champion (a committed teacher) and their involvement in the EcoSchools initiative; the international award program for

developing sustainability in schools. 'One teacher's passion got us started and the Green Flag Award in 2004 was both a measure of our early success and a stimulus to do more' (Ofsted 2011b).

How Early Childhood Education for Sustainability is developed

The school believes that 'sustainable development runs through everything we do' (Ofsted 2011b:1). This school adopted the previous government's sustainable schools strategy (Department for Children Schools and Families (DCSF), 2008; Box 2), using the 'eight doorways' as a structure to build and evaluate the curriculum and as a way of embedding sustainable development in its work. The doorways are fundamental to the way England's previous sustainable schools strategy was to be implemented in schools (DCSF 2008). This school has focused on embedding sustainability in the curriculum, developing a sustainable campus and working with the local community.

Approach to Education for Sustainability

The school makes good use of the outdoor environment to provide learning opportunities for children through, for example, gardening, exploring, and play. A participatory approach to EfS is adopted ensuring that all stakeholders are involved (leaders, teachers, children, governors, administrative and other staff, parents/carers, and community members). The school claims that sustainability is now 'completely embedded throughout the school' (Ofsted 2011b:2).

Children take a lead in decision-making and action through the eco team; the caretaker helps to save energy and administrative staff lead the reduction of paper use and other resources. Children's ideas are acted upon where possible, for example,

‘the pupils have introduced a water saving scheme for rainwater which is used for the flower pots and beds. Outdoor play equipment and the gardening club were also their suggestions. Children monitor electricity use and lead initiatives to save electricity’ (Ofsted 2011b:2).

Evidence of impact

The grounds have been developed to include woodlands, raised beds, bird boxes, bike parks and play areas. Classes are named after tree species and there are attractive wall displays throughout the school. ‘The hugely attractive outdoor area with its screening, natural shelters, composting and recently planted fruit trees reflects the level of care taken in all aspects of the school’s work’ (Ofsted 2013:7). Effective use is also made of the outdoor spaces to promote children’s social and physical development.

The school was selected by Ofsted as an example of good practice in respect of education for sustainable development. It was commended for its focus on outdoor learning for the youngest children (4-5 year olds) for whom ‘a wide range of opportunities help children to learn very quickly through play and investigation, both inside and outside the classroom’ (Ofsted 2013:5). Ofsted also noted its links with organisations in Finland, France, Bo in Sierra Leone and Italy including involvement in a Comenius⁶ funded project about sharing best practice in water conservation with

⁶ ‘The Comenius Programme is named after Jan Amos Comenius (1592-1670), often considered the father of modern education. Comenius is aimed at schools, colleges and local authorities across Europe. Comenius has two main objectives:
i] to develop knowledge and understanding among young people and education staff of the diversity of European cultures and languages, and the value of this diversity
ii] to help young people to acquire basic life skills and competences for their personal development, for future employment and for active European citizenship’ (British Council website).

partners in Finland, France and Italy (op cit 2013).

SUMMARY

The case studies illustrate that effective EYEFs can be approached in distinctive ways according to the philosophy, interests and expertise of staff and others in the setting community as well as the influence of outside agencies and local characteristics. An ECEfS curriculum that considers the needs of the child and the local context can provide significant opportunities for natural play, nature as teacher and meaningful learning. We have argued that learning in natural environments can lead to sustained knowledge creation, action taking and value building. Chawla's (2007) 'significant life experience' research argues convincingly that positive nature experiences in childhood contribute to a lifelong interest in sustaining and caring for the environment. The case studies also demonstrate the passion and commitment of individuals and/or external agencies to ensure that children have experience of the natural world. Together, an appropriate curriculum and professional commitment to EfS, can lead to the development of concepts, skills and behaviours for sustainable living.

Independent reviews of the curriculum in England for the Early Years Foundation Stage (Birth-5 years) (Early Childhood Action 2012) and for primary children (5-11 years) (Hofkins and Northen 2009; Rose 2009) espoused an entitlement to EfS for young children. Yet this chapter has shown that a commitment to EfS is not evident in the educational policy context or curriculum for Birth-7 year olds in England today. The 'schoolification' (Early Childhood Action 2012) and standards-driven approach

to the early years curriculum in England is a conceptually narrow response to raising educational standards in the primary years. This approach undervalues the importance of play that practitioners and researchers in the field acknowledge should be central to any early years curriculum. Further, the reduced opportunity for outdoor play in England due to the concerns and perspectives of many contemporary parents together with reduced access to natural spaces, is affecting children's life and educational experiences.

Any future ECEfS curriculum should consider the relationship of the child to the natural environment (local –global), the child's engagement with nature and the importance of play. In particular, future curricular should consider a range of EfS learning and development opportunities that incorporate natural play, familiar and unfamiliar places and environments, participation and sustainable living (Box 3).

Box 3 here

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Box 1 A Summary of Early Years Provision in England

Early years education up to the age of 4 years takes place in a range of different types of pre-school provision including playgroups, Local Authority and private nurseries, nursery classes in schools, workplace nurseries, child and family centres run by social work departments and community childcare centres. This varies by region 'reflecting Local Authority funding and geographical conditions (i.e. urban/rural and local access to centres)' (Sylva et al 2004:2). Schools (maintained and independent) provide the remainder of early years education ('reception classes' – 4-5 year olds) and Key Stage 1 education (5-7 year olds).

Box 2 The Sustainable Schools Framework in England (2006-2010)

The sustainable schools framework was introduced in 2006, comprised of three interlocking parts: a commitment to care; an integrated approach (developing EfS through the curriculum, campus and community); and eight doorways or entry points developing sustainability practices. The eight doorways were Food and drink; Energy and water; Travel and traffic; Purchasing and waste; Buildings and grounds; Inclusion and participation; Local well-being; Global Dimension. This initiative was seen to bring educational benefits to schools and children where the framework was well-developed (Barratt, Scott and Lee 2010).

Box 3 EfS Learning Experiences for the Early Years

In the early years children should have the opportunity to experience:

- free play, natural play and outdoor structured ‘activity’ (e.g. growing, physical activity)
- natural play as an essential dimension of children’s development
- caring for the environment, for example, gardening, tree planting, improving a small scale environment.
- natural play with other children from other places
- learning *about* and *through* the environment
- regular and return visits to a natural place
- sustained periods of time in the natural environment, for example a camp in which children, teachers, families and community members live in a natural space and are challenged to think and act responsibly in relation to food, water and shelter.
- visits to different environments and places including coastlines, mountains, forests, farmland and built environments
- an international expedition
- a night time expedition to a natural environment
- learning which is focused on global perspectives
- a (national) curriculum that reflects a global environmental agenda taking account of how people live and interact with the planet
- intergenerational learning to share knowledge across the generations and provide role-models
- planned progression in learning about the environment and sustainability
- recognition as global, national and local citizens
- being listened to about their perspectives on the (local) environment
- planned learning about how to live more sustainably in their local environment (skills, knowledge, understanding and values)
- participation in developing and using sustainable practices in the setting that replicate nature’s cycles and systems (for example, reusing waste, walking to school, collecting and using water...)
- roles as sustainability leaders, champions and ambassadors in their setting or local community (helping or persuading others to live more sustainably)
- a dialogue with adults about the nature of their educational experiences including what they see as meaningful learning
- researching their own environment (e.g. species counts, bird watching, how environments have changed...)
- what local and distant habitats, places and environments are like at different times (day and night) and seasons using digital technology (e.g. webcam in a nest or burrow, webcam in a city centre).

