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# Formal curricular initiatives and evaluation in the UK

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The formal education system in the UK, as in many educational systems, is outcome driven. There is a strong and substantial research base for the impacts of outdoor adventure programmes on young people's development in the affective and interpersonal domains but less evidence for the cognitive benefits (Rickinson *et al.*, 2004). Many schools would dream about being presented with a simple model in which the introduction of an outdoor curriculum impacts directly on higher pupil achievement, resulting in an upward trending profile in key performance indicators. The reality is that, even if such a relationship could be presented, the intangibility of variables would be such that the cause and effect could not be differentiated securely from factors such as further pedagogical initiatives, step-change, baseline data on student performance, and other intrinsic and extraneous influences. However, it is clear that an outdoor curriculum can pervade young people's attitudes, beliefs and self-perceptions, and enhance interpersonal and social skills (*ibid.*). The inter-relationship between the interpersonal, activity and locational dimensions of outdoor experiences has been shown to be valued by young people (Mannion, Sankey, Doyle & Mattu, 2007), and research has suggested that, 'it seems that adventure programs have a major impact on the lives of participants, and that this impact is lasting' (Hattie, Marsh, Neill & Richards, 1997, p. 43).

## **The range of provision for outdoor learning in the formal curriculum**

In the UK, the launch of the Manifesto for Education outside the Classroom by the government in 2006 was a vision shared by a range of stakeholders including schools, youth groups and parents, in which direct experience was seen as paramount through an organised and powerful approach to learning (DfES, 2006). It signalled a shift to a broader interpretation of out-of-school experiences (which could include educational visits such as to the theatre or museums), but also helped to justify experiential and outdoor learning outwith the classroom. Critics commented on the relative paucity of funding against other initiatives. The Council for Learning outside the Classroom (CLOtC)<sup>1</sup> was formed in 2009, and now takes on leadership and responsibility for the areas defined in the Manifesto, providing resources and guidance to teachers and leaders in the UK.

Many outdoor providers, particularly those involved with multi-agencies, aligned their work with a previous UK government agenda, 'Every Child Matters' (DfES, 2003), which was an initiative aimed at protecting children at risk of harm or neglect following several high-profile cases. The policies also set out to improve children's lives as a whole, to maximise their potential, and sought to give them support to be healthy, stay safe, enjoy and achieve, contribute to society positively and achieve economic wellbeing. The former coalition government chose not to continue with this child-centred initiative, which provided a useful framework of simple, yet well-articulated outcomes for outdoor curricula.

In England, outdoor and adventurous activities (OAA) has been part of the national curriculum within physical education (PE) since its inception in 1989, although after several iterations of the curriculum, has become optional at all key stages to 2013 (DfE, 2014). A new national curriculum implemented from September 2014 raises the profile of OAA in Key Stages 2 (7–11 years) and 3 (11–14 years). However, OAA in a PE curriculum is too often about teaching a skill – for example, rock climbing at GCSE (14–16 years) or A-level (16–18 years) – or a replicated use of a local area for orienteering rather than a whole-school approach to outdoor learning. Outdoor educators have been disappointed that this more holistic and cross-curricular approach cannot be adopted.

Adventurous activities are also part of the physical education curriculum at Key Stages 2 and 3 in the Curriculum for Wales, with an emphasis on increasing confidence and a progression towards leadership at Key Stage 4 (14–16 years). It strives to create an effective, coordinated holistic curriculum by promoting positive relationships and self-esteem, and by encouraging the inclusion of appropriate visits and visitors and extra-curricular experiences. Key values in terms of outdoor provision are teaching and learning in the natural environment and through residential (Curriculum for Wales, 2014).

In contrast, the Northern Ireland physical education curriculum does not contain outdoor activities under any guise, although there is an emphasis on learning outdoors through play in the early years, and on personal development and mutual understanding at Key Stages 1 and 2.

