

Learning *with* Nature

Embedding Outdoor Practice

 SAGE

Los Angeles | London | New Delhi
Singapore | Washington DC

Claire Warden

Introduction

Outdoor learning is on a massive continuum of quality and form. In order to evaluate the nuances of what is happening, we can start by looking at the management of outdoor learning. We can take each key aspect of management in turn and consider its influence on our practice. The features that we have chosen to explore are landscape, use of space, resources, time and the adult role. The weather sits on top of these elements as unique and uncontrollable. The child is the wondrous element that moves across all the aspects, making connections in learning.

The aspects are on continuums from high structure to low structure. By considering where our practice sits, we can raise awareness in the whole team and then use development planning to take action.

The first aspect is the topography of the land and the landscape that we create or use on it. At one extreme, we could place types of outdoor practice that are bound by artificial equipment, surfaces and designs; at the other extreme, we could find settings in natural wild spaces such as forest and beaches.

The second aspect is space. The three spaces are inside, outside and the wilder spaces beyond the boundary fence. These are used in different ways: in the way we work in them, but also in the way we make links between them, or physically subdivide them for learning spaces.

The third aspect is resources. At one end of the continuum, the resources are highly structured and closed; at the other end, we have open-ended materials.

The fourth aspect is time, with subdivided and highly structured time at one end, and free-flowing, self-fulfilling play at the other.

The fifth aspect is the adult role, which varies from didactic over-structuring to the calm supportive structure of an almost silent presence.

All practice sits somewhere on these continuums. It is the interplay of all of these lines of continuum that creates practices that seek to define themselves in slightly different ways. Practitioners around the world are being asked to attach themselves to set outdoor models as a form of identity. Names such as Forest School, Nature Kindergarten, Nature/Nurture Zones, Moorland School, Barnehage, Wald Kindergarten, Beach School, Forest Clubs, Woodland Days, pervade the internet forums.

This book seeks to go below simple naming to look at what I call 'Nature Pedagogy' – the understanding of *how we work with* nature in all of its forms. As professionals, we should attach ourselves to a set of pedagogical values that are created through thinking about our practice, rather than dividing up nature and dividing colleagues into separate silos.

In order to embed outdoor learning in our work, we first need to know what it is that we are doing. We need to deconstruct in order to reconstruct our understanding. This book challenges standard ways of approaching self-evaluation to offer a fresh approach with innovative ways of sharing ways of knowing and planning for improvement.

Diagrams of Practice (DOP) are a method of showing what you do in a diagrammatic form, using colour, line, size, form and pattern. They have been applied through research to explore how they enrich and motivate staff teams to engage the improvement of self and setting (Internal Report, MacQuarrie, 2012).

The origin of this book sits at a meeting point of three values by which I live. The first is the value of justice, which is often manifested in having an influence or voice. The voices of marginalised groups, of the young and old, are often lost as they are viewed as having no value or opinion. Diagrams of Practice give all people a voice.

The second is love. In this context, a love of nature, and possibly that it, too, suffers an injustice in that it has no voice. The large-scale commercialisation of childhood is overwhelming; media and global connectivity have a very loud voice that stretches around the world, breaking connections to nature in its path. When we go to wilder natural spaces, there is no internet signal but, ironically, the connections will be stronger.

The third value is hope. Humans are part of nature and we detach ourselves from it in an almost self-harming way. We are beginning to realise the long-term effects of disconnection. There are now more global education groups, such as the Children and Nature Network and the Nature Action Collaborative, that are creating a solid advocacy body.

The book is structured to use the Diagrams of Practice. These are presented throughout the book to inspire readers to experience an innovative way of communicating outdoor practices.

- Chapter 1 introduces the concept of multi-modal forms of self evaluation and then asks you to self-evaluate your practice through the creation of a diagram. Each of the aspects listed above is explored and applied to encourage the reader to dig deeply into what is actually happening in the management of outdoor learning.
- Chapter 2 outlines research that surrounds the characteristics that shape outdoor learning so that we can root our practice.
- Chapter 3 explores the specific way in which we can look at learning with nature in comparison to learning in or about it. Examples of individual changes and strategic planning are incorporated.
- Chapter 4 explores the influences on parents and carers and suggests ways in which we can share our values and journeys strategically.
- Chapter 5 addresses outdoor observation, consultative planning and types of assessment.
- Chapter 6 shares the wisdom of practice (Shulman, 1986) through a wide range of settings from around the world which have used Diagrams of Practice to share values and pedagogical thinking.

1

Self-Evaluation of Practice

Overview

This chapter will explore how relevant research techniques can support self-evaluation and centre improvement. The Diagrams of Practice (DOP) will be introduced as a form of mapping practice and to generate staff discussion in order to deepen awareness and understanding of how outdoor learning can be improved and embedded in our practice.

Research is key to knowing what you are really doing. However, the word itself is often linked to a form of research that is removed from day-to-day experience. The dichotomy here is between what we see as quantitative and qualitative approaches to research. When ‘knowledge’ was being explored in Victorian times, the arts and the sciences sat together. Over the years, quantitative research linked to science became more dominant; it provided data and statistics that could be easily extrapolated to provide norms. However, the reality is that education is far from being easy to quantify, as we work with individuals who have emotions, and with many ways of knowing. This book seeks to bring together some quantitative research and to explore ways in which we can conduct self-evaluation and action research to improve our practice through the qualitative method of Diagrams of Practice (DOP).

