Chapter overview

This chapter reports the findings from a research study that considered the child-initiated interactions that took place between children and their teachers in both indoor (classroom) and outdoor (natural country park) spaces in three early years and Key Stage 1 classes in South Wales (Waters, 2011). These classes are for children from 4 to 7 years old, described in Wales as the ‘Foundation Phase’. The chapter presents data that suggests the natural outdoor space better supported the children in initiating interaction with their class teachers than the indoor space. Further, the content of the child-initiated interactions when outside was more likely to include enquiry-based questions and lead to longer periods of interaction between child and teacher, including episodes of sustained shared thinking (Sylva et al., 2003). The exploratory and essentially child-led nature of the outdoor learning observed in the study challenges approaches to learning outdoors that are limited by pre-planned learning outcomes, adult direction or children playing with pre-defined materials without adult interaction. Essentially, the observed practice offers an alternative model of outdoor learning that addresses the priorities established in the Foundation Phase framework for 3–7-year-olds in Wales (DCELLS, 2008), namely the requirement for child-initiated activity and learning, development of curiosity, and engagement in questioning and sustained shared thinking. This chapter promotes the value of children spending time regularly in wild, natural spaces with their teachers; the study suggests this is particularly valuable for children’s cognitive engagement with, and enquiry about, the world around them.
The study

The research was undertaken in a large inner-city primary school in South Wales. Three classes of children (Reception: 4- to 5-year-olds, Y1: 5- to 6-year-olds and Y2: 6- to 7-year-olds) and their teachers were involved. Each class visited a local country park for an afternoon four times across the school year. This activity, initiated as part of an Outdoor Learning Project (OLP; Waller, 2006), had been part of the children’s school experience for four years. The visits involved the children putting on appropriate protective clothing (wet weather trousers, padded waterproof jackets and Wellington boots) as needed, and walking for 15 minutes or so along pavements through a housing development to reach the country park. The park itself was situated surrounding the summit of a hill, and incorporated a variety of geomorphic features such as shallow and steep terrain, wooded areas, open scrubland and heavily covered vegetation, grassed space, puddles and swampy ground, trees and panoramic views. A popular area for local dog walkers and used by local youths for recreation, there were often aspects of the space that required care and children’s attention to avoid (e.g. broken glass, faeces, litter), as well as aspects that provided further variety for children’s use and/or attention (e.g. abandoned rope, lengths of wood, a mattress, a rusting car). The children and teachers usually negotiated between them where, within the park, they would go on any particular visit. The ratio of adults to children was usually 1:2 or 1:3, as a result of support from student volunteers and, occasionally, parents or additional adults from school.

For the duration of one school year, the interaction between the teacher and the children was captured using digital audio and video devices during each of the four outdoor visits per class. An equivalent amount of time was spent recording interaction within the classroom while children undertook a range of play-based and teacher-directed activities. The teacher wore a microphone so that all instances where children initiated interaction with the teacher were recorded. The video footage was taken on a hand-held video recorder from an optimal distance of 3–5 metres. Every episode of interaction that began with a child initiating talk with the teacher was transcribed; the content of the child’s talk and the type of interaction were categorised.

Findings

The key findings of the study, pertinent to this chapter, included the relative proportion of child-initiated interaction taking place indoors and outdoors and the features of the environment that created opportunities for prolonged adult–child interaction. While indoor and
outdoor observation sessions varied only slightly in terms of duration, it is notable that substantially fewer child-initiated interactions were recorded for the indoor sessions compared to the number recorded in the outdoor environment for each class. The Y2 children initiated over six times more interactions with the teacher when outside than when inside; the Y1 and Reception children initiated three times more. That the outdoor environment appeared to offer more opportunity for children to initiate interaction with their teachers than the indoor environment could be explained by the relative novelty of the activity and the inherent interest that the outdoors holds for young children (e.g. Hart, 1979; Moore, 1986; Titman, 1994; see Box 2.1). However, when the content and duration of these child-initiated interactions are also considered, we find that the nature of the interactions is different too. When indoors, children did not initiate any interaction with the teacher that was about the space they were in; that is, they did not talk about any recalled events related to their classroom, did not open conversation about the classroom and did not offer any information about their classroom during the observations. Only the Reception children drew the teacher’s attention to any object indoors; this was infrequent and related to the product(s) of teacher-directed activity. The children in the two older classes did not draw their teacher’s attention to anything in their classroom space. However, when outdoors about a third of all child initiations were to an element within the environment. A further third of all initiations outdoors were indirectly related to the environment (this was when the child’s initiation was related to being outside but not directly focused on a specific element in the environment; see also Waters and Maynard, 2010). Not only did children bring what interested them to the teacher when outdoors, but also the teachers engaged in many more prolonged interaction sequences when outdoors. Indeed, only one episode of ‘sustained shared thinking’ (Sylva et al., 2003; see Box 2.2) occurred indoors but 31 were observed outdoors. It appeared that children’s interest in features of the environment, and loose parts in the natural outdoor space, created opportunities for prolonged, engaging adult–child interactions that were centred on the child’s interests.