In Scotland, however, the Curriculum for Excellence (CfE) draws away from subject orientation, placing more emphasis on young people developing as 'successful learners', 'confident individuals', 'responsible citizens' and 'effective contributors' – the four 'capacities' (Learning and Teaching Scotland, 2010a). Furthermore, the Scottish government emphasises that children should have positive learning experiences in a variety of settings and thus is promoting experiences in the outdoors, legitimising and encouraging outdoor learning (Beames, Atencio & Ross, 2009). It has also invested in the production and promotion of guidance to support opportunities for teaching and learning in the outdoors (Learning and Teaching Scotland, 2010b).

## Cognitive benefits of outdoor curricula

Schools rarely have evaluated out-of-classroom learning experiences and their impact on cognitive attainment or on other subjects in the curriculum (CUREE, 2009) and 'evaluation of learning is not conducted systematically, not triangulated with other evidence and not evaluated or assessed externally' (Nicol, Higgins & Ross, 2006, p. 3).

However, more recently, there has been some emerging evidence of the link between the provision of outdoor experiences in the formal curriculum, be it outdoor 'learning' or outdoor 'education', to higher academic achievement among pupils. Generally, because of the time framework of the input factors, these examples have emerged from residential experiences.

The Paul Hamlyn Foundation (PHF), in the work on 'Learning Away' a funding and research opportunity of £2.25 million to thirteen clusters of sixty schools in the UK, has been available through a six-year period from 2008. This initiative provided an opportunity for some new thinking on a key aspect of outdoor learning: residential provision. CUREE (2009) provides

evidence for the underlying rationale for its establishment and formative evaluation through a literature review of previous research.

Learning Away is a . . . special initiative that aims to support schools in significantly enhancing young people's learning, achievement and well-being by using innovative residential experiences as an integral part of the broader adventure learning curriculum . . . [It] was founded on the belief that high quality residential experiences can provide extremely powerful learning opportunities for children and young people . . . the opportunity to engage young people with the much more intensive, rich and deep learning experiences that residential can offer is compelling.

For some children a week's residential experience is worth more than a term of school. We know we want it for our own children – we need to make sure other people's children experience it too. (Tim Brighouse, former London Schools Commissioner and Advisor to the Paul Hamlyn Foundation Educational Programme (PHF, 2014))

In its interim report (PHF, 2013), evidence is provided for the influence of the programme on raising educational attainment, particularly in mathematics at the borderline mark (pp. iv, 16). In one cluster, 39 per cent of residential students improved their test score in mathematics, compared to only 14 per cent of the 'comparator group', who did not attend the residential. More than two-thirds (69%) of the residential group achieved a C grade at GCSE<sup>2</sup> compared to none of the comparator group (all students were C/D borderline). In addition to progress and attainment, the report also notes the increase in knowledge, skills and understanding and a greater engagement with learning, which have positive effects throughout the curriculum. Christie, Higgins and McLaughlin (2014) also provide evidence for the power of residential experiences in providing authentic contextualisation for oral and written work, and the consequential improvement of grades in French and English, although it might be that the impact of an improving self-construct, particularly self-confidence, cannot be a disaggregated effect.

In a wider context of learning outside the classroom and educational visits, there is evidence from museum education showing that 60 per cent of pupils' assessed work achieved a higher mark after a museum visit than the three previous pieces of work. Accelerated achievement was most evident for the lower achievers (Watson, Dodd & Jones, 2007).

## Monitoring and reporting on outcomes

The accountability framework that impacts on curricula in the UK is complex, driven by ever changing policy decisions from government, including the national curriculum, examinations, Ofsted (the Office for Standards in Education, Children's Services and Skills in England) and school league tables. Ofsted is the inspection and regulation service reporting directly to Parliament, necessarily independent and impartial but the regulator of all organisations that care for children and young people and those providing education and skills for learners of all ages (but not higher education institutions, which are regulated by the Quality Assurance Agency (QAA)).

