

Education 3-13

International Journal of Primary, Elementary and Early Years Education

ISSN: 0300-4279 (Print) 1475-7575 (Online) Journal homepage: <https://www.tandfonline.com/loi/rett20>

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To cite this article: Sue Waite, Orlando Rutter, Adrian Fowle & Andrew Edwards-Jones (2017) Diverse aims, challenges and opportunities for assessing outdoor learning: a critical examination of three cases from practice, *Education 3-13*, 45:1, 51-67, DOI: [10.1080/03004279.2015.1042987](https://doi.org/10.1080/03004279.2015.1042987)

To link to this article: <https://doi.org/10.1080/03004279.2015.1042987>



Published online: 21 May 2015.



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Diverse aims, challenges and opportunities for assessing outdoor learning: a critical examination of three cases from practice

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(Received 1 October 2014; accepted 21 March 2015)

In this article, we consider the term ‘assessment’, its relationship to ‘evaluation’ and the implications for outdoor learning in the light of changing educational policy on assessment in England. A small-scale empirical study of how assessment was practised by two primary teachers on a residential trip and two further cases in practice are used to examine how emphases in assessment are shaped by contexts. Finally, we reflect on how conceptual frameworks that integrate planning, pedagogy and assessment might support assessment and evaluation practice in outdoor learning in a new era of apparent ‘freedom’ for teachers.

Keywords: assessment; outdoor learning; learning outside the classroom; evaluation; educational policy

Introduction

There has been a considerable growth of interest in and concern about a lack of outdoor and nature contact for children and young people (Louv 2008; Moss 2012). One response to this in England has been to look for ways to embed outdoor learning within schooling, and a variety of approaches have been adopted, including Forest School (Knight 2009), the John Muir Award (<http://www.jmt.org/jmaward-home.asp>) and the Natural Connections Demonstration Project (Natural Connections, n.d.). The Curriculum for Excellence and Learning for Sustainability initiatives in Scotland, the *udeskole* movement in Denmark and the ‘nature rucksack’ project in Norway represent further examples of ways this is being recognised and supported. A connection to schools, although not unproblematic (see, e.g. Rea and Waite 2012), has the advantage that potentially all children could gain access to outdoor learning regardless of family socio-economic and geographical circumstances. As well as within mainstream education, the benefits of nature for children’s learning and well-being are acquiring increasing importance in the leisure, adventure and tourism sector, for example, through family-based learning, such as the Natural Trust’s 50 Things to Do Before You’re 11 and 3/4 (<https://www.50things.org.uk>) and Project Wild Thing (<http://projectwildthing.com/>).

The growth in learning in natural environments takes place within a wider context of Learning Outside the Classroom (see www.lotc.org.uk/) in museums, art galleries and

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other contexts beyond the classroom, contexts often characterised as informal learning environments (Dierking et al. 2002). However, simply being in an out-of-school context does not guarantee that the learning is informal (Waite and Pratt 2011); cultures of schooling can permeate such experiences in complex and sometimes unacknowledged ways (Waite 2013, [forthcoming](#)). Furthermore, being outside does not automatically mean that there are worthwhile educational outcomes. Rickinson et al. (2004) suggest that, while there is a general endorsement of and sometimes unquestioned enthusiasm for 'Out of Classroom Learning', evidence is mixed regarding its efficacy across all learning activities. Such evidence often presents variants of *assessment* that seek to understand learner knowledge and skills, as well as *evaluation* of the success of learning methods, both of which warrant further exploration. As Atjonen (2014) comments, assessment has multiple and sometimes competing functions for its audiences of teacher, student, parent and policy-makers. Formative assessment emphasises process more than product (Winterbottom et al. 2008) and is intended to support learning; while final assessment is based on curriculum objectives and assesses pupil achievement (Atjonen 2014).

Historically there has been considerable bureaucracy in monitoring pupil progress through, for example, the non-statutory but widely adopted Assessing Pupil Progress (APP) methods (Department for Children, Schools and Families (DCSF) 2009) but in April 2014, a coalition minister for Education, Elizabeth Truss, confirmed the withdrawal of APP and stated:

So in the abolition of levels and associated bureaucracy – the new freedom over materials, assessment, and development – the message to schools could not be clearer.

We will look at results – not meddle in teaching styles.

Under the new system, we are clearer on the ends. And give freedom on the means: freedom from government prescription. And freedom to explore new ways of teaching. (2014)

However, Truss also seems to confound assessment of pupils' progress with evaluation of teaching; while linked (Hattie 2009), the relationship between the two is complex. Furthermore, freedom is not necessarily an unalloyed bonus for teachers (Passy and Waite 2008) and developing assessment in isolation can result in unevenness and inequalities (Atjonen 2014; Hermansen and Nerland 2014). In our discussion, we consider how assessment *as* learning might also support evaluation and planning of outdoor teaching if it is developed as part of a team within and across schools (Harlen 2005, 214).

