

Camping on Concrete: Professional Development for Adventurous Activities in Wales

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ABSTRACT

The growing discourse around ‘cotton wool kids’, risk aversion, childhood health, activity levels and nature deficit (Gill 2009; Munoz 2009; Louv 2006) has led to concerns about the experiences of children and young people in the education system. By contrast recent changes in the National Curriculum for Physical Education in Wales (2008) have increased the emphasis on learning in the outdoors. At Key Stage 2 (ages 8–11) the programme of study for Physical Education now includes Adventurous Activities¹ as a statutory entitlement. A new Outdoor Learning Cards resource and training programme has been developed to assist teachers in the delivery of ‘high quality outdoor learning activities and to help young people develop a range of skills related to these activities’ (Outdoor Education Advisors Panel, 2008, p. 4). Four designated outdoor learning activities have been identified as the focus of the Outdoor Learning Cards: journeying, team building, bouldering and orienteering. The aim of this research is to investigate the impact of the Outdoor Learning Cards training and resource on adventurous activities provision in schools in west Wales. Data for the study was generated via open-ended questionnaire (23% response rate) and selected interviews from a total of 90 teachers who had attended the training course. Findings suggest that the training

¹ Adventurous Activities is the term used in Wales to describe activities of a challenging and outdoor nature in the Physical Education Programme of study (DCELLS, 2008). Other terms such as *outdoor and adventurous activities* and *outdoor education*, which reflect earlier curriculum models and teachers’ personal preferences are, for the purposes of this research, used synonymously.

and resource is valuable in developing teacher's confidence and expertise. There is also evidence of a broader impact upon complementary forms of adventurous activities pedagogy in schools. Children are reported to be highly enthusiastic and engaged in physical education lessons when using the resources. Teachers also highlighted the positive impact of adventurous activities upon the development of their Key Skills understanding. The research raises issues relating to the limitations and potential of the Outdoor Learning Cards resource to deliver high quality adventurous activities in the curriculum as well as implications for future training course delivery and school-based teacher practice.

Introduction

The media highlight concerns about the lack of opportunities for children to roam and play in green spaces, e.g. *The Times* 2007, *The Mail* 2008, *The Telegraph* 2010. Developments in technology and the loss of green spaces mean that children increasingly spend their time on computer games and in front of television and computer screens (Palmer 2006). Louv (2005, p. 36) describes 'Nature-deficit Disorder [as] the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses.' Combined with Gill's (2007) discourse relating to a risk adverse society, and Mortlock's (2009) anger at how adventure in the natural environment has been replaced by adventure in the form of computer games, it seems that the need to ensure children are able to access natural environments is increasingly a priority for both education and society in general.

The growing interest in the outdoor environment as an integral and valued resource for children's learning and development (Maynard and Waters 2007; Louv 2005; Garrick 2004; Waite 2011), in particular the natural environment, also highlights that this learning incorporates increased levels of physical activity (Mygind 2007) and improved motor development (Fjortoft 2004). Maude suggests there is overwhelming evidence for the benefits of outdoor play for young children where meaningful exploratory experiences create 'opportunities to become risk literate and physically literate' (Maude 2010, p. 113).

Wider benefits are highlighted by Waite (2010), who suggests learning outside the classroom enables observation of children's natural behaviour, not tied to a particular learning outcome, but a view of the holistic social

and emotional aspects of learning. In his report *Natural Thinking*, Bird (2007) also makes a strong case for the importance of engagement with nature linked to a variety of issues. He identifies evidence that suggests nature impacts positively on children's concentration, levels of stress and that it can reduce aggression. It can be used to treat children with poor self-discipline and ADHD (Attention Deficit Hyperactivity Disorder), as well as improve well-being and mental health. Louv (2005, p. 105) supports this, describing the restorative qualities of the environment as 'Nature's Ritalin'.

Alongside the growing awareness of the importance of the outdoors for children's development has been a growing discourse focusing on the design of children's play spaces and the need to facilitate access to outdoor spaces, not just for play but where children can engage in outdoor activities (Munoz 2009). Not only is the design important, but the way in which schools use their grounds and access the local environment will impact on the quality and amount of outdoor education available to the children. Many urban schools may not have access to the types of landscapes and wild places that Mortlock (2001) used for adventurous activities when working with children. However much of the research evidenced by Bird (2007) demonstrates the impact of nature to be so profound that even minimal exposure to it can be beneficial (Taylor, Kuo and Sullivan 2001). Much can be done with limited space and Moore and Wong (1997) highlight a wide range of benefits to pupils and staff resulting from the transformation of a tarmac yard into an environmental yard with the addition of natural elements.

Outdoor Education in the Curriculum

The 1944 Education Act in the UK made it a statutory requirement of every local authority 'to secure provision for their area of adequate facilities for leisure-time occupations in such organised cultural training and recreative activities as are suited to their requirement' (Hunt 1989, p. 28). Whilst the Act made no specific reference to outdoor education, other sections of it drew upon the New School Movement of the early twentieth century, the development of organised youth groups such as the Scouts, Guides, and Youth Hostel Association, and the establishment of Outward Bound and the Duke of Edinburgh Award, recognised the need to provide challenging, adventurous, outdoor activities as part of the educational

experience of all children. Hunt (1989, p. 24) comments on the universality of such themes that 'lie at the heart of outdoor, and indeed all, education' that are equally important to the process of education today as they were then. Other sections of the Act provided a way forward for local authorities to begin to introduce children to the benefits and learning potential of education outdoors. In particular it suggested, 'a period of residence in a school camp ... would contribute substantially to the health and width of outlook of any child from a town school, especially if ... the study of the countryside and the pursuit of outdoor activities formed the bulk of the educational provision and were handled by specially qualified staff' (Hunt 1989, p. 25).