Box 2.1  Seminal works – Titman, 1994; Moore, 1986; Nicholson, 1971

Elements and features of the outdoor space in this study reflect some of those in which children have consistently reported

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their interest over time (e.g. Hart, 1979; Moore, 1986; Titman, 1994). In Titman’s (1994) study, for example, children reported that their ideal outdoor space associated with school was a space for doing, thinking, feeling and being – ideally simultaneously. Signifiers of such ‘ideal’ environments were a natural landscape, livings things, colour diversity and change, features that can be used for seating/shelter, and private spaces and materials that can be changed or used in an imaginative way. It is pertinent to recognise the convergence of these reported signifiers with the elements of the outdoor space to which children repeatedly draw teachers’ attention in this study. Indeed, all the signifiers identified by Titman’s work are features of the outdoor environment in this study.

Similarly, Moore (1986) records in his study of children’s use of their environments in the mid-1980s, how children made use of ‘found objects’ (p. 78), including flowers, seeds, nuts, berries and ‘loose parts’, e.g. abandoned seats and ‘collecting things’ such as rocks, toadstools and leaves; he also looked at how they made use of these in conjunction with ‘landscape features’ (p. 80) such as pools, hills and streams. Moore’s work reflected the interests of children in their middle years, recording what they did in their neighbourhoods, usually without supervisory adults, in informal play situations. Again, the elements of the environment that the children in Moore’s study commented on and valued are reflected in what the children in the current study are drawn to in their outdoor environment. It appears that flexible, natural environments inherently offer opportunities for capturing children’s interest. The theory of loose parts, put forward by Nicholson (1971), suggests that: ‘In any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it’ (p. 30).

The loose parts appear to inspire awe and wonder as evidenced by children’s attention to minute detail, colour, shape and their exclamations made about various found objects. The loose parts appear to inspire responses from the children in this study that Nicholson predicted in his theory; particularly inventive and creative responses (see Waters, 2011).
Box 2.2 Theoretical links – sustained shared thinking

Sustained shared thinking has been defined as: ‘an effective pedagogic interaction, where two or more individuals ‘work together’ in an intellectual way to solve a problem, clarify a concept, evaluate activities, or extend a narrative’ (Siraj-Blatchford, 2010: 3; Siraj-Blatchford et al., 2003; Sylva et al., 2003). The term ‘sustained shared thinking’ ‘emerged as an analytic node ... in the process of qualitative research’ (Siraj-Blatchford, 2009: 78). The research in question was part of the large-scale longitudinal project Effective Provision of Preschool Education (EPPE) (Sammons et al., 2002, 2003) and the extension Researching Effective Pedagogy in the Early Years (REPEY) (Siraj-Blatchford et al., 2003; Siraj-Blatchford and Sylva, 2004). The EPPE project tracked the developmental trajectories of 3,000 children from randomly selected preschool (or home) settings in England as they progressed through school. Outcomes for the children were assessed in terms of cognitive, social and behavioural measures. The 12 preschool settings considered the most effective as a result of these measures were taken as case studies for the REPEY project. This project sought to identify the practice(s) associated with the observed high quality outcomes and emergent sustained shared thinking. Siraj-Blatchford claims the importance of the ‘evidential basis for sustained shared thinking’ (2010: 162) and describes how the term:

came to be defined as sustained shared thinking because research respondents and observers specifically referred to the sharing of thinking, and to the particularly sustained nature of some of the interactions identified in effective (in terms of child outcomes) preschool settings. (2010: 1)