While multiple benefits have been demonstrated through research, many of the tools used to assess these benefits are not feasible for everyday practice as they rely on time-consuming qualitative research methods suitable for small-scale studies (e.g. [goodfromwoods.wordpress.com](#)), focus on a single aspect (e.g. Nature relatedness, Zelenski and Nesbit 2012) and/or narrow groups (e.g. Booth et al. 2013). Yet, without evidence of the impacts of outdoor learning at a local level for specific contexts, there may be reluctance on the part of schools and organisations to invest resources and make room in busy schedules for it. It can help schools to recognise that outdoor learning is not an 'extra' but can be integrated with the curriculum and contribute to school priorities regarding attainment as well as other benefits (Waite, Passy, and Gilchrist 2014).

The context for our article is collaboration between a primary schoolteacher, an Education Officer in a National Park and researchers in an Institute of Education. We are all members of an outdoor and experiential learning research network that seeks to interface

research and practice in productive ways. Having identified a common interest in the dilemma of assessing and evidencing outdoor learning outcomes, we met several times to discuss ‘cases of assessment and evaluation’, having written our ‘cases’ independently, describing and explaining the rationale for practice. We then critically commented on each other’s evidence, juxtaposing the different reports of assessment practice and questioning our own and others’ interpretations. We collaborated on successive drafts of the paper, refining our understanding and the implications that we considered this discussion paper might have for others working in the field. This interchange of perspectives generated ideas about outdoor learning assessment policy and practice that may resonate across both schooling and outdoor activity provision. It should be emphasised that although the latter two cases were derived from reflection on practice rather than a formal research study as represented by the first case, our iterative analytical process included *description*, *interpretation*, *juxtaposition* and *comparison* of practice advocated by Bereday (1964) and this enabled us to draw out uncertainties, commonalities and distinctions between cases, enriching the small-scale empirical research.

There seemed to be two aspects that intersect and interact:

- (1) *Assessment* of achievement of objectives for the activities.
- (2) *Evaluation* of success of activities.

Clearly, neither purpose can stand alone as the success of an activity depends partly on meeting objectives which therefore need to be measured or evaluated in some way (Hattie 2009), but our principal aim in this article is to clarify how we might tell what is learnt in outdoor contexts and what relationship that learning has to formal intentions for providing outdoor experiences.

Assessment as integral to education

In this section, we consider assessment and its purposes more broadly and how they may relate to learning outside the classroom. Evidence points to formative assessment practice as a key element of teaching and learning improvement:

It is based on the principle that pupils will improve most if they understand the aim of their learning, where they are in relation to this aim and how they can achieve the aim (or close the gap in their knowledge). It is not an add-on or a project; it is central to effective teaching and learning. (DCSF 2008, 5)

‘Assessing Pupils’ Progress’ (DCSF 2009) was promoted as a straightforward method of making secure judgements about the standard of pupils’ work and what they need to do next, and was widely adopted by schools with some success according to Ofsted (2011, 5):

the introduction of the ‘*Assessing pupils’ progress*’ initiative had helped to strengthen assessment practice in all of the schools visited.

While this has now been abandoned by government (Truss 2014), it remains to be seen how schools will respond in this new market economy for assessment.

Conceptually, assessment has often been subdivided into summative and formative, which are frequently characterised as assessment *of* learning and assessment *for* learning (AfL) (Black and Wiliam 1998). While the AfL movement has had a marked influence on the field, Torrance (2007) argues that its practice and purposes are often skewed by

the dominant agenda of performativity in education (Torrance 2012) so that it can become a somewhat mechanical and instrumental activity (Marshall and Drummond 2006).

Hargreaves (2005) found in her survey of 83 teachers that their conceptions of 'AfL' included 'assessment-as-measurement' and 'assessment-as-inquiry'. Assessment-as-inquiry is seen as

an exploratory and sensitive venture, with no clear endpoints except a heightened awareness of current developments. Within this paradigm the purpose of the assessments is a deeper understanding of individuals as learners, not just performers. (Hargreaves 2005, 218–219)

Whereas assessment-as-measurement was referred to as the

act or process of determining or estimating the amount, extent or level of a student's 'learning', often using tests as the means of doing so (Hargreaves 2005, 218)

and Hargreaves characterised these as underlying two conceptions of learning: learning-as-attaining-objectives and learning-as-the-construction-of-knowledge (Hargreaves 2005, 213). This distinction is highlighted in current educational policy in Truss' emphasis on 'ends' rather than 'means'. Yet the gap between these conceptualisations can be bridged, according to Krechevsky, Rivard, and Burton (2010), using a 'documentation' approach, which offers accountability both inside and outside the classroom by making learning visible.

