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Outdoor learning spaces: the case of forest school

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This paper contributes to the growing body of research concerning use of outdoor spaces by educators, and the increased use of informal and outdoor learning spaces when teaching primary school children. The research takes the example of forest school, a form of regular and repeated outdoor learning increasingly common in primary schools. This research focuses on how the learning space at forest school shapes the experience of children and forest school leaders as they engage in learning outside the classroom. The learning space is considered as a physical space, and also in a more metaphorical way as a space where different behaviours are permitted, and a space set apart from the national curriculum. Through semi-structured interviews with members of the community of practice of forest school leaders, the paper seeks to determine the significance of being outdoors on the forest school experience. How does this learning space differ from the classroom environment? What aspects of the forest school learning space support pupils' experiences? How does the outdoor learning space affect teaching, and the dynamics of learning while at forest school? The research shows that the outdoor space provides new opportunities for children and teachers to interact and learn, and revealed how forest school leaders and children co-create a learning environment in which the boundaries between classroom and outdoor learning, teacher and pupil, are renegotiated to stimulate teaching and learning. Forest school practitioners see forest school as a separate learning space that is removed from the physical constraints of the classroom and pedagogical constraints of the national curriculum to provide a more flexible and responsive learning environment.

Key words: learning spaces, forest school, primary education, national curriculum, outdoor learning, community of practice

Introduction

This paper engages with the growing area of research on geographies of education (Taylor 2009; Holloway *et al.* 2010; Holloway and Jöns 2012), in particular the growing use of outdoor learning spaces in education in primary schools. The outdoor environment has been described as 'a unique instructional setting' (Orion and Hofstein 1994). This paper examines the role of outdoor spaces on learning, using forest school as an example. In this paper space is considered in terms of the physical aspects of outdoor space, and also more metaphorical ideas of space such as spaces where different behaviours are permitted, and spaces in the curriculum.

This research takes the case of forest school, a form of outdoor learning that is commonly practised in primary school settings in the UK. Forest school enables children to engage in regular and repeated opportunities to learn

in an outdoor setting. This qualitative research was conducted with forest school practitioners: a community of experienced learning professionals who are able to reflect on leading many sessions of forest school.

Drawing on the literature concerning learning spaces and outdoor education, this research focuses on the learning space at forest school, and seeks to assess the significance of being outdoors on the forest school experience. How does this learning space differ from the classroom environment? What aspects of the forest school learning space support pupils' experiences of learning at forest school? How does the outdoor learning space affect teaching, and the dynamics of learning while at forest school?

Outdoor learning

Outdoor learning, defined as 'that which is beyond the walls of the indoors' (Zink and Burrows 2008), is

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believed to provide more memorable and stimulating learning experiences (Dillon *et al.* 2006; Nundy 2001; Peacock 2006) and instil 'excitement, interest and motivation to learn' (Bell *et al.* 2009, 4). Outdoor learning is often seen as being relevant to, and supportive of, teaching science or geography topics, where it provides an opportunity to illustrate or exemplify classroom learning. However, a growing literature has identified that it can provide opportunities for learning across many subjects, and also support children's holistic development (Dillon and Dickie 2012; Fiennes *et al.* 2015; Gill 2011; Rickinson *et al.* 2004). Outdoor learning is used in various formats to support children's personal, social and emotional development. This can be through group work, team building and the development of social and communication skills. In addition, a sector of outdoor learning providers focus specifically on risk and adventure, pushing students beyond their normal 'comfort zone' to cope with new challenges and develop skills to overcome them (Cooper 2003).

Existing research on outdoor learning is spread across many different activities and age groups, using a range of methods (Fiennes *et al.* 2015; Gill 2011; Rickinson *et al.* 2004). Fiennes *et al.* conclude that 'almost all [outdoor] learning interventions have a positive effect' (2015, 7) and that the beneficial effect of such interventions is enhanced after longer periods of outdoor learning (e.g. repeated sessions or residential trips), but warn that the beneficial effects diminish over time. Rickinson *et al.* (2004) highlight the need for the outdoor learning to be carefully planned and executed, and integrated with classroom teaching.