In 1950, the White Hall Centre in Derbyshire became the first Local Authority funded residential centre to be established in the UK. In the years that followed, residential experiences became a cornerstone of state sector outdoor education provision, focusing upon personal and social learning through outdoor pursuits and field studies (Ofsted 2008).² However, despite widespread recognition of the value of outdoor education such provision has remained beyond the statutory obligation of local education authorities, leaving it open to cost-cutting and the threat of closure in more difficult economic times (Humberstone 1992). Noble (1995, cited in Nicol 2002) identified a reduction in the length of Local Authority residential experiences from 28 days to 8 days. This downward trend has continued since the turn of the century with the most centres now offering residential experiences that last between 3–5 days (Williams 2013). Other criticism focusing specifically on the educational process, has come from a number of quarters. Ofsted (2008, p. 17) have raised concerns about the rise in the use of commercial rather than local authority centres. Dillon et al. (2005) and Williams (1995) have called for teachers to liaise with residential centres pre and post visit so that experiences meet the particular needs of pupils, whilst Ofsted (2008, p. 17) highlight the importance of the visit as an integrated part of pupils' holistic as well as curriculum learning rather than 'an isolated special event'. More positively, they identify a range of good practice to reduce staff workload linked to outdoor residential experiences to include the use of well-trained administrative support staff, the provision of generic risk assessments and teaching material by local authorities or centres and the support of an educational visits coordinator (EVC). At the same time Gill (2010) has attempted to debunk many of the

² Ofsted is the Office for Standards in Education in the UK.

urban myths perpetrated by the media that continue to undermine the provision of outdoor education learning opportunities. In particular, he has drawn attention to the overall increase in the number of outdoor visits undertaken by schools as well as bringing a more rational voice to the threat of prosecution if something goes wrong.

Beyond the provision for residential outdoor education, it was not until the Education Reform Act of 1988, and the introduction of the National Curriculum in 1989, that provision for outdoor education in the curriculum was increased. However, rather than being established as a subject in its own right, and there are many who would suggest it does not have the requisite body of knowledge to be identified as a curriculum subject (Barnes and Sharp 2004; Nicol 2002), it was introduced as Outdoor and Adventurous Activities (one of six areas of learning) in the Physical Education Programme of Study and made available as an option choice alongside athletic activities. In the *Wales Curriculum 2000* document (ACCAC 2000), Outdoor and Adventurous Activities consisted mainly of orienteering and problem solving until Key Stage 4, when journeying, camp craft and adventurous challenges were added (ACCAC³ 1999). Although self-evaluation and the development of personal and social skills were highlighted at Key Stage 4, the potential of outdoor and adventurous activities remained stubbornly unfulfilled as it remained an optional choice for pupils and schools at all key stages. Humberstone (2002) eloquently sums up the situation: 'I would suggest that outdoor education in its present form did not feature substantially in the National Curriculum because it is ideologically incompatible with, and in practice, incongruent within, a National Curriculum framework, where knowledge is more rigidly compartmentalised and teaching is likely to be led by test rather than by the needs of the pupils' (p. 163).

The politicisation of education over the last twenty years would suggest Humberstone's analysis to be accurate; however physical education has proven to be a valuable ally in enabling outdoor education to be made more readily available to all pupils. Recent research drawing attention to the physical (Veitch et al. 2005) and health benefits (Munoz 2009) of outdoor experience in particular have helped to strengthen the physical education–outdoor education relationship. More broadly, the upsurge in provision of Forest Schools has identified increased levels of physical activity through learning outdoors (Mygind 2007), with a commensurate

³ ACCAC is the Qualifications, Curriculum and Assessment Authority for Wales.

decrease in pupils' sedentary time from three quarters to a third of the school day. As positive and welcome as this research is in providing a stronger empirical basis for outdoor education within the curriculum, no similar studies have been undertaken with pupils aged between 8–16, and Munoz (2009) highlights the need for more systematic investigation of outdoor experiences for children of different ages and gender.

Outdoor Education in Wales

In Wales this relationship between Physical and Outdoor Education has been further strengthened with the creation of the National Assembly for Wales (1999) and the emergence of home-grown education policies, different and distinct to those in England, to meet the specific educational, social and cultural needs of the people of Wales. Informed by a series of policy documents (*Climbing Higher* 2005; *Climbing Higher Next Steps* 2006), a twenty-year strategy has been developed aimed at increasing the population's use of the natural resources of Wales. Similarly, *Creating an Active Wales* (2009) has further identified the need to equip young people with the skills and motivation to use the outdoors in a bid to stem rising health problems associated with a lack of physical activity.

Most recently the introduction of a new learner-centered, skills focused curriculum (DCELLS 2008a) has further demonstrated Welsh government commitment to the learning potential of the outdoors. Three developments have particular importance for Outdoor Education in Wales. First, there is the introduction of the underpinning Skills Framework for 3 to 19-year-olds. This new curriculum approach advocates the development of the key skills of Thinking, Communication, ICT and Number across all subjects and areas of learning, including adventurous activities, from 3 to 19 years of age. Second, Early Years and Key Stage 1 have been replaced by an holistic play-based learning continuum for children aged 3–7 called the Foundation Phase, that advocates children learning through first-hand experiential activities using both indoor and outdoor classrooms (DCELLS⁴ 2008b). Third, the Physical Education programme of study at Key Stages 2 and 3 continues the emphasis on the use of the outdoors, with the

⁴ DCELLS is the department for Children, Education, Lifelong Learning and Skills.

introduction of Adventurous Activities as a statutory area of activity for all pupils up to the age of 15 (DCELLS 2008a).

Whilst the Foundation Phase is still being rolled out in Wales, anecdotal evidence from England's Foundation Stage approach suggests schools and teachers are beginning to adapt to the new expectations of children being able to move freely between indoor and outdoor environments. In the best instances, the whole school environment as well as local facilities such as woods or shops was available to the children. In other cases, full use of the school grounds was unnecessarily limited by the lack of a suitable wet weather canopy or suitable wet weather clothing (Ofsted 2008). More worryingly in England, Waite (2011) has identified a trend for declining provision of outdoor learning experiences between early years and later stages of primary education despite the generally strong support of teachers and pre-school practitioners. She postulates on the possibility of holistic discovery pedagogies such as the Foundation Stage being seen as superficial and inappropriate to the narrow, assessment-led curriculum operating in England. In Wales, the move away from assessment and testing in the primary years in favour of a more focused, skill based curriculum strengthens the case for adventurous activities, which have traditionally been recognised for developing young people's personal and social education, thinking and communication skills. The Skills Framework identifies the need to combine thinking with assessment for learning through 'active engagement, teacher and learner exploration, learners encouraged to think, question and talk' (DCELLS 2008c p. 11), which many would argue are fundamental aspects of adventurous activities.