However, a key part of AfL, apposite feedback, does not necessarily happen in evidencing. It requires shared perspectives about what learning is being intended, clear awareness of how the learner learns, clarity about what would show the learner's knowledge and an ability to encapsulate where the learner is in relation to those considerations (Dann 2014; Sadler 1998). Immediately, we can see how high levels of specificity of learning content by the teacher might present problems in informal learning contexts and how the teacher's perspective may tend to be privileged over the learner's (Hargreaves 2013). Hawe and Parr (2014, 212) contend, 'The full potential of AfL can only be realised when all strategies are present, [...] within a learning-teaching episode and when students are afforded opportunities to take responsibility for their learning.'

What becomes clear from our brief review of assessment is that purposes and values of the teaching and learning are central. This is unsurprising if we accept that assessment is integral to pedagogy. Clarity about one's values and the purpose of activities is fundamental to good teaching whether inside or outside the classroom as it is this that enables the teacher to create a curriculum that is more than a list of learning objectives (Biesta 2014).

In the following sections, we present three different cases in order to reflect critically on how forms of assessment are shaped by and shape practices. We consider how the purpose of activities and associated pedagogy stimulate and support meanings attributed by participants and for us as practitioners and researchers.

Case 1: Assessing what emerges

At times the intention of the outdoor experience may be to observe and assess underpinning social and emotional aspects of learning and whether concepts, knowledge and skills learned in class or elsewhere are applied or evident in a different context, taking advantage of less teacher-directed learning to carry out observations. Our first case study illustrates this approach.

In summer 2010, we conducted a small-scale mixed method study of assessment practice by two teachers during an outdoor residential visit in Devon of a mixed age group of primary school children. Teacher interviews explored teacher expectations for learning outside the classroom; their role in teaching and learning during the visit; and their intentions and practice vis-à-vis assessment outdoors and in the classroom. Observations were made every five minutes during the activities and related to teacher role, vocal interaction, proximity to group and involvement in task. Field notes were made throughout the day.

Observed behaviours were coded within a system framework derived from Neill (2008), considering the programme, individual, group, facilitator, activity, culture and environment, and yielded summary data of how teachers interacted during the three activities observed. Comments from the interviews were thematically grouped.

Overall, the teachers reported that outdoor residential experience could enhance understanding of children's needs in relation to learning when 'assessment' was interpreted broadly. While the teachers acknowledged that this kind of learning experience offers opportunities for assessment, it was more likely that a child's social skills are assessed than academic attainment, and the form of assessment was informal and implicit. Assessment opportunities connected to the Personal Social and Health Education (PSHE) curriculum were particularly evident around issues such as tolerance, inclusion and special needs. The teaching staff frequently discussed a child's 'performance', 'interactions' or 'achievement' related to an earlier activity from the day:

... when we meet up together, that's what we are talking about. So and so has done something ... do you know ... I am just amazed that they can do that ... she's finding that really difficult ... oh my goodness. So it's much more the social thing, how they are getting on with each other (T1)

In Figure 1, we see that asking questions and encouraging the children were the two most common forms of talk during activities, while instruction was low. An example of 'asking question' was a teacher asking 'What have you got there?' when a child was showing her an insect she had caught with her pooter. All the teachers' questions were to an individual child or group of children, and not to the activity leader, indicating a focus on sharing children's

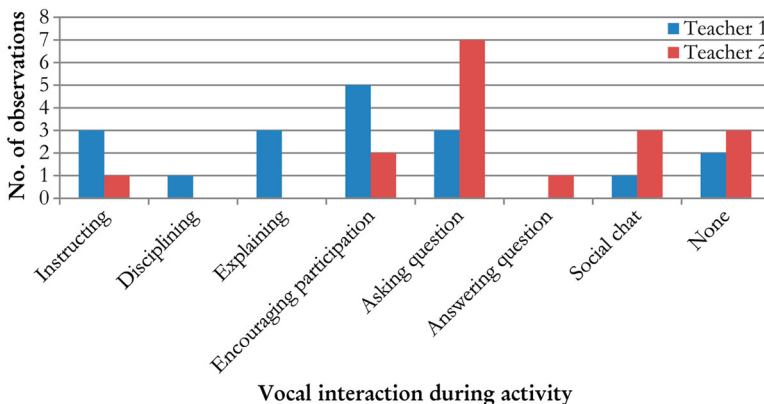


Figure 1. Types of vocal interaction of teachers.

understanding. This corresponds to interview data that suggest the teachers regarded their role as facilitative rather than directive in the residential visit.

The teachers felt able to spend more time *observing* children rather than *organising* them with their activities, as they tended to do in the school setting, and believed they got a much better idea of how people (child with child and child with adult) were interacting. The types of questions they found themselves asking was ‘How have they got on?’, ‘How are we going to help them?’ and ‘How am I going to help that particular child?’