In the context of schools, it has proved to be open minded about the range of provision of outdoor learning, including OAA, field studies, residential provision and in-school outdoor learning. Reports in 2004 and 2008 (Ofsted, 2004, 2008) were widely received and respected by outdoor practitioners. Her Majesty's Inspector (HMI) Robin Hamilton, the author of the 2008 report, created a challenging title – 'How far should we go?' – and noted that, 'when planned and implemented well, learning outside the classroom contributed significantly to raising standards and improving pupils' personal, social and emotional development' (Ofsted, 2008).

There is considerable research evidence to suggest that outdoor adventure programmes can impact positively on young people's attitudes, beliefs and quality of learning. According to Ofsted:

- learning outside the classroom improved young people's development in all five of the Every Child Matters outcomes, especially in two areas: enjoy and achieve, and achieving economic well-being;
- well organised activities outside the classroom contribute much to the quality and depth of learning;
- learners of all ages say they enjoy working away from the classroom. They find it 'exciting', 'practical', 'motivating', 'refreshing' and 'fun'. They make such comments as: 'You see rather than listen', 'We learn in a fun way', 'We like learning by doing.' (Ofsted, 2008)

Learning Outside the Classroom was part of the Ofsted inspection criteria from 2007 to 2012. Schools are judged as 'Outstanding', 'Good', 'Requires improvement' (previously 'Satisfactory') or 'Inadequate' in terms of overall effectiveness. However, outdoor centres are not organisations that are subject to these inspections in their own right although case studies have been used in reports (Ofsted, 2004).

A recent project in a group of outdoor centres in England has been applying Ofsted criteria to the evaluation of every outdoor session (Graham, 2014). While many would make a self-judgement of a success for most outdoor sessions due to the positive feedback, body language and experiential nature of delivery, a more rigorous and quantified examination showed room for improvement. The initiative was designed to develop a model away from just experiential learning to a teaching methodology including an appropriate level of challenge for all pupils, good facilitation, pace and adaptability of the leader, and meaningful, personalised learning that results in interdependence of outcomes and the transfer of learning across activities and back into school. Using the Ofsted inspection criteria, the key attributes for outstanding learning were progression, ownership and creativity. The tree of outstanding learning (Figure 14.1) illustrates the thinking through the roots (teacher input), through the trunk (assessment of learning) to the branches (pupil outcomes).

A simple model of outdoor curriculum evaluation beyond setting objectives and monitoring whether or not these have been achieved is through a framework of 'safety, fun and learning'. Debate has centred around whether or not an activity should take place if it is deemed that safety is questionable, but it is argued that it is sometimes difficult to anticipate the boundaries of psychological comfort with an unknown group. Furthermore, dynamic risk assessments and on-site vigilance can and should highlight unforeseen safety concerns, which can be mitigated in the field. In an attempt to make a judgement about the quality of outdoor education, the Outdoor Education Advisers' Panel (OEAP, 2005) presented ten possible outcomes and concomitant key indicators around self and group constructs. This publication on 'High Quality Outdoor Education' has proved useful for schools and outdoor centres to evaluate their practices.

## Legislation and accreditation

As the result of a canoeing tragedy at Lyme Regis in 1993, when four teenagers drowned, an Act of Parliament, the Activity Centres (Young Persons' Safety) Act 1995, was passed with the establishment of an independent licensing authority (originally AALA, the Adventure Activities Licensing Authority) to inspect and license 'in scope' hazardous activities for young people under eighteen years. Although the provision of adventure activities by schools to their own pupils was exempt from the scheme, safety rightly became paramount on the agenda but, with it, a demand for extensive documentation and justification. External providers were subject to inspection and