Curriculum Change

Even with a more conducive climate for outdoor pedagogy in Wales, the statutory inclusion of adventurous activities in the physical education curriculum is not without its problems, in particular, in relation to resources, equipment, timetabling and perhaps most importantly teacher skills and confidence. The new learner-centred and skills focused curriculum allows teachers and schools to be more creative in their approaches to the teaching of physical education (Lavin et al. 2010). Guidance on the implementation of the curriculum emphasises flexibility with an aim to 'reduce prescription and to give control and responsibility back to schools and to learners themselves' (DCELLS 2008a, p. 7), and although Kirk and Macdonald

(2001) warn that reforms that are overly prescriptive will not succeed, a lack of prescription can equally result in inconsistencies. The role of the teacher as the change agent is critical (MacDonald 2003). Teachers implement their own versions of an initiative, which may not reflect the intentions of the document (Kirk and Macdonald 2001). Teachers may also lack the training and confidence to deliver new curriculum initiatives. Waite (2011) found that teachers had little or no input to their own training on the use of the outdoors, whilst Dillon et al. (2005) recommended government, local authorities and other agencies should 'further develop school teachers' confidence and capacities to work with students in outdoor contexts' (p. 75). Supporting this were concerns raised by ESTYN⁵ (2001) who reported that 'the time allocated to university or college-based training is often not enough to allow trainees to develop the necessary knowledge, skills and understanding to teach the subject competently and confidently' (ESTYN 2001, p. 14). Similar findings have been reported more recently by the Physical Activity Task and Finish Group (TAFG 2013, p. 6).

This reduction of hours allocated to outdoor activities in initial teacher education increases the need for continuing professional development (CPD) to compensate for the lack of subject expertise. DfEE⁶ (2001, p. 3) defines continuing professional development as 'any activity that increases the skills, knowledge or understanding of teachers, and their effectiveness in schools'. This is supported by Armour and Yelling (2003) who suggest the purpose of continuing professional development is to raise standards of teaching and therefore pupil learning. Unfortunately, continuing professional development for physical education has been found to be limited and comprising mainly of sport-specific, coaching focused, up-date courses (Armour and Yelling 2002). These one-off training events may result in a quick fix, but they do not result in lasting change and may, in fact, be counterproductive (Carnell and Lodge 2002). Armour and Yelling (2002) also suggests that patterns of continuing professional development are haphazard and lack coherence and progression. They comment how much official continuing professional development opportunities lose their impact because they are not based on real issues from the teachers' schools or children, and therefore lacked relevance for the those attending the training (Armour and Yelling 2003). In spite of the growing body of

⁵ ESTYN is Her Majesty's Inspectorate for Education and Training in Wales.

⁶ DfEE is the Department for Education and Employment.

research supporting the need for learning in the outdoors, and welcome initiatives like the introduction of the Skills Framework, it is perhaps this lack of teacher expertise and confidence more than anything else that could limit the potential for 'an enriched curriculum that will motivate and meet the needs of the individual learners and prepare them for life in the twenty-first century' (DCELLS 2008c, p. 12).

Outdoor Learning Cards

In a direct response to the need to develop teachers' skills and understanding in adventurous activities, the Outdoor Education Advisers Panel for the UK (OEAP) developed a new Outdoor Learning Cards resource and training programme in 2008. This was specifically designed to assist teachers in the delivery of 'high quality outdoor learning activities and to help young people develop a range of skills related to these activities' (OEAP 2008, p. 4). Four designated outdoor learning activities were identified as journeying, team building, bouldering and orienteering. Principles underpinning the new resource recognised: the activities could be delivered by teachers without the need for specialist training and expertise; they could be delivered within and around the school grounds and local area; they required minimal specialist equipment, and they could be used to contribute towards a scheme of work for adventurous activities within the PE curriculum.

A common skills framework for the Outdoor Learning Cards has been created, drawn from the government documentation for the Skills Framework for 3 to 19-year-olds and includes communication, team working, reflective learning, leadership, independent thinking, creative skills and personal attributes (Outdoor Learning Handbook 2008, p. 8). Generic learning outcomes for the Outdoor Learning Cards highlight their contribution 'to promote physically active and healthy lifestyles and will develop in young people positive attitudes towards self, others and the environment' (p. 4). In addition, the Learning Cards are also intended to 'engage young people in safety education by encouraging them to manage risk sensibly' (p. 4).

The Outdoor Learning Cards training programme requires teachers to attend a one-day training course where they are introduced to the Learning Cards and their underpinning rationale. The one day course allows teachers to become familiar with the four different aspects of the Cards (journeying,

team building, orienteering and bouldering) through active participation, discussion and questioning. Teachers are encouraged to consider how the Learning Cards could be implemented within their own school settings and across the curriculum, and what resource implications there may be. In addition, teachers get the chance to gain confidence in using the Cards and to experience the activities first-hand. The Learning Cards are not designed to be a scheme of work but are designed to support teachers to create their own scheme of work for adventurous activities within physical education. As such, a major focus of the training programme considers how teachers will integrate the training and resources into their own school and local setting, reflecting Duckworth's (1997, p. 3) argument that the starting point for effective professional development should be to challenge the teacher to 'look with fresh eyes' at their professional practice.

Effective forms of professional development are highly complex, taking into account teachers' experiences, emotions, social context, making connections that develop understanding, and how best to facilitate learning and change. They require reflection, analysis, judgement, dialogue and collaborative responsibility for learning (Carnell and Lodge, 2002). The Outdoor Learning Cards training has been carried out across school clusters, and as such provides some scope for groups of teachers to work together, allowing the collective participation required for long-term change to be enacted (Makopoulou and Armour, 2006). However, concerns about the structure of the training as a 'one shot' continuing professional development module and the lack of long-term support for teachers raises questions about the impact of the training upon school-based outdoor pedagogy as well as upon teachers' ability to establish true collaborative learning that will improve practice. In light of these concerns this research seeks to investigate the impact of the new Outdoor Learning Cards resource across schools in west Wales whose staff have taken part in the training programme.