Without the structure of APP, it could be exceptions to the norm of educational performance that stand out among relatively large groups of children. Unless specific children are targeted for observation, those children who particularly struggle, or impress, or do something that is considered at odds to their normal level of ability or behaviour back at school, might be more likely to be noted. However, our data suggested that teachers appeared acutely aware of non-participatory children in this context because they had less responsibility for leading the learning.

No assessments were written down or formally taken back to the school. This was attributed mostly to time pressures, the need to relax the teacher role when away from the school and going straight back into the daily routines after the residential period. No formal feedback was expected in terms of central systems of assessment. However, the teachers taking part in this research were satisfied with this less rigid arrangement:

I wouldn’t want to analyse it to death. I think we analyse so much to death. I think assessment is so minute sometimes it drives me insane, it takes up so much time and the benefits can be very useful but sometimes are not. I would just like certain areas to be free really. (T1)

If there were a formal assessment process associated with this kind of experience, there was a concern that the significance of the outdoor learning element might be lost in the bureaucracy:

It would become school because you would be going round with a bit of paper and a clip-board, writing down quotes or ticking boxes or checking all children had understood whatever you were trying to assess. I think it would lose some of its importance somehow. (T2)

This does not mean that the teachers did not believe the information obtained from their observations was less valuable. As a result of the formal assessment doctrine at the school, there was a lot of information about a child retained mentally by the teacher which can then be ratified (or not) within the outdoor learning experience:

... we have to have evidence to show for moderation meetings ... there is still a lot of it that is in our heads because that’s how we do it and so it is really useful to be able to come here and confirm it or challenge your own thinking about a certain child. (T2)

Possibly this opportunity arose through the time and space for greater reflection on the more mechanical school systems of assessment. Davis and Neitzel (2011, 207) refer to assessment of written products as ‘artefactual’; the nature of questions asked during these visits enabled shared understandings of ‘transient’ assessment of interactions between pupils and their activities.

Regarding the PSHE curriculum, there was a suggestion that certain issues that may arise during an outdoor learning event can be noted, and acted upon back in the school to strengthen the relevant part of the curriculum for that cohort:

... and now we are going 'well actually we do have a need here that we are not addressing [in the PSHE curriculum] around self-esteem and self-worth and how do you judge yourself and compare yourself to others. (T2)

The teachers also referred to some post-residential consultation with children back in the classroom with the teachers reflecting on the anticipated learning and asking the children about it in order to confirm this.

The teachers felt that if the residential event were held at a different time of the year, it might lend itself to more formal assessment. By holding the event at the end of the school year, it was seen more as a social occasion where everyone could relax a bit, and assessment was not at the forefront of the teachers' minds. If the event were held in September, for example, with a new cohort, then assessments might influence planning and curriculum delivery for the following term or year. It was not evident how much of the children's outdoor learning experience took place in the latter part of the school year, although other research suggests that time and space for residential visits can often only be found after key stage assessments (Waite 2010).

Assessment in school focused on Maths, English, Reading and Writing, using formative assessment and the APP method (DCSF 2009). Work of one child per ability group, including teacher observations, was assessed once a term to determine the level that child had reached. Selected children represented levels for each group. In other subjects, tests were held at the end of each unit comparing what knowledge a child had before the work with their knowledge after the work, resulting in an assessment along the lines of 'working at expected level', 'working below expected level' and 'working above expected level'.

Evidently, while outdoor assessment practice was not formalised as seemed the case for much of the classroom work, neither did it adopt a 'hands-off' approach. It appeared to be intuitive, contingent to the activities and, from the interview data, spread beyond the boundaries of organised activity into the social spaces between and after the day's events. It seemed to offer insights not always available in the busy school day and perhaps a broader understanding of strengths and areas of development especially in social and emotional aspects of learning:

... we've had a big push this term on friendships with some of our year 5 girls, so it's really nice to be able to take them out from school, put them here and see how they get on. Just see whether they do fall out or whether they get on or whether they are spiteful and go ok, so they've moved this far, what do we need to do next and I think that would be our focus for assessment. (T2)

Case 2: Family learning in a National Park

In this section, a National Park is the location for the assessment activity. The emphasis is predominately evaluative for the authority to determine the value of its educational offer and the individual assessment forms the mechanism by which that is achieved.

Dartmoor National Park Authority (DNPA) is one of the 15 UK National Parks. Its Learning and Outreach service provides both formal and informal learning opportunities, including the 'Ranger Ralph Club' with outdoor learning activities for families with

children between the ages of 5 and 12. Although primarily aimed at children, it is important to emphasise that parents are seen as equal participants rather than passive observers. Evidence that parents benefit from activities was provided first by research by Townsend (2003) and in subsequent user surveys. Ranger Ralph Club members can take part in up to 12 Dartmoor Ranger-led activity sessions lasting two to three hours. Sessions explore the National Park's special qualities, for example, Nature's Decorations (at Christmas), Halloween (stories, myths and legends), Fiery Feast (bushcraft-style firefighting activities), Medieval Manuscripts (reimagining and responding to the past using creative writing in a medieval setting) as well as the tried and tested: orienteering, pond dipping and sensory experiential/earth education. The Ranger Ralph Club fits alongside other informal and formal learning opportunities, such as

- direct, experiential learning opportunities through Education Guide hire programme to explore Dartmoor's special qualities – principally at KS 2;
- outreach programme of family activities which help young and old engage through directed activity with Dartmoor and
- informal opportunities offered by DNPA's volunteering programme.