In the UK, the learning outside the classroom manifesto (DfES 2006) championed a move beyond the classroom towards more diverse learning sites, including the outdoors. The provision of outdoor learning within the early years foundation stage became mandatory in 2007 (DfES 2006). Outdoor learning at schools is now provided through free flow between indoors and outdoors in early year settings, improved outdoor areas in school grounds and field trips to natural environments beyond the school gate. Longer term residential trips and expeditions also provide outdoor learning experiences. Each type of outdoor learning is led by learning professionals: sometimes teachers, but also wardens, trained forest school practitioners or adventure leaders. This paper seeks to assess how the learning spaces in outdoor learning differ from the learning spaces in the classroom.

Learning spaces

Taking children out of the classroom to an outdoor location transfers their learning to a physical space that

is materially different from the classroom environment: a novel learning space (Peacock and Pratt 2011). Learning spaces are associated with practices, norms of behaviour, objectives and goals for learning (Peacock and Pratt 2011), so that new learning spaces provide different contexts and environments for children's learning. The learning environment can impact on children's ability to follow different learning styles (Kritchevsky and Prescott 1969).

Peacock (2011) identifies macro and micro contexts of learning spaces. The macro context refers to the physical layout of structures such as buildings, whereas the micro context consists of spatial physical arrangements within the macro contexts: the physical layout of chairs, tables and pathways for movement, presence of adults, size of teaching group, the ability to engage in smaller group discussion or 1:1 questioning, the balance between child-initiated and teacher-initiated learning, objects available to support teaching, and background noise and activities that may cause distractions.

Peacock and Pratt (2011) argue that learning spaces are associated with particular learning professionals. Each has their particular community of practice (Wenger 1998), which shapes how they interact with children and their expectations for children's behaviour. As children move from one learning space to another, they cross cultural borders, moving from one set of practices, norms and expectations to another (Aikenhead 1996; Wenger 1998). The impact of this 'novelty space' has been considered from several perspectives.

Physical space

Outdoor learning environments are less structured and formal than classroom environments, allowing more physical mobility. In comparison to a classroom environment, outdoor learning increases the physical space around children. Greater physical activity has been shown to impact on children's educational attainment (Ahamed *et al.* 2007; Trudeau and Shepherd 2008).

Norms and expectations

Research has shown that moving outdoors moves children to a learning space that is freer in terms of norms and expectations for learning behaviour (Amoly *et al.* 2014; Fiskum and Jacobsen 2013). Children do not need to suppress energy levels, movement or noise in the same way as required in a classroom. This reduces children's need to control and suppress their imaginations and actions, something Fiskum and Jacobsen (2013) argue is very stressful for some pupils, including those with ADHD. They go on to argue that, for these children, the move outdoors reduces stress and so enables better concentration as well as increasing motivation to learn.

Affordances

Removed from the standard equipment of the classroom setting (desks, chairs, pens, rulers), children take advantage of the affordances (Gibson 1977) of natural objects. In classrooms, objects are often associated with customary patterns of use. However, there is greater freedom to be imaginative and innovative in using natural objects outdoors, thus freeing children from norms and expectations concerning using them in particular, customary ways (Fiskum and Jacobsen 2013).

Social dynamics

The learning space is a result not only of the physical space but also how this impacts on social organisation within the space. As Kraftl states, it is 'impossible to divorce social processes from spatial processes' (2013, 1). Within a formal school setting, teachers organise the majority of the activity in a controlled setting. Outdoors, learning is characterised by lower levels of control and therefore greater interaction among children. Outdoor learning permits children to engage in less structured and formal learning, with greater freedom to interact with each other, and to select who they are near to, and who they work with. This encourages more pro-social behaviour, which it is argued can have beneficial impact on social behaviours and cohesion in the classroom (Waite *et al.* 2011).

Curriculum

Removed from the structure, social dynamics, norms and expectations of the classroom, new learning spaces offer new ways for children to explore. Learning professionals in non-school settings may be aware of links to the national curriculum, but are less constrained by demands to follow them (Peacock and Pratt 2011). Rather than focusing on task-oriented activities, they may follow more learner-oriented approaches, engaging in informal and child-initiated learning. This contrasts with the classroom environment, where teachers are under pressure to deliver a packed curriculum, meeting learning targets and measures of performativity (Waite 2011).