Methodology

Aligning the methodology with the investigative focus and initial scope of the study, the research was planned in two phases. Phase 1 lasted for six months and involved a series of five individual training days at which local teachers were introduced to the underpinning philosophy, cross-curricular and Key Skills leaning focus of the Outdoor Learning Cards Resource. A

total of 90 primary school teachers attended these externally funded continuing professional development events. All participants consented to being further involved in the study (Cohen, Manion and Morrison 2011). One month after the last training day, a questionnaire was sent to all the teachers who had undertaken the Outdoor Learning Cards training. Mindful of the workload of teachers, and with the understanding that ‘the questionnaire will always be an intrusion into the life of the respondent’ (Cohen, Manion and Morrison 2011, p. 318), an attempt was made to ensure responses could be completed in less than ten minutes.

The questionnaire was piloted with staff who had attended Outdoor Learning Cards training with a different provider in order to ensure completion in the given time was feasible and that all the questions were self-explanatory. Following feedback from the pilot, the format of several questions was altered to allow a tick box answer system for speed. The questionnaire consisted of a mixture of closed and open questions grouped under five different headings to aid data analysis: *Perceptions of the Outdoor Learning Cards (OLC) course*, *Links to the Curriculum*, *Impact on Children’s Learning*, *School Issues* and *The Future*. These five headings best captured the range of data we were looking to generate, linking resource development and training around outdoor learning with its impact upon current and future curriculum provision of outdoor and adventurous activities teaching and children’s learning.

The questionnaire was distributed via email with a covering letter. As with postal questionnaires, the validity can be seen from two viewpoints (Belson, 1986, cited in Cohen, Manion and Morrison, 2011), whether those completing the questionnaire do so accurately and if those who do not complete the questionnaire would have filled in similar responses. In order to best address the issue of non-response, the questionnaire was sent out repeatedly over a four-week period, one month after the completion of the last training day, in an attempt to encourage teachers to respond. A response rate of 23% (n=21), or just under a quarter of the course participants, was achieved.

Semi-structured interviews were also carried out with three teachers as a second phase of data generation (Silverman 2013). Interviews took place two months after the end of the last training day and were spread-out over a period of three weeks. All interviews took place within the school workplace for the greater convenience of the teachers and lasted approximately 30 minutes each. Teachers were selected on the basis of their willingness and availability to take part in the second phase of the

study and according to their phase 1 questionnaire responses. Two female teachers (*Jane* and *Sue*) were selected along with one male teacher (*John*). All three teachers had a number of years of experience working as a generalist primary school class teacher. Interviews were used to follow up phase one data analysis and 'to go deeper into the motivations of the respondents and their reasons for responding as they do' (Cohen, Manion and Morrison 2011, p. 411). An interview guide was used and a number of questions linked to data analysis of phase 1 responses were prepared in advance. These questions provided the framework for the interviews and acted as a point of departure to further explore emergent ideas and themes identified from analysis of questionnaire responses. Data from both research methods were analysed by using the Constant Comparative Method (CCM) of data analysis outlined by Maykut and Morehouse (2001). All data generation and analysis was completed within a nine-month period from the start of the first Outdoor Learning Cards Training day to the one week after the last interview.

Findings

Initial findings about the impact of the Outdoor Learning Cards Resource and Training fall into three categories: an increase in teacher confidence to deliver outdoor and adventurous activities in schools; teachers' perception of a positive impact on children's learning; and an increased provision of adventurous activities learning experiences in schools. The discussion below draws upon indicative comments made by respondents in the questionnaire and interview phases of the study, and supports the analysis of data and the trustworthiness of the three emergent categories that were identified.

1. Increase in teacher confidence to deliver adventurous activities in school

The aim of this research was to assess impact of the Outdoor Learning Cards training and resource as a result of a one-day continuing professional development experience. The first finding of the study was that teachers identified increased levels of confidence to deliver adventurous activities experiences in school. All respondents (n=21) reported they were more confident, or much more confident, to deliver adventurous activities in school. Even the majority of teachers who had very little previous outdoor

teaching experience commented positively on their new-found confidence. This they attributed to attending the training day and having the opportunity to work with the Outdoor Learning Cards, commenting that, '[p]ractical experiences made it easier to achieve within a school environment' and that '[t]he practical nature of the course really helped'. In particular, teachers identified how the resources '[p]rovided a plethora of ideas', explaining that the training '[g]ave me numerous ideas to develop in school and gave me the confidence and security'.

Teachers highlighted the potential ease of use of the Outdoor Learning Cards within their schools, commenting, 'All teachers were able to use them and they show good progression', and 'I never taught it before and now it features regularly in the teaching of PE'. In particular, their ease of use in providing guidance to other colleagues who had not undertaken the training day was noted as being especially important for non-specialist physical education teachers. 'They were easy to explain to other staff which is vital as I am the co-ordinator but do not teach KS2', and 'I would encourage any teacher who has the opportunity to make the most of this course, especially the non-specialist PE teachers.'

Although it is encouraging that teachers feel they have gained confidence in the teaching of adventurous activities, the purpose of continuing professional development as highlighted by DfEE (2001) and Armour and Yelling (2003), is to increase skills, knowledge and understanding, and perhaps most importantly to increase teacher effectiveness and raise standards. In considering teacher responses further, it could be quite possible that what they are reporting is not that their teaching is any more effective than it was prior to the training, but that they feel more confident doing it. Other comments by teachers do, however, support the notion of a teacher professional development having a positive impact on children's learning, suggesting that increased teacher confidence has in fact translated into increased pupil learning. These are highlighted in the next section.

When considering the lack of hours spent on adventurous activities during Initial Teacher Education (Waite 2011), it would be reasonable to assume that teachers' skills and understanding in this aspect of physical education will, and should have, improved as a result of their Outdoor Learning Cards training. Follow up interviews suggest this to be the case with *Jane* commenting,

When we did orienteering we realised we were doing it in a very simple manner compared to what we should have been challenging these children with, as shown on the cards.