While previous Ranger Ralph Club activity days had clearly been valued by participants (young and old) as evidenced by repeat visits and research by Townsend (2003), the DNPA wanted to increase the depth of engagement and to use a framework that would allow progression in both children and adults to be tracked. The framework used provided an adaptable structure to engage a cohort over a longer time frame. The Dartmoor team wanted to use a framework that was nationally recognised with a rigour¹ that would have impact with parents and children rather than be 'just another certificate'.

The activities were held in the summer holidays of 2011 and 2012. In 2011, we had 20 participants, and in 2012, there were 16. In both cases there was no evidence of specific socio-economic deprivation and a broadly even gender balance; three children were home educated; two were from single-parent families.

DNPA staff were encouraged not only to lead but also to undertake the award for themselves. Thus, staff, parents and children were all working towards the same goals. This democratic and inclusive approach built strong links: between parents and their own children, between children who had not previously met, between parents and between children and parents and National Park staff.

During each of the four activity days, staff leading informally assessed the degree of engagement by participants and at the end of each day's activity the team delivering the activities would reflect on their observations. Having a number of staff delivering – but only one on any one day – meant there was ample scope to gather much of this informal assessment over the course of the four days. These 'day reflections' were used primarily as formative assessment to help develop and improve subsequent delivery but also to assess whether there had been progression throughout the day to meet the criteria that the National Park staff had determined would merit the award.

An end-of-course evaluation was carried out on the final 'Share' day after each participant had presented to the rest of the group. This was principally to understand outcomes in the participants' terms. A series of evaluative questions (assessment-as-inquiry as well as assessment-as-measurement) were presented on separate pieces of flip chart paper:

- What did you like best? What was most successful?
- What didn't you like? What was least successful?

- What would you change? What would you do differently?
- What would you change? What would you do differently?
- What surprised you? ... about yourself? ... about others?
- Can you recall a personal triumph? – something that makes you happy or proud to remember?
- What changes have you noticed? – in yourself; in others?

Participants were asked to write answers on post-it notes; children's and adult's responses were colour coded to separate out after evaluation completion. Questions were framed in two different ways to encourage responses and help people understand the intention of the questions. Parents helped children with this understanding but the children's responses were their own. Equality of participation and being able to track or trace answers to either adults or children was a key component of this evaluation. The results provided a rich qualitative resource, some of which was used formatively for the second cycle of the structured engagement.

The evaluation was summative to evaluate the structured activities' success and individuals' achievement of the award; and also formative, so that negative feedback was used to redesign delivery in 2012. A number of themes emerged which were broadly categorised.

The most popular 'liked best' for children was the opportunity to interact with wildlife, with practical conservation tasks and 'adventure' being equal second placed.

For parents, the interpersonal was most important, both with their own children but also with other participants, young and old. Adults in particular expressed surprise at this ability to form bonds so quickly with 'strangers'. The wildlife interactions were ranked second, with conservation tasks a close third.

Children differed from parents by barely acknowledging interpersonal interaction as important and did not rate 'acquisition of knowledge' at all, while parents in both years did make some reference to this. Inevitably parents' use of language was more complex, as were the thoughts and themes reflected. However, it is interesting to reflect on these differences in relation to Dann's (2014) thinking on assessment as a shared process between learner and teacher. In this case, where staff, adults and children were all participants, the diversity of perceived learning outcomes was starkly evident. Before this final assessment, staff had made formative judgements during the four days before this sharing, which may or may not have involved the adults and children in constructing those opinions. The diversity of outcomes presented by participants calls into question the usefulness for outdoor learning of assessment which focuses only on predefined results (Truss 2014).

One common theme for adults in both years was time – either references in the positive:

The chance to stop and commune with nature.

Or the negative:

It wasn't long enough – I want to do the eight day award.

Adults also referred to longer time frames and other experiences by comparison:

I wrote the most personal (and best) poem of my life; my first for 30 years.

This was a fabulous experience – one of the best of my life comparable to sailing across the Atlantic.

This last quote also highlights a theme from a number of adult responses which could be grouped under a heading ‘transformational’; some expressing heightened awareness with others and making a commitment to pro-environmental behaviours.

Fewer themes were identifiable in terms of negative responses. In both cohorts, a few children expressed a dislike for walking, and for adults, some would have enjoyed more time. The walking was reduced in the light of this feedback; another pedagogical response might have been to discuss with participants why the amount of walking had been included.