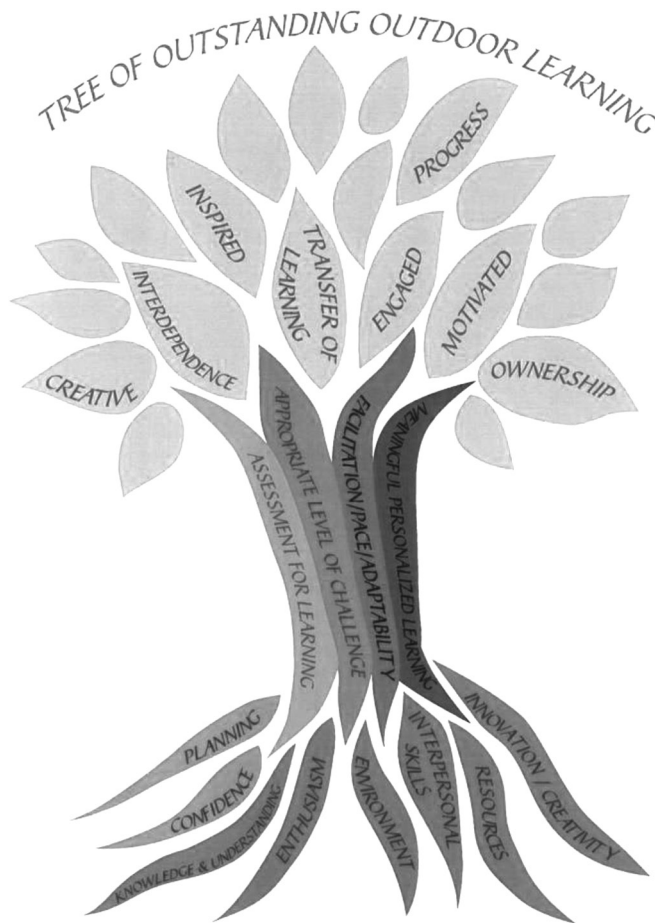


Figure 14.1 Tree of outstanding outdoor learning

Source: Graham (2014)

the AALA licence was the badge by which schools usually chose provision. Safety in this respect remains of prime importance to any school or participant undertaking adventurous activities, but there has been an increasing recognition of the importance of the pedagogy, facilitation and quality of teaching in the outdoors beyond that overseen by the Adventure Activity Licensing Scheme that is now in operation. Kitemarks have emerged to respond to ‘out of scope’ providers (‘Adventuremark’) and to the wider learning framework in the outdoors.

The Learning outside the Classroom Quality Badge is designed as a national award that is a recognisable accreditation for all types of LOtC providers in the UK, and combines the essential elements of provision, learning and safety for teachers and children. The scheme is managed and developed by the Council for Learning Outside the Classroom in an attempt to facilitate the incorporation of learning outdoors by schools and teachers, and to shift the focus from process to outcomes. It is not clear if the efficacy and effectiveness of a kitemark scheme has been researched or comparator data examined.

The single largest factor in education is the quality of teaching and the impact on student learning and achievement (Nye, Konstantopoulos & Hedges, 2004; Ofsted, 2008). Historically,

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local authority outdoor education centres in the UK were staffed by qualified teachers, but a significant amount of other provision was being delivered by instructors with a range of technical outdoor qualifications. Due to economic considerations, there has been a shift in that balance of teachers to instructors now in the few local authority centres that remain. But the instructor matters, as does the teacher in the classroom. Their ability to deliver the curriculum, at a suitable pace, in a style that enables students to engage with the experience, and to review and process the experience, is key. Curriculum design is irrelevant without instructors with the capability to make an impact to student learning, progress and achievement (O’Boyle-Mitchell, 2013). The accreditation scheme of the Institute for Outdoor Learning<sup>3</sup> for practitioners provided a benchmark of staffing quality in the field other than qualified teacher status.

## Adventure Learning Schools

Adventure Learning Schools (ALS) in the UK were the concept of David Hopkins. His intention was to create a network of schools that would, through the integration of adventure education into their curricula, ethos and approach to learning, enable young people to reach their potential, and to achieve excellence in their academic and vocational, and personal and social development. A number of primary and secondary schools in north-west England, Cumbria, UK, were part of the initial pilot, along with schools like Macmillan Academy (see exemplar below). The network developed rapidly from a small number of schools to more than forty across the UK within a few years (Hopkins, 2012).