Likewise, *John* states,

Those cards have had a huge impact because they've made us rethink about resources and what we're offering these children, and they've shown us more than anything how we are meant to be covering adventurous activities.

Attention is again drawn to the needs of the non-specialist teacher by *Sue*:

In primary we're not specialists, we're sort of, you know, I'm PE co-ordinator, but my subject was always literacy in college and I'm now PE co-ordinator, and I'm not a specialist in any way, so I'm completely reliant, or have been, on PESS⁷ and Trinity⁸ for these courses really, so it's had a huge impact on us because it's shown us the sort of things that we need to be doing to develop these children in these outdoor and adventurous activities.

This aspect of the curriculum only became a statutory requirement in Wales in 2008, and it remains optional in England to date. It is therefore quite feasible that prior to this date many initial teacher education courses may not have covered this aspect of the curriculum and that many teachers would have had little or no experience teaching adventurous activities (Humberstone 2002; Williams 1995). Newly qualified teachers may in fact be the only staff to have had any preparation for this aspect of physical education in their initial teacher training, and even then it may only have been a few hours spread over an entire course.

Existing research suggests that one-day training courses are unlikely to result in lasting change (Carnell and Lodge 2002), however, the changing nature of the curriculum over recent years and teachers' lack of previous experience may mean that in this case the impacts are longer lasting. Without exception, teachers reported that the cards fulfilled the curriculum requirements. Likewise, as a statutory requirement, teachers had incorporated them into their schemes of work thus ensuring they will remain a compulsory aspect of the children's physical education provision for many years to come. However, given the relatively short time period between the introduction of the Outdoor Learning Cards training and the research (two years) it remains uncertain how much impact the continuing professional development will have on standards, at least until schools have undergone inspection and ESTYN report on their findings. Due to the complex nature of measuring impact on pupils' learning and links to effective teaching, particularly in areas of outdoor learning, it is recognised

⁷ PESS is the Physical Education and School Sport Project in Wales.

⁸ Trinity is the University of Wales Trinity Saint David, Carmarthen.

that further, in-depth studies are required to gain a truer picture of the long term impact of the training and resource.

2. Teachers' perception of the positive impact on pupils' learning

A second finding of the study was the teachers' perception of the positive impact on pupils' learning. The teachers were unanimous in commenting on the positive impact they felt the new adventurous activities Outdoor Learning Cards had on children's learning. Three inter-linked aspects of pupils' learning were deemed to have benefited: pupils' personal and social learning; cross-curricular learning and Key Skills learning.

Personal and social learning is an area that has traditionally been linked with Outdoor Education and in particular with outdoor residential experiences (Nicol 2002). However, whilst many schools would identify personal and social learning as part of the 'hidden curriculum' that infuses the values and ethos of the school *per se*, most have only sought to formally engage with it in the form of the outdoor residential. However, Ofsted (2008) has reported on the failure of many schools to fully integrate the outdoor residential experience into children's holistic learning. Bringing adventurous activities into the school curriculum and grounds, and placing it in the hands of the teachers who best know and understand the particular needs of their children, would seem to be a very positive step forward in making overt the importance of children's personal and social learning within their curriculum experience. Teachers reported on children '[t]aking turns, sharing, working as a team', and as having '[i]mproved self-esteem and self-confidence through tackling challenges'. The activities had 'proved valuable socially for children to work together', although for some children this had been a challenge, 'as our children are a very competitive group, it was a learning curve to have to support each other and work as a team in order to succeed'.

At a time when children are spending increased amounts of time in front of televisions and at computers (Palmer 2006), the importance of opportunities for developing personal and social skills in school cannot be underestimated. In particular, and most recently, a growing body of evidence has begun to highlight how the natural environment in particular impacts on children's social and emotional well-being (Louv 2005; Palmer 2006). Although teachers did not highlight children's emotional development *per se*, learning outdoors was identified as a positive aspect of children's experiences. 'They [the children] enjoy the outdoor aspect of the

work’, and ‘[t]hey gain a lot from the outdoor nature that is encouraged’. Follow-up interviews were similarly positive, with *John* stating, ‘You’re outdoors, you’re in the fresh air, children love learning outside, they have more fun from going outside.’ Another teacher (*Jane*) expanded on the lasting impact of the activities on pupils:

On return to school we had a team building event, where the children had to construct small tents. We had borrowed five camping stoves ... and prepared hot dogs and baked beans. These children have since left school but still mention it when we meet.

Adventurous activity experiences were also identified by teachers as having a positive impact upon children’s cross-curricular learning. Prior to the introduction of the National Curriculum in Wales and England in 1989, outdoor education had long been a recognised approach to bringing an experiential and thematic dimension to pupils’ learning. In particular, learning in the school grounds and local area acted as a major focus for developing a more integrated and cross-curricular approach to children’s learning. More recently, the advent of Key Stage assessments and the introduction of league tables have reduced the opportunities for cross-curricular approaches that take children out of the classroom to learn in a more natural setting and in a more experiential way. Comments from teachers would suggest that the Outdoor Learning Cards were being used to develop broader cross-curricular links that extend beyond physical education to other areas of the curriculum. ‘Maths, Geography, Communication, Thinking – huge links’ were identified, as well as ‘Communication skills, ICT-Use of Logo and BeeBot’. Further opportunities were found by another teacher in ‘Journeying – PHSE, Geography, Science (effective material to build shelters)’.

Whilst it would be wrong to interpret these responses as a return to a thematic outdoor education approach, the identification of cross-curricular links is particularly encouraging in terms of developing the potential to expand the use of the outdoors beyond physical education at Key Stage 2. *John* commented, ‘That [the outdoor] element of the Foundation Phase, we’d love guidance in Key Stage 2, and how we bring that into our curriculum and cross curricular elements.’ Similarly, *Jane* states,

We adapted and have areas in the classroom, and have a bank of resources and they have to decide on their own game and put rules in place, so we do try, but guidance for us in Key Stage 2 on how we can develop what they’ve learnt in Foundation Phase and bring the best out of these children cross curricularly.

At present, teachers have identified the activities as being part of their schemes of work for physical education, but it is clear from their comments they are aware of the need for and potential of the Outdoor Learning Cards to expand the use of the outdoors to other aspects of the curriculum.