Case 3: Outdoor learning in school grounds

In the last case we present, the context is in school but outside the classroom and uses the same engagement framework. The case offers an opportunity to consider what happens when cultural spheres elide or collide (Waite, [forthcoming](#)).

The structured activities ran consecutively over the Autumn and Spring terms of 2010 and 2011, for one afternoon a week at a large primary school situated on the outskirts of Exeter. Although the school has extensive grounds, these were underused. The activities within the framework aimed to change this by encouraging a greater diversity of habitat and wildlife within school grounds.

The participants were a mixed gender and ability class of 24 ten- and eleven-year-olds (Year 5) and an Outdoor Learning Teacher, a Teaching Assistant and a parent helper. The pupils came from an area of Exeter with a high proportion of low-income families with 40% of the class on the free school meals scheme. The class, and two of the three adult participants, was completely new to experiential learning and environmental work.

Activities reflected different learning modes allied to Cornell’s (1998) flow model of learning and animal types: Otter (energetic/playful), Crow (attentive/observational), Bear (calm/experimental) and Dolphin (reflection/sharing), thereby utilising initial energy and excitement (discover and explore) before undertaking more focused activities (conserve and share).

The rationale for using this approach was to provide a focused framework for outdoor learning within a large city primary school. The structured activities would help the participating Year 5 pupils discover their grounds and empower them to make positive changes to benefit the school community. The learning undertaken was linked to the National Curriculum to enhance the connection between classroom and outdoor learning.

This meant that assessment took place in two ways. Firstly, the participants undertook activities linked to the four challenges of the engagement initiative. These activities were documented and evidenced achievement within the challenges set up by its structure. Secondly, the activities offered a framework for exciting and relevant learning contexts which could be linked to the National Curriculum Programme of Study. This allowed certain activities contributing towards meeting the four challenges to be assessed formally within school policy guidelines. Creating the multimedia presentation for the ‘Share’ aspect of the award, for example, covered a teacher’s information and communication technology (ICT) objectives for the second half of the Spring term 2011. The children participating in the activities could be assessed on their ICT capability, while working towards the ‘Share’ aspect of the award, by creating a video to be played in a large celebration assembly. Work making bug hotels and bird boxes for the ‘Conserve’ aspect of the award could also meet Design Technology objectives. Linking Challenges within the structure of the award to the National Curriculum in this way provided clear assessment opportunities against which the success of taking a class of children outside could be measured. This served

to satisfy the school leadership that the time spent outdoors was not without valuable curricular learning opportunities. The objectives were embedded in the planning but whether they had been achieved was a matter of discussion with the children. This compromised between a rigid definition of what learning is intended, which might fit more easily with the cultural expectations of schooling, and being open to other unexpected outcomes.

Critically considering assessment and context

The three examples of outdoor learning and its assessment demonstrate how context shapes purpose and focus. In Case 1, teachers struggled to adapt their in-school assessment to the more open flow of learning and socio-emotional outcomes that they recognised and valued in children's outdoor experiences. In Case 2, the DNPA agenda of providing popular and worthwhile activities shifted the emphasis of assessments to checking that the activities addressed customers' desires as well as following steps within an externally validated award. Open-ended questions were used in an assessment-as-enquiry framework to understand the similarities and differences between adult and child learners exposed to similar experiences. In Case 3, successfully linking outdoor learning to the National Curriculum by using a national award as a framework enabled both schooling and a wider agenda to be addressed.

Using the concept of cultural density to theorise these differences (Waite 2013), we suggest that the residential context offered an environment which was culturally light for the visiting participants. Teachers suspended their usual schooling habitus and found new ways of interacting with and assessing pupils. Over time, these 'new' ways became the habitus associated with this place. The National Park offered a context where individual habitus was foregrounded but the tool to promote engagement and curricular outcomes introduced a structure of cultural expectations within which participants were assessed. In the school setting, the teacher negotiated potentially competing cultural densities of the value system of the engagement tool and mainstream schooling, weaving the two together through pedagogy that included the children's ownership of their learning and its assessment as advocated by Dann (2014).

Many in mainstream education understand that taking learning outdoors has benefits, such as catering for different learning styles, utilising school grounds and meeting personal and social development criteria, but a question commonly posed by teachers is how to engage in outdoor learning while covering a full and rapidly moving curriculum. The engagement tool provided one method through its structure for outdoor learning activities to which clear national curriculum objectives could be attributed and assessed using established school processes. Assessment encompassed broader aims than just curricular goals. Nevertheless, assessment of socio-emotional gains happened through teachers' intuitive judgements as in Case 1. Incorporating Dann's self and peer assessment might help this aspect of the assessment process reflect more effectively some of the important personal and social outcomes for children.

