

A REVIEW OF RESEARCH ON OUTDOOR LEARNING

EXECUTIVE SUMMARY

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Introduction

There is growing concern that opportunities for outdoor learning by school students in England have decreased substantially in recent years. In response to this, and recent government calls for ‘schools to make better use of the outdoor classroom as a context for teaching and learning’,¹ the Field Studies Council (FSC) and several partner organisations commissioned the National Foundation for Educational Research (NFER) to undertake a review of research on outdoor learning.

This document summarises the key findings of this review, which critically examined 150 pieces of research on outdoor learning published in English between 1993 and 2003. The literature encompassed three main types of outdoor learning with primary school pupils, secondary school students and undergraduate learners:

- ♦ fieldwork and outdoor visits
- ♦ outdoor adventure education
- ♦ school grounds/community projects.

The project was undertaken during a six-month period from August 2003 to January 2004, and was funded by the Field Studies Council, Department for Education and Skills, English Outdoor Council, Groundwork, Royal Society for the Protection of Birds, SkillsActive and Wildfowl and Wetlands Trust.

The Impact of Fieldwork and Visits

- ♦ Substantial evidence exists to indicate that fieldwork, properly conceived, adequately planned, well taught and effectively followed up, offers learners opportunities to develop their knowledge and skills in ways that add value to their everyday experiences in the classroom.
- ♦ Specifically, fieldwork can have a positive impact on long-term memory due to the memorable nature of the fieldwork setting. Effective fieldwork, and residential experience in particular, can lead to individual growth and improvements in social skills. More importantly, there can be reinforcement between the affective and the cognitive, with each influencing the other and providing a bridge to higher order learning.

¹ <http://www.teachernet.gov.uk/teachingandlearning/resourcematerials/growingschools/>

- ◆ Despite the substantial evidence of the potential of fieldwork to raise standards of attainment and improve attitudes towards the environment there is evidence that the amount of fieldwork that takes place in the UK and in some other parts of the world is severely restricted, particularly in science.
- ◆ The number of studies that address the experience of particular groups (e.g. girls) or students with specific needs is negligible, although those that have been done draw conclusions that are important in terms of both policy and practice. Some children are more likely to take part in fieldwork than others for a range of reasons, many of which could and should be addressed.
- ◆ A minority of studies provide a health warning to proponents of outdoor education. Poor fieldwork is likely to lead to poor learning. Students quickly forget irrelevant information that has been inadequately presented.

The Impact of Outdoor Adventure Activities

- ◆ Strong evidence of the benefits of outdoor adventure education is provided by two meta-analyses of previous research. Looking across a wide range of outcome measures, these studies identify not only positive effects in the short term, but also continued gains in the long term. However, within these broad trends, there can be considerable variation between different kinds of programmes, and different types of outcomes.
- ◆ There is substantial research evidence to suggest that outdoor adventure programmes can impact positively on young people's:
 - attitudes, beliefs and self-perceptions – examples of outcomes include independence, confidence, self-esteem, locus of control, self-efficacy, personal effectiveness and coping strategies
 - interpersonal and social skills – such as social effectiveness, communication skills, group cohesion and teamwork.
- ◆ The evidence base for cognitive and physical/behavioural benefits is less strong than for affective and interpersonal/social outcomes. In cases where there is a focus on such measures, however, there are examples of outdoor adventure programmes yielding benefits in terms of:
 - the development of general and specific academic skills, as well as improved engagement and achievement
 - the promotion of positive behaviour and reduced rates of re-offending, and improved physical self-image and fitness.
- ◆ In relation to fostering environmental concern and awareness, the evidence of a positive link between outdoor adventure activities and environmental understanding and values is not strong. There seems to be a strong case for questioning the notion that nature experience *automatically* contributes to environmental awareness, commitment and action.

The Impact of School Grounds/Community Projects

- ◆ School grounds/community projects have the capacity to link with most curriculum areas. Two specific examples of benefits stemming from this are positive gains in science process skills and improved understanding of design and technology-related issues.
- ◆ In the affective domain, the most important impacts of learning in school grounds/community settings include greater confidence, renewed pride in community, stronger motivation toward learning, and greater sense of belonging and responsibility.
- ◆ There is significant evidence that social development and greater community involvement can result from engagement in school grounds projects. Students develop more positive relationships with each other, with their teachers and with the wider community through participating in school grounds improvements.
- ◆ Few studies have focused on physical and behavioural impacts of school grounds/community projects. However, there is some evidence that school grounds educational projects are able to improve children's physical being through better quality play and through an increased motivation to eat more healthily and to take more exercise.
- ◆ Compared with research on fieldwork/visits and outdoor adventure education, there is a need for a greater number of rigorous in-depth studies on outdoor learning in school grounds and community settings.

Factors Influencing Outdoor Learning and its Provision

- ◆ The review suggests that it is helpful to distinguish between:
 - factors that can influence *the provision* of outdoor learning by schools, teachers and others
 - factors that can influence *the nature and quality* of young people's learning in outdoor settings.
- ◆ It is clear that the provision of outdoor learning in schools and universities is affected by a wide range of barriers and opportunities. Notable barriers include: (i) fear and concern about health and safety; (ii) teachers' lack of confidence in teaching outdoors; (iii) school and university curriculum requirements limiting opportunities for outdoor learning; (iv) shortages of time, resources and support; and (v) wider changes within and beyond the education sector.
- ◆ Opportunities for outdoor learning provision, though, are also noted in the form of: (i) new legislation and regulations such as those relating to safety at outdoor activity centres; (ii) recent curriculum developments and initiatives such as the revised National Curriculum in 2000; and (iii) developments in UK higher education that (as well as challenges) have provided scope for innovation in university fieldwork teaching.
- ◆ These various factors make clear the complexity of the challenge facing policy makers, practitioners and others who are seeking to increase and improve young people's access to learning beyond the classroom and the school.