The third and perhaps most significant impact of the Outdoor Learning Cards upon children's learning was in relation to the focus on Key Skills Learning. Introduced in Wales in 2008, the Key Skills Framework for 3 to 19-year-olds focuses specifically on the development of the Key Skills of Thinking, Communication, ICT and Number, which are felt to underpin lifelong learning. Teachers have commented favourably on the positive contribution of adventurous activities to this crucially important initiative. Questionnaire responses noted how '[t]he Outdoor Learning Cards have a large impact on children's thinking skills and problem solving', and how they help children to '[s]olve problems more efficiently and communicate better with each other'. Follow-up interviews expanded further:

For us it's all about the skills, it's teaching all those different Key Skills and they really come through in this because you've got your communication skills, you've got your creative thinking, you've got every skill, you've got the problem solving element of it. (*Sue*)

At a time when teachers in Wales have to identify how their teaching delivers the Skills Framework, it appears that they welcome a resource that so readily enables children to develop these Key Skills. More importantly one teacher commented on how some pupils themselves were aware of the underpinning potential of the activities they were doing.

I asked them about the skills they had learnt and they could name all the skills they had learnt, 'we were listening; we were communicating', they could name all the skills, they just filter through in such a fun and positive way. (*John*)

Teachers have clearly identified the positive impact of the Outdoor Resource Cards as a tool for delivering the Skills Framework, and further analysis of the comments begins to reveal why this may be. The Outdoor Resource Cards are felt to be 'self-explanatory and can be used independently by the children'. They are 'visual and realistic'. 'Children are given the skills to learn independently' and '[t]hey enjoy the activities, take more interest and consequently their understanding improves'. In other words, analysis of the data suggests that the Outdoor Learning Cards and the activities they introduce are felt to be learner centred, practical and user friendly.

One aspect of children's learning that was not mentioned, rather surprisingly, was related to children's health. Whilst it might not be unusual for children themselves not to mention this, it is a little more unexpected that teachers did not comment on this issue. Given the intense media and research spotlight on children's health in recent years (Mygind 2007), it would be reasonable to expect that teachers would draw attention to this new opportunity to promote longer and more diverse periods of physical activity. That this was not commented on in any of the questionnaire returns or discussed in the interviews may be explained in one of two ways. First, the overwhelming emphasis on the development of Key Skills in the new curriculum focused teachers' attention on these areas to the exclusion of other aspects, such as health and activity. Second, children's physical activity and improved health are assumed outcomes of physical education, and therefore not worthy of specific comment. This is an interesting and potentially important issue and future research will seek to further explore the impact of adventurous activities upon children's physical activity levels, health and well-being.

3. Increased provision for adventurous activities learning experiences in schools

The third finding was that schools in this study had increased their overall provision for adventurous activities. Whilst Gill (2010) suggests there has been an increase in the number of outdoor visits undertaken by schools, it is commonly recognised that the non-statutory status of residential outdoor learning has meant that, like school playing fields, they have been sold off by many local authorities in recent years. It was a particular interest of the research to explore the impact of the Outdoor Learning Cards upon adventurous activities provision. To this end, a small number of schools did identify a move away from residential experiences in favour of school-based and in-house delivery such that the Outdoor Learning Cards had become their only means of delivering adventurous activities as part of the physical education syllabus. In contrast, however, the majority of teachers felt the cards had actually expanded their schools' provision of adventurous activity learning experiences for pupils. It was informative to find that many schools maintained their existing use of outdoor residential centres – 'We also use the Outdoor Education Centre', and 'Year 6 also do a PGL weekend' – as well as other schools continuing with 'residential visits by year 5 and 6'. Added to this continued use of the residential experience in the final two years of primary schooling, other teachers commented on the

other increased provision of adventurous activity learning opportunities. Many teachers commented on increased provision as part of their physical education syllabus generally, as well as an increase in the cross-curricular use of the outdoors that was increasingly evident across the full four-year range of Key Stage 2. Increased adventurous activity learning opportunities were also identified in years 3 and 4 of Key Stage 2 and at the point of transition from the Foundation Phase to Key Stage 2, in addition to the expanded opportunities in years 5 and 6.

The incorporation of the Outdoor Learning Cards into a scheme of work by most schools has also resulted in greater financial investment in resources and facilities to support pupils' adventurous activity learning. One teacher commented, 'We have purchased two climbing walls for Key Stage 2 and the Foundation Phase, updated orienteering equipment and purchased more resources for team building'. Other schools had been more circumspect and for some a lack of resources was still a barrier to fully implementing adventurous activities, especially the 'lack of funds and space for a climbing wall'. When comparing the provision now to that which existed prior to the changes in the curriculum, it is clear that there has been a considerable increase in opportunities and general investment around adventurous activities. However, it needs to be considered whether the sole use of the Outdoor Learning Cards as a scheme of work for adventurous activities delivers the breadth and progression of learning required for an area of activity that covers four year groups of pupils ranging from 8–11 years of age. Although at the present time the Outdoor Learning Cards appear to have expanded the provision and learning opportunities around adventurous activities, this may be a double-edged sword. If schools fail to develop their delivery of adventurous activities beyond the limits of the Outdoor Learning Cards, and it must be remembered that they were written to contribute towards and *not* to act as a scheme of work (Outdoor Learning Handbook 2008), this aspect of the curriculum will fail to realise its full potential. Ultimately teachers and, most importantly, pupils will work within and be constrained by the ideas on the Outdoor Learning Cards as a scheme of work for adventurous activities that is limited to physical education. In the longer term, this can only work contrary to the cross-curricular and Key Skills potential that has been identified earlier. On the other hand, if teachers are regularly delivering adventurous activities, initially within the scope of the Outdoor Learning Cards, their increasing confidence and experience may result in the natural, longer-term development of this area of activity in schools.