Findings from the projects indicated that sustained shared thinking ‘was most likely to occur when children were interacting 1:1 with an adult or with a single peer partner. Freely chosen play activities often provided the best opportunities for adults to extend children’s thinking’ (Siraj-Blatchford, 2010: 158).
Case study: Burnt trees

The case study that follows takes the form of a transcript and commentary: this is the first visit to the country park for the Y2 class, in October. The class have been taking regular trips such as this for two years. The class are walking past a bank that slopes away from them where some burnt logs are lying flat on the ground. The outdoor space allows Omar to express his interest, solve a problem and extend his solution into a playful episode. It is interesting to note that Omar withdraws from interaction with the teacher when this becomes ‘teacherly’, and re-enters the interaction when he has a resolution to offer. The engagement of the teacher in the subsequent play episode indicates Omar’s solution has been respected.

Key for the following transcript:
TEA: teacher
OMAR: focus child
CHB: other child (boy)
CHG: other child (girl)
CB2: second additional child (boy)
XXX: inaudible speech
<>?: uncertain transcript

*Bold text: commentary*

OMAR: Miss, look, the tree’s been cut down.

**OMAR draws attention to something of interest in the environment.**

TEA: I wonder why?

**TEA responds congruously – seeking to explain the observed phenomenon.**

OMAR: ‘cos it’s coming Autumn.

**OMAR offers an explanation for the phenomenon.**

TEA: Joel, can you come and join us on the path?

**TEA is distracted.**

OMAR: Miss! I know why they’re cutting the tree down!

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OMAR returns to the problem of explaining this phenomenon; his first explanation may not have been sufficient to satisfy his enquiry.

TEA: Why do you think?
OMAR: To make more paper!

OMAR offers further explanation.

TEA: Good plan, Stan.

This is an evaluative comment that could ‘close’ the interaction.

TEA: What do you need paper for?

This ‘teacherly’ question may narrow the interaction, though it does potentially extend OMAR’s contribution and explanation.

CHB: To write on?

TEA: Something else?

This request reinforces the ‘teacherly’ pattern; TEA is asking the children to give more answers to her question.

OMAR: For the newspaper!

OMAR contributes a response in this routine interaction.

TEA: Yes, something else?

This is a closed ‘teacherly’ move. Note: OMAR appears to have withdrawn.

CHB: Um, I dunno.

CBZ: I been over your house.

The interaction appears to have moved on and away from OMAR’s interest in the trees.

TEA: ! We’re carrying on and we’re going round the corner.

CHB: Miss <look at those>[?] trees.

Another child draws attention to the trees again [pointing out another feature – that they are not only cut down but burnt].

TEA: Do you think someone naughty has burnt those trees down?

TEA addresses a social agenda in this leading question.

CBZ: XXXX.

TEA: I know. Why are they burnt?

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CHB: I dunno.

TEA: Do you think somebody naughty’s done that?

TEA reinforces the social agenda in this repeat question. OMAR takes no part in the preceding judgement of the burning of trees.

OMAR: Aha! Somebody’s been camping!

OMAR engages again: this utterance explains the observed phenomenon. He is excited by this idea.

TEA: Do you think so? [laughs] And had an enormous campfire.

Congruous response; TEA accepts OMAR’s explanation and extends it.

OMAR: Yeah.

OMAR: Or a bonfire!

OMAR accepts TEA’s extension and adds to it.

TEA: Yeah.

Congruent conclusion between OMAR and TEA; observed phenomenon is explained.

This episode is followed 30 minutes later by a playful episode in which Omar extends his ideas into a play situation and the teacher appears, in turn, to extend this further by developing the narrative through briefly joining this play.

OMAR: Miss! Miss! I’m having a campfire.

OMAR draws attention to the current play theme. This centres around the solution to his previous enquiry to explain the observed cut and burnt trees. He is using sticks to pile up a ‘fire’.