This paper investigates what aspects of the forest school learning space support pupils' experiences.

Forest school

Forest school is a popular form of outdoor learning in primary schools in England and Wales, which may be taught within the framework of mainstream school or as part of more informal or alternative learning provision (Kraftl 2013). Introduced from Scandinavia, it is increasingly practised in primary school in the UK. It has not been adopted by the national curriculum, so is not compulsory,

and is seen by some as an alternative form of education¹ (Kraftl 2013).

Drawing on Scandinavian examples of outdoor kindergartens, forest school embraces philosophies of child-initiated learning and learning through play (Knight 2009; O'Brien 2009; Joyce 2012; Fjørtoft 2001; Harris 2017), and its practice has been growing in the UK since 1994 (Blackwell 2015). Children attend forest school over a period of time: often weekly for at least a half term, sometimes throughout the school year. Sessions are led by a qualified forest school practitioner, trained in aspects of child development, skills such as firefighting, basic wood carving and tool use, and local environmental knowledge. Practitioners are also trained in the ethos of forest school, which focuses on raising confidence and self-esteem of children through small, repeatable tasks and nurturing their personal, social and emotional development through development of social and team-working skills. The setting for forest school is separate from the classroom environment because children are taken to a new space outdoors. Generally, forest school takes place in a local woodland setting, though in some instances it occurs in an area of school grounds separate from the normal playground.

Forest school is situated among several movements (see Figure 1), including outdoor learning, connecting children to nature, child-led learning and personal, social and emotional development of children. Research on forest school (Davis and Waite 2005; Knight 2009; O'Brien 2009; Maynard 2007; O'Brien and Murray 2007; Swarbrick *et al.* 2004) shows how it can



Figure 1 Situating forest school among contemporary movements in education and child development

contribute to the development of social skills and citizenship skills (Knight 2009; Swarbrick *et al.* 2004); impact on mental health and physical activity (Maynard 2007; Lovell and Roe 2009); and enable free play and child-led learning (Waite *et al.* 2013). Research has also examined what is learned at forest school and how this relates to the national curriculum (Harris 2017). This paper examines how the outdoor learning space affects teaching and the dynamics of learning while at forest school.

Method

This research takes a qualitative approach with the aim of theory building. It was undertaken in two phases, relying first on observations of children attending forest school and then on semi-structured interviews with 20 forest school practitioners. The stages of the process are outlined in Figure 2.

An initial pilot study of forest school was carried out to familiarise the researcher with forest school sessions. This involved observing 72 children of primary school age who each attended 5–6 weekly sessions in groups of 12 (6 cohorts of approximately 12 children, each attending forest school for half a term, 34 sessions observed in total). Participant observation and subsequent analysis of notes regarding each cohort, and again when all cohorts had been completed, identified research themes to be explored in further detail: What were children learning at forest school? How did the outdoor learning space influence the sessions? How did children respond to the sessions? This paper focuses specifically on the second question concerning the outdoor learning space. The emerging research questions all required further investigation and scaling up the findings to encompass a greater number of children and sessions.

The second phase of the research moved the focus of investigation from participant observation of children to interrogation of the experiential knowledge of forest school practitioners. Findings from phase one informed the development of an interview schedule to be applied to experienced forest school practitioners. The learning professionals leading forest school complete a qualification to develop their understanding of the aims

and methods of forest school, as well as practical knowledge to support delivery of forest school activities. Forest school practitioners come from a range of backgrounds, and may be from schools (teachers, teaching assistants, early years and foundation stage settings) or from organisations delivering environmental education, adventure education or bushcraft. Following qualification, many forest school practitioners meet regularly in regional cluster groups to exchange ideas and best practice, or undertake continuing professional development activities. Together, the practitioners hold experiences from leading multiple sessions with many cohorts of children. As 'reflective practitioners' (Schon 1983), they are able to draw on their experience and expertise to develop in-depth understanding of the process of forest school. This community of practice (Wenger 1998) can act as a conduits of evidence (Waite and Goodenough 2010), drawing on their experience of many sessions to reflect on the practice of forest school. This self-selecting community is likely to adopt a positive stance and rhetoric concerning outdoor learning and forest school, encultured by their training. However, this potential bias has to be acknowledged and balanced against the need to conduct research with practitioners with a depth of experience, training and understanding of forest school. The interviews interrogated their experiences (both positive and negative) and understanding of the forest school learning space. By interviewing forest school practitioners it was possible to broaden the scale of the research from individually observed sessions or schools, as was practised in the initial pilot study.