A final and interesting aspect that some teachers highlighted was the particular value of these activities to expand provision for pupils who have not enjoyed and engaged with traditional games and sport activities in the past. This greater inclusivity of all children within physical education has been a major strength of outdoor pedagogy for many years, and helps to provide children with a broad and balanced programme of study that should be the hallmark of high quality physical education. 'OAA is a great way of keeping everyone active at a non-competitive level. It has proved a great success with children that are not keen on sport' (*Jane*). It may well be that the greater diversity of learning offered by the statutory inclusion of adventurous activities (at least at Key Stage 2) is evident in the high levels of enjoyment and increased pupil motivation reported by teachers in interviews. 'The children are very motivated; they cannot wait for the summer term when they know the adventure cards are coming out' (*Sue*). A last word, however, should rightly be reserved for one teacher whose enthusiasm for adventurous activities was similarly reflected in her pupils' responses and engagement.

I did one last week, I did the blindfold one and set up a course. They were being blindfolded and working their way through the course and two children came up to me at the end and they said 'Miss, that's the best PE lesson we've ever had and we couldn't see for most of it'. They loved it because they are so fun. (*John*)

Conclusion

We acknowledge at this point that the conclusions must be treated cautiously due to the limited sample size of this initial study. However, we also feel that a number of important conclusions can be drawn from this study.

First, previous research (Armour and Yelling 2003; Carnell and Lodge 2002; and Armour 2001) highlights the limitations of one-day training days as a form of continuous professional development, suggesting that lasting change is seldom achieved. However, the preliminary findings of this study have identified that teachers have incorporated the Outdoor Learning Cards training and resources into their schemes of work for physical education. This fact alone will ensure children continue to access increased opportunities for adventurous activities learning at Key Stage 2.

Although this should be considered highly positive in the short term, further analysis questions the longer-term implementation and development of this area of activity. Likewise, concerns arise about whether teachers'

knowledge and understanding around adventurous activities has been sufficiently developed to expand pupils' learning opportunities without and beyond their use of the Outdoor Learning Cards. This would limit the long-term potential of this aspect of physical education and is an area for future research.

Second, the data also suggests that teachers have concerns relating to pupils' transition between important stages of their education experience and, in particular, from the end of Foundation Phase to the start of Key Stage 2. Their concerns highlighted a need for future training focused on the use of the outdoors as a holistic learning environment similar to that established within the Foundation Phase philosophy. Questions are also raised about pupils' transition from Key Stage 2 to Key Stage 3 and, although some secondary school teachers attended the training, none had contributed to the data generation. Gaining an insight into the impact of the Outdoor Learning Cards upon secondary school teachers' delivery of adventurous activities, and the broader use of outdoor experiences as a cross-curricular approach to learning, is a focus of research waiting to be undertaken.

Third, the research failed to generate data relating to levels of physical activity and pupils' health as a result of their adventurous activity experiences. In a time of increased emphasis on health, it is a little surprising that teachers did not identify aspects of physical activity and health in relation to children's experience of adventurous activities. It is possible that teachers may not have commented on these aspects as they feel physical activity and improved health is synonymous with physical education. However, it may also be the case that the increased emphasis on Key Skills in all aspects of the curriculum dominates teachers' thoughts to the exclusion of anything else. This would be another highly topical focus of future research around adventurous activity experiences.

Fourth, data from the research suggests the major impact of the Outdoor Learning Cards resource and training has been their clear support for the delivery of Key Skills that underpin pupils' learning in the curriculum. This contribution to developing pupils' Key Skills of Thinking, Communication, ICT and Number was repeatedly evident in the data generated in this study. We believe it is of no small consequence for even an initial study to identify a learning resource that appears to engage and motivate pupils to develop a positive aptitude for learning; that underpins the development of lifelong learning skills, and is also welcomed and highly valued by teachers. Exploring the impact of adventurous activity

learning experiences upon pupils Key Skills learning at all stages of their education is a final area of future research identified by this study.

References

- ACCAC (Qualifications, Curriculum and Assessment Authority for Wales) (2000). *Wales Curriculum 2000*, Cardiff: National Assembly for Wales.
- Armour, K. and Yelling, M. (2003). 'Physical Education Departments as Learning Organisations: The Foundation for Effective Professional Development'. Paper presented to *British Educational Research Association*, Edinburgh.
- Armour, K. and Yelling, M. (2002). "'Chalk and Talk" or Learning from Doing: Continuing Professional Development for Physical Education Teachers'. *British Journal of Teaching Physical Education*, 33 (4), 40–2.
- Barnes, P. and Sharp, B. (2004). 'Some Thoughts on the Nature of Outdoor Education'. In P. Barnes and B. Sharp (eds.), *Outdoor Education*. Lyme Regis: Russell House.
- Belson, W. A. (1986). *Validity in Survey Research*. Aldershot: Gower.
- Bird, W. (2007). *Natural Thinking*. Report by Dr William Bird for the Royal Society for the Protection of Birds, Investigating the links between the Natural Environment, Biodiversity and Mental Health, RSPB.
- Carnell, E. and Lodge, C. (2002). *Supporting Effective Learning*. London: Sage.
- Cohen, L., Manion, L. and Morrison, K. (2011). *Research Methods in Education* (7th edition). London: Routledge.
- DCELLS (Department for Children, Education, Lifelong Learning and Skills) (2008a). *Making the Most of Learning. Implementing the Revised Curriculum*. Cardiff: DCELLS.
- DCELLS (Department for Children, Education, Lifelong Learning and Skills) (2008b). *Foundation Phase Framework for Children's Learning for 3 to 7-year-olds in Wales*. Cardiff: DCELLS.
- DCELLS (Department for Children, Education, Lifelong Learning and Skills) (2008c). *Skills Framework for 3 to 19-year-olds in Wales*. Cardiff: DCELLS.
- DfEE (Department for Education and Employment) (2001). *Learning and Teaching: A Strategy for Professional Development*, DfEE, 71.
- Dillon, J., Morris, M., O'Donnell, L., Reid, A., Rickinson, M. and Scott, W. (2005). *Engaging and Learning with the Outdoors – The Final Report of the Outdoor Classroom in a Rural Context Research Project*. London: National Foundation for Education Research.
- ESTYN (2006). *Physical Education and School Sport Action Plan: An in Depth Look at Progress Made in the Implementation of the PESS Action Plan*. Cardiff: ESTYN.
- Fjortoft, I. (2004). 'Landscape as Playscape: The Effects of Natural Environments on Children's Play and Motor Development', *Children, Youth and Environments*, 14(2), 21–44.