ALS has its roots in the legacy of the Outward Bound movement, the work of Kurt Hahn and the concepts of ‘whole school design’ by reference to Expeditionary Learning in the USA. The vision in the prospectus for an ALS school stated:

Imagine a school where the learning culture is so rich that students not only achieve high academic standards, but through the emphasis on adventure increase their competence as learners, develop their personality and enjoy a variety of experiences that broaden their view of and place in society. (ALS, 2014)<sup>4</sup>

Adventure was to be at the heart of the curriculum, in every subject. In essence, it was to be hoped that it would possible to take the ‘tenacity of pursuit’ and adventurous spirit and apply it to a science or mathematics lesson. Schools were redesigning curricula, timetables, content and pedagogy to meet the ALS accreditation criteria.

The curriculum was summarised in the ALS Handbook as follows:

These will be schools where learning is not just enjoyable, but leads to genuine accomplishments, an appreciation of oneself, others and society, and where the skills, knowledge and dispositions acquired enable the student to become an active and creative citizen. In addition these schools will have a global outlook promoting greater understanding of the wilderness environment throughout their curriculum. These are schools where the great traditions of education often previously the privilege of a few, are now open to all. (Hopkins, 2012)

## Towards a wider interpretation of the positive effects of outdoor curricula

Macmillan Academy, as an inner-city state school directly funded by the government, has been providing life chances for young people in the catchment of Middlesbrough, north-east England, for more than twenty years. It provides a valuable case study of innovative curricular

initiatives that draw upon outdoor learning. It is an organisation that rejects complacency and always strives for improvement, and as such has built up a reputation nationally and internationally not only for outstanding results but also for forward thinking. Staff at the school designed and delivered a new model for outdoor learning provision within the school, with curriculum, facilities and Academy Funding. The outdoor learning programme is unique, judged outstanding by Ofsted in 2007 and noted for its exemplary provision in 2013 with the core of its provision available to all as an integral part of the curriculum.

Outdoor Learning at Macmillan Academy had been a SSAT (Specialist Schools and Academies Trust) specialism from 2006 to 2012. Changes in government brought an end to the funding and the status, fuelled by the neo-liberal ideology of the coalition government, although the provision at the academy remains. Since the starting point in 2006 Macmillan had strived to give students an inclusive and progressive adventure learning curriculum. The Director of Outdoor Learning is on record as stating that:

Outdoor learning works, adventure and challenges inspires, it's a deep learning experience that is memorable, meaningful and motivational. It's learning that lasts a life time (Macmillan Academy, 2014)

At the end of the five-year journey in 2011 and completion of the initial vision there was time to review and think about the future development of outdoor learning. The staff re-examined their mission, values and range of programmes available to students. Above all, staff reinforced how they could continue providing outstanding provision and explore creative new ways of working.

Ofsted (in May 2013) stated that Macmillan Academy seeks to provide an education that is motivational, meaningful and memorable, and it is successful in doing so. Its motto, 'inspiring every student to succeed', is at the heart of everything the academy does. Ofsted confirmed that 'the academy uses outdoor learning exceptionally well to develop students' skills'.

The mission of Outdoor Learning at Macmillan Academy is 'inspirational and memorable learning through adventure and challenge.' The core of our provision will be available to all and an integral part of the Macmillan Academy curriculum. We will maximise the use of existing resources for the benefit of our students. We will continually improve and develop our programmes and teaching practice. We value risk, real and perceived, as a powerful learning opportunity for our students. Fundamentally, we truly believe in the magic and power of outdoor learning as a catalyst for change. (Macmillan Academy, 2014)

The Centre for Outdoor Learning is the umbrella for the extensive range of outdoor learning facilities at Macmillan Academy. The low and high ropes course provides a range of individual and team challenges. Regarded as one of the fastest routes to improving a range of self-constructs (Attarian & Holden, 2005; Gillis & Speelman, 2008), this unique facility contributes to the ethos of 'I can.' The Climbing Centre contains twenty-four route corridors and more than one-hundred graded climbing routes across a range of feature walls, and is the largest and most extensive climbing wall within any school in the UK. The Expedition Unit has the ability to provide all the clothing and equipment (including a fleet of mountain bikes) for a range of educational visits and expeditions. Such facilities are a fundamental resource for on-site delivery of high-quality outdoor and adventure learning. The core staff come from the outdoor learning sector, bringing the technical skills and qualifications to lead their students in the outdoors. They are outdoor leaders, who balance the skills of teaching, facilitation and coaching to



maximise the learning opportunities for students. The centre holds the LOtC Quality Badge, Adventure Mark and LOtC Mark Gold for its provision.