Interviewees were selected from a sample frame of 54 forest school leaders chosen from five forest school cluster groups, identified through the forest education initiative. Members of cluster groups were contacted by email and asked to participate in the research. Twenty semi-structured interviews with forest schools leaders (13 women, 7 men) were undertaken by telephone, lasting on average 25 minutes. Those interviewed worked in urban areas (5), rural regions (7) and the home counties (8). All had been practising for a minimum of three years, had built up experience with a range of groups of children and focused mainly on delivery of forest school to primary school children (aged 4–11). Of the 20

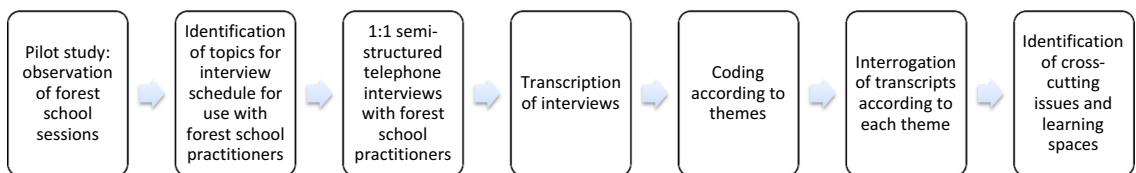


Figure 2 Stages of research from initial pilot study through to data analysis

participants, two were teachers employed at schools, five were education officers with councils or environmental trusts and 13 worked for independent companies offering forest school activities. Interviews probed their experiential learning, focusing on practitioners' views of what aspects of being outdoors contributed to forest school, with key questions:

- What aspects of the learning space support pupil's experiences of learning at forest school?
- How does the new learning space differ from the classroom environment?
- How does the learning space affect teaching, and the dynamics of learning?

Core questions were supported by the use of interrogators, exemplification and discussion of critical incidents (Chell 1998) and reflection (Schon 1983). Each interview was recorded, and then transcribed. Transcripts were read through several times and then coded against the themes identified in the initial pilot study and reflected in the topic schedule, as well as any new themes that emerged during data immersion. Comments relating to each theme were then gathered, read repeatedly and reviewed to identify sub-themes and clarify emerging issues. The findings of this research identified three different aspects of learning spaces at forest school: space in terms of a physical setting, as well as the space in more metaphorical ways: a space where behaviours are permitted; and a space outside of the national curriculum. Within each theme comments related to one or more of these aspects of learning spaces, and therefore in a second phase of analysis results were coded according to their relationship to the physical space, the behavioural space and the space away from the national curriculum. Table 1 indicates the themes identified initially, and how they relate to three different aspects of the learning space.

Results

During the process of interviews and transcription, the concept of freedom emerged. Of the 20 interviews, 17 discussed the idea of the forest school learning space releasing them from the constraints associated with normal classroom teaching, with nine specifically using the word freedom, sometimes repeatedly. This freedom was about more than escaping the walls and confines of the classroom. The move outdoors to a novel space, with sessions led by practitioners, was a move not just to a physical space outside, but also a metaphorical space that was freer in terms of behavioural expectations, time pressures, demands of the national curriculum and assessment, and pressure

for pupils and teachers to achieve. Each are now discussed in turn.

Physical space

The physical space in which forest school takes place was seen to be larger and more open than classroom settings. The move away from ceilings and walls that confine children towards an outdoor space meant children were not 'hustled in like in a pressure cooker' (Int 4) and instead had a chance to 'breathe' and express themselves (Int 4). Forest school practitioners felt that the children had more space (Ints 5 and 8), and in such a big space felt less overloaded. They could go to a quiet area (Int 8), choose to be on their own or interacting with a larger group (Int 17). This novel space was also constantly changing due to differences in seasons and weather at each forest school session (Int 21). Forest school leaders claimed children found being outdoors stimulating to all senses, so that the environment 'wakes people up' (Int 1). They also believed that being outdoors was associated with enjoying themselves, and 'wonder' at natural things made learning more exciting and 'memorable', so that learning was more likely to be retained (Int 15).