- ◆ The research that has been undertaken into students' experiences of outdoor learning activities suggests that there are several factors that can facilitate and/or impede learning in outdoor settings. These can be conceptualised in terms of:
 - programme factors – including the structure, duration and pedagogy of outdoor education programmes
 - participant factors – including the characteristics, interests and preferences of learners
 - place factors – relating to the nature and novelty of the outdoor learning setting.
- ◆ Taken together, these factors provide a framework for thinking about how efforts to improve the quality and depth of young people's outdoor learning might be directed.

Conclusions and Implications

Against the backdrop of calls for educational practice and policy to become more evidence-based, there is much in this review that is of relevance and use to practitioners, policy makers and researchers. With this in mind, it is important that the findings of this review are considered not just in terms of how they might help to *prove the value* of outdoor learning, but also in terms of how can they might help to *improve its quality*.

Key Messages for Practice

- ◆ The review highlights demonstrable benefits for several types of outdoor learning. These findings should provide a source of support and justification for practitioners seeking an evidence base for the area of work in which they operate.
- ◆ More specifically, the review gives a clear endorsement for certain kinds of outdoor learning provision. Research indicates the value of programmes which; (i) provide longer, more sustained outdoor experiences than is often provided; (ii) incorporate well-designed preparatory and follow-up work; (iii) use a range of carefully-structured learning activities and assessments linked to the school curriculum; (iv) recognise and emphasise the role of facilitation in the learning process and (v) develop close links between programme aims and programme practices.
- ◆ The research also throws up several important challenges for practitioners. These include: the fact that the aims of outdoor learning are not always realised in practice; the different types of barriers faced by individual students in learning out-of-doors; the unresolved issue of the relative benefits of novelty and/or familiarity with the outdoor learning setting; and the fact that the benefits of outdoor learning are not always sustained over time.
- ◆ These challenges raise important questions for those involved in organising and undertaking outdoor learning activities. Deliberation and reflection about such issues could help to inform the strategic planning and development of organisations involved in providing outdoor learning opportunities for young people. They could also help to direct the ways in which school staff think about

the structure, focus and timing of outdoor learning within and beyond the curriculum.

Key Messages for Policy

- ◆ Those with a statutory and non-statutory responsibility for policy relating to outdoor education should be in no doubt that there is a considerable body of empirical research evidence to support and inform their work.
- ◆ Policy makers at all levels need to be aware of the benefits that are associated with different types of outdoor learning. The findings of this review make clear that learners of all ages can benefit from effective outdoor education. However, despite such positive research evidence and the long tradition of outdoor learning in this country, there is growing evidence that opportunities for outdoor learning are in decline and under threat.
- ◆ There is an urgent need for policy makers at all levels and in many sectors to consider their role in:
 - tackling barriers that stand in the way of the provision of effective outdoor education for all students
 - encouraging good programmes and practices and capitalising on policy developments, for example, by linking initiatives in different sectors
 - supporting research, development and training so that good practice can be understood, disseminated and fostered.
- ◆ This has implications for action across a range of policy sectors nationally, regionally and locally, including education, health, environment and science.

Key Messages for Research

- ◆ This review makes clear the substantial amount and range of research that has been carried out in outdoor learning in the 1990s and 2000s. It also highlights a number of encouraging signs in this field, such as a diversification of research approaches and foci, and a growth in theoretical/critical exploration and meta-analyses/research syntheses.
- ◆ The current evidence base, however, is not without weaknesses or potential areas for improvement. A good proportion of the research in this review originated from beyond the UK, and there is a particular need for more UK-based research into a number of aspects of outdoor learning. Examples include: the extent of outdoor learning provision available to school and university learners in this country; the effectiveness of outdoor learning programmes that seek to build progression from local environments to more distant learning contexts; the sorts of fears and concerns that young people can bring to different kinds of learning situations beyond the classroom; teachers' and outdoor educators' conceptions of 'the outdoor classroom'; and the cost-effectiveness of different kinds of outdoor learning.
- ◆ In order for these gaps to be addressed, attention will need to be given to two important issues. The first is how to improve the methodological rigour of outdoor learning research and evaluation. There was a range of methodological weaknesses evident within certain parts of the literature in this review, including

poor conceptualisation and research design, and little or no follow-up in the medium to long term. The second issue is how to improve and deepen the research-based understandings of the outdoor learning *process*. To put it simply, there is still much to be learnt about how and why programmes work or not.

- ◆ Finally, there is a case to be made for greater theoretical and empirical attention being given to three significant ‘blind spots’ in the current literature. These concern: (i) the nature of the ‘learning’ in outdoor education; (ii) the relationship between indoor learning and outdoor learning; and (iii) the historical and political aspects of outdoor education policy and curricula.

Review Methods

The project involved a systematic and critical review of research on outdoor learning published internationally in English from 1993 to 2003. The international scope was important in order to be able to draw lessons from research in other countries and identify gaps in the UK-based research literature. The inclusion of studies published from 1993 to 2003 reflected a desire to examine the most recent research findings.

Relevant research was identified using a number of complementary search methods, including bibliographic database searches, hand searches of key research journals, previous reviews/bibliographies and websites, and email requests to researchers working in this area. Publications were selected on the basis of whether they included a clear research/evaluation dimension (as opposed to programme description), and whether the focus was in line with the parameters of the review. Overall, the review identified 150 relevant research publications.

Copies of the full report ‘Review of Research on Outdoor Learning’ are available from the Field Studies Council. Tel: 01743 852100. Email: publications@field-studies-council.org Web: <http://www.field-studies-council.org/index.asp>