Outdoor learning is not just part of one department as it is in some schools in the UK (usually physical education). Instead, every department, year group and member of staff has the ability to contribute. In simple terms, outdoor learning is being led from the top, and is a whole-school approach and design.

At the core of the curriculum in Key Stage 3 (11–14 years), every student is timetabled to take part in a two-day intensive programme each year, balanced with three weeks of intensive provision, on residential and during a challenge week programme. In Key Stages 4 and 5, pathways exist for students within physical education for specific sport-based development.

Unique alternative timetabling can create opportunities for immersion-type experiences. For example, in Years 7, 8 and 9 (Key Stage 3) at Macmillan Academy every student takes part in a two-day course, part of the adventure learning school curriculum. In Year 7 this programme is called 'Kick Start'. In Year 8 the programme, with an element of service (for example, working for the North York Moors National Park), is linked to a Baccalaureate qualification, and in Year 9 the programme is based on a model of student co-creation where students design their learning outcomes and adventure experience to match. All programmes have at their core the Academies range of learning capacities or habits, based on the work of Guy Claxton (see Claxton, 2002).

These programmes benefit from the facility to work with small groups of students (maximum of twelve) off timetable for two days with the specialist outdoor learning instructors. The model is transferable to any school, with an approach that is experiential and personal. In two days a student would focus in detail on two learning habits, exploring in depth meaning and understanding, and demonstrating these habits.

Tasks in outdoor learning are only vehicles to students learning, but they are designed as dynamic, exciting and different activities to stimulate engagement, interaction and the learning of the habits. The process and the facilitated experience are also critical. One approach is how practitioners facilitate the learning by asking key questions to students during the course. Students are often asked to reflect on 'What went well?', 'What improvements we could make?' and, fundamentally, 'What was the real learning from that experience?' A powerful moment is when a student reaches a realisation that s/he can achieve.

Systematic evaluation of the outdoor learning programmes at Macmillan has been in place since its inauguration, through student written evaluations, student focus groups and parent/carer surveys balanced by external quality assurance agencies for kitemarks such as the LOtC quality badge and Adventure Learning Schools status (as well as Ofsted). The student evaluations 2006–2014 showed that the outdoor programme enhanced students' enjoyment of learning, and encouraged them to be more active, more confident and capable of dealing with new situations, and students believed that this learning would help them in the future.

Macmillan Academy has a deep commitment to learning outside the classroom . . . mak[ing] a significant contribution to the development of students. Experiential learning is widely in evidence and outdoor education is totally embedded into the curriculum and valued by teachers, students and parents . . . a fine example of how outdoor education can become an inspirational way of life for a wide range of students. (LOtC Quality Badge Inspection, 2009)

Under the previous UK coalition government, and felt acutely in the financial years from 2011 onwards, there has been a systematic change and 'raising of the bar' in the education system, to compete with others internationally with higher PISA scores.<sup>5</sup> Financially many schools including Macmillan Academy were managing reducing budgets. Macmillan had to find ways of protecting

and maintaining their provision for outdoor learning. It is hoped that the early strategy at conception of investing in buildings and facilities on the school site will be sustainable model for outdoor learning. Other more traditional models of resource intensive residential provision budgets are becoming less tenable with more local authority out-of-county residential provision being subject to closure. Strong initiatives also weather economically challenging times. Interestingly, the Paul Hamlyn Foundation 'Learning Away' programme came during the financial crisis that led to large-scale challenges in the UK and global economies. From a school perspective having some new thinking, research and creative ideas on how to deliver residential provision protected some provision for young people by providing new more affordable options.