- Fullan, M. (1993). *Change Forces – Probing the depths of Educational Reform*. London: The Falmer Press.
- Garrick, R. (2004). *Playing Outdoors in the Early Years*. London: Continuum.
- Gill, T. (2007). *No Fear. Growing Up in a Risk Averse Society*. London: Calouste Gulbenkian Foundation.
- Gill, T. (2010). *Nothing Ventured: Balancing Risks and Benefits in the Outdoors*. Nottingham: English Outdoor Learning Council.
- Humberstone, B. (1992). Outdoor education in the national curriculum. In Armstrong, N. (ed.), *New Directions in Physical Education*, vol. 2. Leeds: Human Kinetics, pp. 155–68.
- Hunt, J. (1989). *In Search of Adventure – A Study of Opportunities for Adventure and Challenge for Young People*. Surrey: Talbot Adair Press.
- Kirk, D. and MacDonald, D. (2001). 'Teacher Voice and Ownership of Curriculum Change'. *Journal of Curriculum Studies*, 33 (5), 551–67.
- Lavin, J., Wainwright, N., Hargreaves, S., Delany, B. and McKee, D. (2011). 'Children's Primary Physical Education in the United Kingdom: A Post Code Lottery?'. *Primary Physical Education Matters*, 6 (1), Spring, 3–5.
- Louv, R. (2005). *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*. London: Atlantic Books.
- Macdonald, D. (2003). *Curriculum Change and the Postmodern World: Is the School Curriculum-Reform Movement an Anachronism?* Available at <http://faculty.ed.uiuc.edu/westbury/jcs/Vol35/MACDONALD.HTM> (accessed 21 January 2011).
- Makopoulou, K. and Armour, K. (2006). 'Evaluating the National PE-CPD Programme in England: Evidence from Schools and Teachers'. Paper presented at the British Educational Research Association Annual Conference, University of Warwick.
- Maude, P. (2010). 'Physical literacy and the young child'. In M. Whitehead (ed.), *Physical Literacy Throughout the Lifecourse*. Oxon: Routledge, pp. 100–15.
- Maykut, P. and Morehouse, R. (2001). *Beginning Qualitative Research*, 2nd edition. London: Routledge and Falmer.
- Maynard, T. and Waters, J. (2007). 'Learning in the Outdoor Environment: A Missed Opportunity?' *Early Years*, 27 (3), 255–65.
- Moore, R. C. and Wong, H. H. (1997). *Natural Learning: Creating Environments for Rediscovering Nature's Way of Teaching*. Berkeley: MIG Communications.
- Mortlock, C. (2009). *The Spirit of Adventure: Towards a Better World*. Kendal: Outdoor Integrity Publishing.
- Mortlock, C. (2001). *Beyond Adventure*. London: Cicerone Press.
- Munoz, S. A. (2009). *Children in the Outdoors: A Literature Review*. Forres, Scotland: Sustainable Development Research Centre.
- Mygind, E. (2007). 'A comparison between children's physical activity levels at school and learning in an outdoor environment', *Journal of Adventure Education and Outdoor Learning*, 7 (2), 161–76.

- Nicol, R. (2002). 'Outdoor Education: Research Topic or Universal Value? Part Two'. *Journal of Adventure Education and Outdoor Learning*, 2 (2), 85–100.
- Ofsted (2008). *Learning Outside the Classroom: How Far Should You Go?* London: Ofsted.
- Outdoor Education Advisors Panel (2008). *The Outdoor Learning Handbook*. Perthshire: Harvey.
- Palmer, S. (2006). *Toxic Childhood: How the Modern World is Damaging Our Children and What We Can Do About It*. London: Orion.
- Silverman, D. (2013). *Doing Qualitative Research*, 4th edition. London: Sage.
- Silverman, D. (2001). *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*, 2nd edition. London: Sage.
- TASG (Schools and Physical Activity Task and Finish Group) (2013). *Physical Literacy – An all Wales Approach to Increasing Levels of Physical Activity for Children and Young People*. Cardiff: Welsh Government.
- Taylor, A., Kuo, F. and Sullivan, W. (2001). Views of Nature and Self-Discipline: Evidence from Inner City Children. *Journal of Environmental Psychology*, 21, 49–63.
- The Mail* (2008). *Parents Risk Creating 'Battery Farm Children' by not Letting Them Play Outside*. Published 5 February 2008.
- The Telegraph* (2010). *Don't Cosset Children in 'Cotton Wool' says Commissioner*. Published 8 June 2010.
- The Times* (2007). *How Many Adults Does it Take to Let Children Play Outside?* Published 4 August 2007.
- Veitch, J., Bagley, S., Ball, K. and Salmon, J. (2005). 'Where do Children Usually Play? A Qualitative Study of Parent's Perceptions of Influences on Children's Active Free-Play'. *Health and Place*, 12 (4), 383–93.
- Waite, S. (ed) (2011). *Children Learning Outside the Classroom: From Birth to Eleven*. London: Sage.
- Welsh Assembly Government (2009). *Creating an Active Wales*. Available at <http://www.sportwales.org.uk/media/144469/creating%20an%20active%20wales.pdf>.
- Welsh Assembly Government (2006). *Climbing Higher & Climbing Higher Next Steps*. Available at <http://wales.gov.uk/topics/cultureandsport/sportandactive-recreation/climbing/?jsessionid=dCKNNy2Sh7GHKSLD6h2WrZJGxcJnLKyZjqNbRQq3JhMkMSnsXKtV!688189528?lang=en>.
- Whitehead, M. (2010). *Physical Literacy Throughout the Lifecourse*. Oxon: Routledge.
- Williams, R. (2013). 'Woven into the Fabric of Experience: Residential Education and Complexity'. *Journal of Adventure Education and Outdoor Learning*, 13 (2), 107–24.
- Williams, A. (1995). 'Outdoor and Adventurous Activities, Holistic Learning and the Primary Residential Experience'. *The Bulletin of Physical Education*, 31 (2), 51–6.