Insight into why assessment as learning may be suited to outdoor learning environments is offered by Dann (2014, 158) in her extension of the idea of Vygotskian zones of proximal development in assessment practice. She draws on Day's 'zone of curiosity' (1982, 20) in which 'children, of their own volition, are motivated to put themselves into conditions of uncertainty, novelty and difficulty because the process of learning is pleasurable and rewarding'. Outdoor contexts are replete with such motivational uncertain conditions (Waite, Huggins, and Wickett 2014). Furthermore, when the child is involved in determining what is to be learnt, this can accommodate discovery learning. Dann (2014) also links Day's zone of curiosity with Dewey's concepts of physical, social and intellectual curiosity

(1910, 31–33) which are themselves frequently evident in rationales for outdoor learning provision (Waite 2011).

However, a further challenge is the sustainability of outdoor learning provision in the face of competing pressures (Rea and Waite 2012). In the final case, the participating school went on to implement a rolling programme of outdoor learning across all classes, with the added benefit of further improving the grounds for learning by the creation of a school orchard and allowing more children to take their learning outside the classroom. It is, however, probably not accidental that the initial structured activities were well evidenced in their assessment and evaluation to achieve this buy-in from the senior management of the school. Locally produced evidence is particularly persuasive where outdoor learning is not universally accepted by staff or parents and governors as it demonstrates value in a specific context (Waite, Passy, and Gilchrist 2014).

Another point that all three cases illustrate is that assessment should include a broader understanding of what can be achieved in outdoor contexts, including children's social and emotional well-being and improving attitudes towards learning, school and the wider environment. Forest School research (Murray and O'Brien 2005) highlighted eight outcomes as 'benefits' of Forest School activities, including 'ripple effects'. These 'ripple effects' were noticeable within all three cases. In Case 3, the children's comments in the weekly evaluation sessions showed a growing appreciation of the outdoor learning sessions with a particular emphasis on acquiring new skills and learning about wildlife. The class teacher reported an increase in teamwork and less grumbling when girls and boys had to work together. The sense of pride for those who achieved the award for engagement was evident in their portfolios. In a similar way, the ripple effects for the parents in family learning (Case 2) showed that independent learning was something that children perhaps embraced more readily than adults and that seeing children in new circumstances helped shift adults' beliefs about children's capabilities and independence (Waite, Rogers, and Evans 2013) and in their own learning. Observation of others in a new light was equally appreciated by teachers in Case 1.

In Case 3, the cohort were new to experiential learning and it took several weeks for them to get used to taking their learning outside. Using the structure of challenges and Joseph Cornell's Otter, Crow, Bear and Dolphin model in accepting that novelty would raise initial excitement, helped to channel and focus enthusiasm constructively. In assessment terms, this requires the teachers to be aware of where the child is at and what they need to help them move forward. Progression can only be accommodated by adapting teaching and assessment appropriately. For the teachers on the residential visit and for the National Park Authority (NPA), this adaptation was a key aspect of ongoing assessment. In the first case, adaptation of assessment practice appeared to have occurred following the teachers' first visits to the residential centre as they realised that simple export of school methods would not capture the most important emergent learning. In later visits, changes in children's behaviour between the classroom and the residential were topics for discussion by the teachers and valued for additional insights into barriers to children's positive learning dispositions. Informal chats between teachers and children about their learning shifted institutional habitus brought from the school to the outdoors (Thomas 2002; Waite 2013).

Whose agenda, whose learning, what assessment?

The new assessment policy to be introduced from September 2015 scraps levels and scores children's performance numerically around 100 (as the expected achievement). As Truss (2014) quoted the Chief Inspector, Michael Wilshaw saying, Ofsted

will want to know how often pupils are assessed and what tests are being used. For those schools that struggle to create their own, we can be sure that the market place will come up with good standardised tests for each year group and each subject.

Adopting packaged assessment tools may prove seductive in a busy school life, but careful consideration is needed about their suitability for specific circumstances and also the comparability of standards across different products and therefore across schooling. Marketisation of marking could result in benefits for companies rather than children. Schools need to consider carefully compatibility of pre-existent structured outdoor learning schemes with their own vision of education. The framework in these two case studies was intended as a ‘catalyst for activity, for partnerships, for new thinking, for planning and inclusion’ (John Muir Trust 2014) and in no way as an assessment tool to classify or measure individual achievement. However, as we have seen, enactment of intentions is shaped by situated contexts and, arguably, assessment can be seen as an integral part of these elements of good pedagogical practice.