## Conclusions

The emphasis on measureable benefits in outdoor curricula follows thinking that the most important aspects of educational experiences are the processes of memory and knowledge (Kirschner, Sweller & Clark, 2006) but deviates from a Deweyan perspective that is child-centred and teacher influenced (Quay & Seaman, 2013). Algorithmic teaching and learning focused towards specific learning outcomes diminishes pupil responsibility and individuality (Loynes, 1998; Allison & Pomeroy, 2000), which now contradicts two key attributes of outstanding outdoor learning, creativity and ownership (Graham, 2014). Examples of successful outdoor curricula within formal education in the UK illustrate learning across the affective, interpersonal and cognitive domains, although the latter may be by inference through increased motivation, behaviour and contextualisation. Strong leadership, teaching and facilitation, together with a well-defined mission are contributors to a high-quality outdoor learning curriculum that, through monitoring and evaluation, is held accountable to scrutiny at a national level.

## Notes

- 1 CLOtC (Council for Learning Outside the Classroom): [www.lotc.org.uk](http://www.lotc.org.uk)
- 2 GCSE (General Certificate of Secondary Education) is a public examination taken in England and Wales generally at 15–16 years. It is graded A\*–G with grades of C and above taken to be pass equivalent.
- 3 Institute for Outdoor Learning: [www.outdoor-learning.org](http://www.outdoor-learning.org)
- 4 Adventure Learning Schools: [www.adventurelearningschools.org](http://www.adventurelearningschools.org)
- 5 PISA (Programme for International Student Assessment) is a study measuring the performance of 15 year olds worldwide in mathematics, science and reading. It is undertaken by OECD (Organisation of Economic Co-operation and Development), which started ranking countries in 2000 and from thence on a triennial basis.

## References

- Adventure Learning Schools (ALS) (2014). Resources. Retrieved from: [www.adventurelearningschools.org/resources/](http://www.adventurelearningschools.org/resources/).
- Allison, P. & Pomeroy, E. (2000). How shall we 'know'? Epistemological concerns in research in experiential education. *Journal of Experiential Education*, 23(2), 91–98.
- Attarian, A. & Holden, G.T. (2005). *The Literature and Research on Challenge Courses: An Annotated Bibliography* (2nd edn). Raleigh, NC: North Carolina State University and Alpine Towers International.
- Beames, S., Attencio, M. & Ross, H. (2009). Taking excellence outdoors. *Scottish Educational Review*, 41(2), 32–45.
- Christie, B., Higgins, P. & McLaughlin, P. (2014). 'Did you enjoy your holiday?' Can residential outdoor learning benefit mainstream schooling? *Journal of Adventure Education and Outdoor Learning*, 14(1), 1–23.
- Claxton, G. (2002). *Building Learning Power: Helping Young People Become Better Learners*. Bristol: TLO.
- CUREE (Centre for the Use of Research and Evidence in Education) (2009). *Learning Away: A Small Scale Literature Review*. Retrieved from: [www.phf.org.uk/page.asp?id=894](http://www.phf.org.uk/page.asp?id=894).