TEA: What are you cooking?

This is a possible extension to the play since OMAR has not indicated that he is cooking on the ‘fire’.

OMAR: XXX.

TEA: Pine cones? Can I have a t – can I have a cooked pine cone please?

TEA responds congruously, joins the play and extends it by joining as a new member.

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CHB: [screams]
TEA: er F!
TEA: Omar’s make – Omar’s got a campfire there and he’s making us some food.

TEA invites others to join the play.
OMAR: Here’s your pine cone!

OMAR continues the play.
CB2: Do you want to come to the pine cone shop?

CB2 asks TEA to join the related play theme.
TEA: Can I have two pine cones, please?
CB2: There you go.
TEA: Cooked.
OMAR: I only had one.

OMAR continues with the original play narrative.
TEA: OK, I’ll wait for the next one to be cooked.
CHG: I got one!
TEA: Oh I – can you cook it for me on the barbie?

TEA introduces different vocabulary and brings the two play themes together.
OMAR: Here’s the cooking! Here’s the cooking!

OMAR continues with the play narrative.
TEA: Oh, thank you.
OMAR: Here’s the cooking!
TEA: Thank you <i’ll have that now>.[?]

Congruous conclusion of play episode.

Discussion

Wood (2007) is concerned that children’s interests and needs do not necessarily generate a problem or activity space but, as the data reported above and the case study here demonstrates, on occasion what children identify and bring to the teacher for consideration can do just that. In the co-construction of cognitive problems that
occasionally result from child-initiated interaction in the study, an
enquiry space (Wood, 2007) is established in which teachers and
children intersubjectively engage to find solutions. Such a space is
created by the outdoor visits in this study and it is of concern that
the indoor space did not support any child-initiated enquiry. Indeed,
this position may reflect Brooker’s concern that despite the rhetoric
to take seriously children’s interests in UK early education policy,
what adults tend to do is offer a ‘diet of activities dependent on spe-
cially produced learning materials with [an] inbuilt curriculum’
(2011: 146). In this setting, the outdoor visits provide children with
encounters with the unknown and unpredictable (Dahlberg, 2010) to
which they thoughtfully respond and often choose to share this
response with their teachers. This study, therefore, indicates that
offering the unplanned, the new or unfamiliar in the form of a
changing natural environment provides opportunities to respond to
the requirements in early years curricula (e.g. the Framework for the
Foundation Phase in Wales; DCELLS, 2008) to attend to children’s
interests.

The outdoor environment appears to be an effective stimulus for
children’s interest and enquiry because it is flexible, natural and contains
many varied, fixed and loose elements. The indoor environment, by
contrast, does not appear to stimulate children’s activity and enquiry
in the manner observed outside. It might be suggested that this implies
the indoor environment is sterile and uninteresting for the children
but Bang’s work (2008), in which she considers the affordance (see
Box 2.3) of aspects of the classroom environment for children’s action,
allows a richer explanation. Bang shows that objects in any environ-
ment cannot be thought of as ‘neutral environmental elements’
(p. 126), since they have a functional significance that is mediated by
context. For example:

different objects in the classroom have different properties; therefore they
may afford different activities which are all part of a culturally developed
pattern of activities. The objects in the classroom contribute to the overall
idea of what it means to ‘go to school’. They are artefacts invented by humans
... and they help to organise and regulate the activities of the setting. They
enable the child to participate in particular activities; at the same time they
serve to frame the actions of the child. (2008: 126)

Associated with the physical features of any space, then, are the reified
(Wenger, 1998; Aasen et al., 2009) and culturally established ways in
which children enact interaction with objects. Outdoors, children in this
study enact interaction with objects in a manner that supports enquiry,
interest and wonder. That they do not interact with objects inside the
classroom in this way does not necessarily imply that the objects there
are dull or uninteresting; rather that, in this setting, children are not
cultured to interact with objects in this way when indoors.
The term ‘affordance’ is often used to describe the possibilities for action that a physical object or space offers to a particular individual, but, as the foregoing suggests, any such interaction between object and individual is mediated by the cultural context in which the meeting takes place (see Box 2.3). In order to fully appreciate spaces and what they offer, then, we need a model that allows us to conceptualise the contextual as well as the physical space in which an individual acts; Figure 2.1 represents these aspects of a space.