Behavioural space

Removed from the structure, social dynamics, norms and expectations of the classroom, new learning spaces were reported to offer new ways for children to explore and learn. At forest school sessions, different norms and expectations for behaviour operated. Forest school practitioners suggested that the larger physical space enabled children to engage in behaviour that was not possible in a classroom situation, where they were at desks and chairs. Outdoors at forest school, they felt children were less constrained and so able to run and let off energy (Int1), to shout and be noisy (Int 11) and express a full range of emotions (Int 10), rather than being constrained. They could be given more physically demanding tasks that burned up energy (Int 1). Equally, they could find space away from others to be calm and reflective (Int 10). This space allowed them the opportunity to choose what and how they wanted to engage in activities to learn 'in their own way' (Int 13), and adopt individual learning styles (Int 7).

Forest school practitioners claimed it was a more relaxed (Int 3) and informal (Int 3) learning space which was 'calming' (Int 2), with those involved feeling 'more relaxed amongst themselves' (Int 3). The learning was felt to be more child-driven (Ints 3 and 5), giving children greater 'independence' to choose what they wanted to do (Int 5). This space allowed students to work individually or in groups, to move away from noise or those who annoyed them.

Table 1 Relationship between key themes and aspects of the learning space

Key theme	No. of interviews referring to key theme	Cross-cutting themes (summary of comments from forest school practitioners interviewed)		
		Physical space The physical space in which forest school takes place	Behavioural space Expectations of norms and behaviour in forest school learning space	Space apart from the national curriculum
Removal of constraints (freedom)	17	Larger physical space Go outside normal physical constraints of classroom Children able to learn without interfering with each other	Free movement Calming atmosphere Able to choose learning styles and activities Able to make noise or be calm and reflective	No curriculum Independence to choose learning – child-led Open-ended learning Learning in their own way
Relaxed	12	Allowed to interact with natural environment	Able to interact with people Children concentrate better outdoors More receptive to learning	No targets Less target-driven, takes pressure off More time
Space	10	Not hustled in Free from walls and ceilings Removal of boundaries	Not annoying each other Choice of quiet or busy space Space to express full range of emotions	Concentrating more, relaxing Learning individually or in groups Learn at own pace
Facilitation of learning	9	Activities contingent on environment Space to do whatever they need	Learning through discovery Sense of satisfaction for children	Child-led learning Light touch monitoring Accept where they are Facilitation rather than directed teaching
Seasonal change	9	Environment changes each week due to weather and seasons Watch things grow Unique Unpredictable		Activities can be adapted in response to seasonal or weather changes at forest school site
Stimulating	6	Rich learning environment Engages all senses Environment changes each week Outdoors associated with enjoyment Challenge of new environment Seeing how things work Exciting Memorable	Changed confidence levels	Taught through challenges Development of independent thinking Small repeated tasks build self-confidence What can be achieved through learning in small groups

Space apart from the national curriculum

In an educational system directed by a national curriculum, forest school also represents a space in the teaching timetable that was not controlled by the

national curriculum and its associated targets. Forest school practitioners felt this gave them the opportunity to be led by children, to 'accept people where they are and give them space to do what they need to do' (Int

20) and 'come in at whatever level they're at, and progress as quickly or as slowly as they want to' (Int 14), so that the learning space was not as stressed or intense as in the classroom. Practitioners allowed children to return to tasks week after week. Forest school was felt to be 'less target driven' (Int 1) and 'more process driven' (Int 1) and there was less pressure to complete tasks (Int 5). Practitioners described an ethos of 'building them up rather than making them feel they have got to succeed ... through short achievable tasks' (Int 18).

The absence of assessment to measure progress against the national curriculum was also considered to be important, 'because there's no, sort of, stress, there's not targets for the children to meet' (Int 5) and only 'light touch monitoring' (Int 18).

Forest school practitioners claimed children who are relaxed get 'more from it' and are 'more receptive' to learning. Practitioners noted the difference in teaching styles from the directed learning of the classroom to 'facilitation' at forest school (Ints 1 and 5), so that 'the role of forest school leaders is to encourage ... to go with the flow, with what the child finds interesting, rather than narrowly control what the child must do' (Int 14).