- Curriculum for Wales (2014). Retrieved from: [www.wales.gov.uk/topics/educationandskills/schoolshome/curriculumwales/revisedcurriculumwales/](http://www.wales.gov.uk/topics/educationandskills/schoolshome/curriculumwales/revisedcurriculumwales/).
- Department for Education (DfE) (2014). *National Curriculum*. Retrieved from: <https://www.gov.uk/government/collections/national-curriculum>.
- Department for Education and Skills (DfES) (2003) *Every Child Matters*. Retrieved from: <https://www.education.gov.uk/consultations/downloadableDocs/EveryChildMatters.pdf>.
- Department for Education and Skills (DfES) (2006). *Learning Outside the Classroom Manifesto*. Nottingham: DfES Publications.
- Gillis, H.L. & Speelman, E. (2008). Are challenge (ropes) courses an effective tool? A meta-analysis. *Journal of Experiential Education*, 31(2), 111–135.
- Graham, S. (2014). *Outstanding outdoor teaching and learning*. Presentation given at the Association of Heads of Outdoor Education Centres (AHOEC) Lake District Regional Meeting, 17 January.
- Hattie, J., Marsh, H.W., Neill, J. & Richards, G.E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43–87.
- Hopkins, D. (2012). *The Adventure Learning Schools Handbook*. Carlisle: Adventure Learning Schools.
- Kirschner, P., Sweller, J. & Clark, R. (2006). Why minimal guidance during instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential and inquiry-based teaching. *Educational Psychology*, 41(2), 75–86.
- Learning and Teaching Scotland (2010a). *Curriculum for Excellence*. Glasgow: Learning and Teaching Scotland.
- Learning and Teaching Scotland (2010b). *Curriculum for Excellence through Outdoor Learning*. Glasgow: Learning and Teaching Scotland.
- Learning Outside the Classroom (LOtC) Quality Badge Inspection (2009) *Inspection Report, Macmillan Academy*. Shrewsbury: Council for Learning Outside the Classroom. Unpublished.
- Loynes, C. (1998). Adventure in a bun. *Journal of Experiential Education*, 21(1), 35–39.
- Macmillan Academy (2014) HRH Duke of Kent visits the Academy. Retrieved from: [www.macmillan-academy.org.uk/news\\_item.php?id=538](http://www.macmillan-academy.org.uk/news_item.php?id=538).
- Mannion, G., Sankey, K., Doyle, L. & Mattu, L. (2007). *Young People's Interaction with Natural Heritage through Outdoor Learning*. Perth: Scottish Natural Heritage.
- Nicol, R., Higgins, P. & Ross, H. (2006). *Outdoor Education: The Views of Providers from Different Contexts in Scotland*. Dundee: Learning and Teaching Scotland.
- Nicol, R., Higgins, P., Ross, H. & Mannion, G. (2007). *Outdoor Education in Scotland: A Summary of Recent Research*. Perth: Scottish Natural Heritage.
- Nye, B., Konstantopoulos, S. & Hedges, J. (2004). How large are teachers effects? *Education, Evaluation and Policy Analysis*, 26(3), 237–257.
- O'Boyle-Mitchell, L. (2013). Expectations of outdoor educators in the UK: A gap between educator competency requirements and promised programme outcomes. Unpublished MSc thesis, University of Edinburgh.
- OEAP (2005). *High Quality Outdoor Education*. London: OEAP.
- Ofsted (2004). *Outdoor Education: Aspects of Good Practice*. Retrieved from: <http://webarchive.nationalarchives.gov.uk/20140723032007/http://www.ofsted.gov.uk/resources/outdoor-education-aspects-of-good-practice>.
- Ofsted (2008). *Learning Outside the Classroom. How Far Should You Go?* Retrieved from: [www.lotc.org.uk/wp-content/uploads/2010/12/Ofsted-Report-Oct-2008.pdf](http://www.lotc.org.uk/wp-content/uploads/2010/12/Ofsted-Report-Oct-2008.pdf).
- Paul Hamlyn Foundation (2013). *Evaluation of Learning Away: Interim Report 1.1, June 2013*. Leeds: York Consulting LLP.
- Paul Hamlyn Foundation (2014). *About Learning Away*. Retrieved from: [www.phf.org.uk/page.asp?id=894](http://www.phf.org.uk/page.asp?id=894).
- Quay, J. & Seaman, J. (2013). *John Dewey and Education Outdoors: Making Sense of the 'Educational Situation' through More Than a Century of Progressive Reforms*. Rotterdam: Sense Publishers.
- Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M.Y., Sanders, D. & Benefield, P. (2004). *A Review of Research on Outdoor Learning*. Shrewsbury: Field Studies Council.
- Watson, S., Dodd, J. & Jones, C. (2007). *Engage, Learn, Achieve: The Impact of Museum Visits on the Attainment of Secondary School Pupils in the East of England, 2006–2007*. University of Leicester, Research Centre for Museums and Galleries: Museums, Libraries, Archives East of England & Renaissance East of England.