**Box 2.3  Affordance**

Gibson’s (1977, 1979) theory of affordance was developed as an ecological approach to the consideration and understanding of

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visual perception. This theory was a significant move away from previous psychological conceptualisations of perception, based on information-processing models, in which objects were considered to be perceived by a process of discrimination of their properties or qualities (colour, texture, size, shape, elasticity, and so on); Gibson’s theory suggested that ‘what we perceive when we look at objects are their affordances, not their qualities … what the object affords us is what we normally pay attention to’ (1979: 134).

The fact that a stone is a missile does not imply that it cannot be other things as well. It can be a paperweight, a bookend, a hammer, or a pendulum bob. It can be piled on other rocks to make a cairn or a stone wall. These affordances are all consistent with one another. The differences between them are not clear cut, and the arbitrary names by which they are called do not count for perception. If you know what can be done with a graspable detached object, what it can be used for, you can call it whatever you please. The theory of affordances rescues us from the philosophical muddle of assuming fixed classes of objects, each defined by its common features then given a name … you do not have to classify and label things in order to perceive what they afford. (Gibson, 1979: 134)

Gibson introduced the word ‘affordance’: ‘I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment’ (1979: 127).

It is this complementarity between animal and environment that Gibson was at pains to point out. The location of the affordance lies neither with the animal nor with the environment but between them, within the perception by the animal of its environment. The fact that affordances are perceived by the animal might suggest that they exist ‘external to the perceiver’ (p. 127), and yet it is only when perceived by the animal that they come into being for the animal. ‘The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill’ (p. 127). The same environment may offer different animals different affordances. Gibson gives the example of the affordance for support of an animal by different types of ground surface with different physical properties. This affordance needs to be considered in relation to the animal – and is unique to the animal. For example, a

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mosquito may land on the surface of a garden pond and be afforded support but a cat would sink. It is therefore not possible to measure affordance ‘as we measure [physical properties] in physics’ (Gibson, 1979: 128).

However, we cannot conceptualise affordance without acknowledging the sociocultural context within which the animal – or ‘agent’ – and ‘environment’ meet. Figure 2.2 represents Gibson’s positioning of affordance as situated between the ‘agent’ and ‘environment’, and allows us to acknowledge the sociocultural context of such meetings.

It is suggested here therefore that while the outdoor space in this study inherently provided features and objects that drew the children’s interest, stimulated their enquiry and caused them to call for the attention of the teacher, the culturally reified practices associated with being outdoors compared with being indoors in school also contributed to the observations made.

The physical space – what is available to talk about – is mediated by the sociocultural context through the culturally accepted practices associated with the spaces and objects through which humans enact interaction. In this study, the culture of the outdoor activity supported interaction with objects in ways that were child-initiated and/or enquiry-based.
Further reading

Nicholson’s seminal paper sets out clearly why the *bits and pieces* inherent in natural and wild spaces are so good for children, their creativity and their development.

This article documents the specific aspects of the natural outdoor space that drew children’s attention in the study reported in the chapter.

Jan White provides clear and accessible advice on how to provide for young children’s outdoor experiences without the dramatic and expensive development of natural areas.

Information for practice

The Welsh inspectorate, Estyn, in its evaluation of outdoor learning in the Foundation Phase (Estyn, 2011) found that children under 5 generally improve their well-being, behaviour, physical development, knowledge and understanding of the world through learning outdoors. But inspectors found that in about a third of the sessions they observed, some children’s learning experiences were too adult-directed, lacked challenge or did not make the most of the facilities available. The report recommends that local authorities provide more training for leaders and managers to help them to identify good practice, challenge shortcomings and make more cost-effective decisions on improving outdoor facilities. This study suggests that the artificial ‘development’ of outdoor spaces for the purposes of supporting children’s learning might be considered with a note of caution; the study supports the notion that wild outdoor spaces may be more valuable for capturing children’s interest, developing their curiosity and thinking skills than adult-designed spaces aimed at meeting curricular targets (see also White, 2008).

References