Discussion

This paper contributes to the emerging area of geographies of education, particularly studies concerning school design and educational spaces. Forest school is a practice sometimes described as 'alternative education', but it is increasingly incorporated into mainstream school activities despite not being part of the national curriculum. It operates at a nexus of interests in reconnecting children with nature, increasing provision of outdoor education, and the development of play-based learning and child-centred pedagogies. A growing body of research focusing on geographies of education has studied education from a range of perspectives. This paper adds to the growing literature on the way spaces are used by educators, including the increased use of informal and outdoor learning spaces among younger primary children (Gilchrist *et al.* 2016). It focuses on the way outdoor learning spaces are used and valued as part of a learning practice (forest school) that is increasingly adopted by primary schools in the UK and so is becoming embedded within mainstream schooling. Forest school is an educational movement (Leather 2016; Knight 2009) situated at a point of intersection between formal and alternative schooling.

This paper has explored forest school as a learning space, considering this space in terms of a physical setting, as well as the space in a more conceptual way – the space where behaviours are expected, the space in the national curriculum and its associated measures of

performance. This paper adds to the existing research on outdoor learning at forest school by looking specifically at the learning space. The results show how the outdoor learning space of forest school frees teachers and pupils from the norms and conventions of the classroom to enable them to adopt different learning styles and engage in more child-initiated learning. These findings are supported by Kraftl, who writes about 'going beyond the familiar' (2013, 62) in his discussion of forest school as a form of alternative education, identifying a break from places, norms and rules of everyday life and schools.

When moving outdoors, a 'cultural border' (Peacock and Pratt 2011) was crossed so that the relationship between children and adults was subtly redefined. The goals of the learning professionals were not those of classroom teachers. As noted in other studies (Humberstone and Stan 2011; Maynard 2007), they took a different approach to the school children in terms of expectations for behaviour and their relationship with them. As described elsewhere, the skills and approach to teaching are subtly altered (Blenkinsopp *et al.* 2016; Harris 2017). The model of teachers organising learning while children observe is altered to a more interactive style of teaching, where learner-oriented approaches take the place of task-oriented approaches, and such learning is less dominated by the national curriculum. As already reported (Harris 2017), practitioners felt that personal, social and emotional development is more significant than national curriculum topics at forest school.

The learning space at forest school is also separate from the demands of the national curriculum and associated measures of performance for both pupils and teachers, and so removes the pressure of targets for both children and staff. Alternative education practices (such as forest school) seek to 'de-school' spaces, including a separation from regulatory frameworks such as health and safety, testing, league tables and outcome-orientated curricula (Kraftl 2013). Forest school takes place in a conceptual space crammed with the demands of the national curriculum, targets regarding achievement and pressure to support personal, social and emotional development of children. While outdoor learning can contribute to many of the national curriculum topics (Rickinson *et al.* 2004), forest school is seen as separate from formal teaching and learning. Although there is no formal curriculum within forest school, it can support children's learning in many ways, which some practitioners argue then reflects on attainment in the classroom (Harris 2017).

In an increasingly congested curriculum and timetable, where monitoring and metrics encourage schools and teachers to evidence the value of school time by achieving measurable learning outcomes, forest

school is in contrast with the rigour and pressure of formal teaching in the rest of the week. There are no formal targets, learning outcomes or prescribed attainment levels relating to children's time at forest school. This gives leaders permission to take a more flexible approach, providing time for the group to follow up opportunities for learning as they arise and to follow children's interests. Without targets, there was no fear of failure, for either children or teachers.

Forest school has attracted considerable interest from researchers, with studies often focusing on a specific aspect of the forest school experience and its impact. This paper focused on the importance of the learning space. This research moves away from a case study approach and instead draws on the community of practice of forest school learning professionals, and their years of experience and multiple cohorts, schools and age ranges. The results show the significance of moving outdoors away from the classroom, and thus contribute to the literature on the value of outdoor learning in primary schools in the UK.

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Note

1 Here alternative education is defined as a form of pedagogy which differs from that generally used in mainstream state schools.

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