Particularly in standards-driven contexts, learners may perceive feedback as judgement rather than redirection, adopting a ‘fixed mindset’ focused on comparative ability, rather than a ‘growth mindset’ where effort can lead to change and learning (Dann 2014; Dweck 2006). It is precisely for the quality of openness to new teaching and learning possibilities that outdoor contexts are often valued (Waite 2013). Hawe and Parr (2014, 229) suggest that where criteria and goals are uncertain at the outset, assessment should aim to accommodate a ‘horizon of possibilities’. Dann (2014) argues that it is more productive to consider assessment as a fundamental and valuable *part of* learning whereby children understand their own learning process through self and peer assessment. Assessment then becomes something which is not done unto children, whether in judging (summative) or supporting (formative) their work, but in which they are necessarily involved as an integral element of their learning (transformative). Separating teaching, learning and assessment into distinct activities disrupts the symbiosis of successful pedagogic practice that is responsive and contingent to learners’ developing understanding both of themselves and their learning. In this way, assessment itself can be responsive to unanticipated learning outcomes. This capacity frees assessment from narrowing potential for learning within informal outdoor learning contexts, where outcomes are not always specified to the degree expected in formal learning environments, and clearly offers more congruence in its approach with pedagogies for the outdoors (Waite, Rogers, and Evans 2013). However, if we are to assess not only intended but also serendipitous outcomes, a shift in our understanding of assessment is needed to locate it within the pedagogical process as a whole and include perspectives of all participants (Bisford and Bath 2014). Blamires and Peterson (2014, 159), reflecting on the assessment of creativity, propose an interactive and developmental model that incorporates pedagogical enablers as well as strands of creativity. A similar matrix might support congruence of purpose, planning, pedagogy and assessment in outdoor contexts, scaffold synergies between them and make visible what counts as ‘learning’ in the outdoors. Its structure might help meet the challenges experienced in Case 3 by a sole ‘outdoor learning teacher’ with little support from peers in developing assessment in introducing outdoor learning opportunities. Linking with the Outdoor and Experiential Learning Research Network had helped the practitioner find colleagues to share ideas, but it is clear that the presence of Learning in the Natural Environment (LINE) teams within schools would be very helpful in developing assessment as part of wider pedagogical practice as evidenced by discussions between practitioners in the two other cases. Within school LINE teams and peer-to-peer sharing of practices across beacon and cluster schools are integral to the Natural Connections Demonstration model (Natural Connections, n.d.) that is working with schools to embed learning

outside the classroom in natural environments. Conceptual frameworks like Blamires and Peterson's model (2014) provide foundations to develop outdoor learning assessment integrated with curriculum goals, but any framework still requires development at a local level towards a shared understanding of what is meaningful and useful for assessment as a fundamental part of learning and standardised evaluation of outcomes (Hermansen and Nerland 2014). This might help learning that happens outside the classroom to be recognised and valued for itself *and* for its contribution to summative assessment.

In the NPA, negative responses from formative evaluation resulted in a reduction of walking in the following set of activities. To what extent should the agenda be set by feedback from the learners or should the facilitator be firmer about wider values and purposes including benefits for health? This illustrates a point of difference between this and the other two cases in that the latter share an imperative derived from governmental and international drivers for educational standards, while the NPA mission perhaps seeks to satisfy the consumer. Yet the marketisation of education may be bringing these values to schools (Ball 1998). Will textbooks lay out the learning to be consumed and regurgitated for assessment by the writers of those textbooks; a circularity that might ensure 'results' but ones indicative of what sort of learning? So, this dilemma also indicates divergent views of 'the learner' and power to determine what is learnt. In Murphy et al.'s (2013) study, children themselves reported tests and inquiry-based activity assessments embedded within their usual work in Science useful. Frequent but fun end of topic tests were valued to know their 'level', but one wonders whether this concern about levels reflects the powerful influence of institutional habitus more than their usefulness for learning. The pupils also advocated choice and their own involvement in assessment practices. This view concurs with Dann (2014), who contends that teachers and learners should be partners in education, including assessment, thereby emphasising process and skills; while Truss (2014) suggests that 'Of course the important thing is the results.' Basford and Bath (2014) point out that a socio-cultural pedagogical approach for early years assessment becomes even more difficult to achieve with recent policy changes, since predetermined curricula steer adults towards noticing only what is expected, often missing unintended learning.

Conclusion

We would argue that there is always a summative, judgemental aspect, a political dimension, to assessment and that we all use assessment/evaluation to some extent to justify, rationalise and acquire support and resources for our work. The (in)compatibility of 'results'- and 'process'-driven assessment and implicit beliefs about the nature of teaching and learning may well continue to present challenges for teachers (and not just outdoors), but the claim that assessment 'is not an add-on or a project; it is central to effective teaching and learning' (DCSF 2008, 5) might equally apply to outdoor learning itself. John Muir stated, 'When we try to pick out anything by itself, we find it hitched to everything else in the Universe' (1911, 110); perhaps, the development of shared conceptual frameworks may help to bridge gaps between diverse purposes and support assessment, both in places of learning outside the classroom and in the context of shifting educational policy.

Note

1. It should be noted that although the John Muir Award happens to be the context for two of these case studies, it is *not* an assessment tool for outdoor learning but a subjective engagement initiative. It has no formal assessment framework, and no evidencing or documenting requirements from participants.

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