Reggio Emilia has given educators a wonderful opportunity to explore ‘The Hundred Languages of Children’. It suggests that we have a hundred ways of knowing and thus a hundred ways of sharing that knowledge with others. It is ironic, then, that we do not apply the creative, arts-based methodology of knowing and understanding to the adults who work with children. As a person who sits with a creative approach to my own learning, I access quantitative readings and then process them into qualitative diagrams in my learning journals so that they link to my emotional, social and cultural frames. This process of application and processing has taken many forms, such as word montages, anecdotes, photographs, diagrams and paintings. It is this journey of increased awareness and understanding that widens the mind and has, therefore, influenced this book.

Time to reflect on practice

There is a potential to expand our perceptions of real situations by moving away from narrative and towards creative visual representations. There are examples of how this approach has worked in a wide range of settings in Chapter 6. We can evaluate practice by looking at the use of space, resources, time and the adult role, and then go on to explore the more subtle elements of practice, such as culture and spirituality, as the team raise their understanding.



*Journaling
outside*



*Working
together to
create joint
understanding*

The concept of using graphics to share thinking has been developed into a narrower definition of a Diagram of Practice. This is a diagram or form that creates a sense of disequilibrium in both the person creating it and the receiver of the image. These are created to convey meanings that are in some cases expanded through narrative. The process of creating them

encourages group and individual reflection and conversation. Diagrams of Practice are effective at communicating messages for parents, staff and the inspectorate.

Working together to create joint understanding

There are mapping strategies that plot the distribution of children and adults in space, or perhaps the physical layout of the outside area. These give adults a snapshot of practice. The Diagrams of Practice used in this book differ from this as they try to move beyond observation of the amount and location of resources, children and adults to express other dimensions. An example would be the learning pathways across boundaries, or the child's use of 'wild' spaces where nature is presented on its own terms and is not 'cleaned up'.

This approach to the reflection of how we can learn with nature is relevant in that much of the research sits in the affective, emotional realm, which is hard to define yet nevertheless real and significant. It is the 'empathetic resonance', as explored by Whitehead & McNiff (2006), that we are seeking to share in a Diagram of Practice, moving the sharing process from a data exchange to a more empathetic connection or participation, so that the reader has a deeper understanding of the situation being explored.

When the arts are used to research and reflect, Barone et al. (2011) suggest that symbols provide hints – they do not denote. However, something important happens – people begin to notice. What they notice can become, and often does become, a source of debate and deliberation (Barone et al., 2011: 2). It is this disequilibrium that changes practices. It represents a shift in thinking, looking through a new lens that will in turn widen the mind.

Caputo (1987: 6) suggested that all people were 'to keep a watchful eye for the ruptures and the breaks and irregularities in existence'. This watchfulness implies a willingness to return to the 'original difficulty of things' by peering beneath the surface of the familiar, the obvious and the orthodox in a re-scrutinising (re-searching) of the world. It is in adopting this interrogative disposition that we promote a level of dislocation, disturbance, disruptiveness, disequilibrium that renders it sufficiently – even highly – useful, and, therefore, in this unusual sense of the word, truthful.

The Diagrams of Practice can represent many aspects of learning with nature. As practitioners, we need to look for the irregularities in the work we do, to ponder and question what it is children are doing and how we can support them, and try to consider what this looks like when we do it effectively. We can all try to explore different ways of knowing and try new ways of sharing what we know, and where we are aiming to move towards. If we can use these diagrams to connect people around the world to improve practice when learning with nature, then they will have served their purpose.

Winston Churchill (1941, House of Commons speech, London) once said: 'At first we build our buildings and then the buildings build us.' In the western world we have set ourselves on a road to believe that education happens inside buildings and have set up a series of tools to propagate that belief. In order to shift a paradigm of thinking to learning with nature, we need to create a new range of tools, approaches that support learning with nature, so that we can create a new concept of 'buildings' for education. The process of creating the diagram opens up important conversations with staff. This book offers a way forward, although the issues surrounding learning with nature are complex.

If we are to self-evaluate our practice, then we need to pay attention. Can the skill of attending be something that can be coached and developed? To what extent is attention affected by intrinsic motivation? Is it possible that some team members will pay attention to visual forms of communication rather than narrative forms? Development planning, in any setting, should be constantly evolving as the journey of improvement continues. The diagrams lodge thinking at the point when they are made, and may act as a stick in the sand that can then be revisited in order to reflect on practice. The meta-cognitive process has value in itself and can be recorded in a second colour on the first diagram

or represented in a new diagram completely. While working with the groups included in the case studies, it was the adjustment and fine-tuning of the diagrams that evoked a real sense of attention to detail, and that demonstrated how leadership in the settings encouraged noticing, attention and mindfulness as key values within a wide variety of settings.

Outdoor learning is a core area for learning for all aspects of the curriculum:

- Children who play regularly in natural environments show more advanced motor fitness, including coordination, balance and agility, and they are sick less often (Fjortoft & Sageie, 2000; Grahn et al., 1997).
- When children play in natural environments their play is more diverse, with imaginative and creative play that fosters language and collaborative skills (Fjortoft & Sageie, 2000; Moore & Wong, 1997; Taylor et al., 1998).
- Exposure to natural environments improves children's cognitive development by improving their awareness, reasoning and observational skills (Pyle, 2002).
- Spending time in nature has been shown to reduce stress and benefit the treatment of numerous health conditions (Kahn, 1999).
- Nature buffers the impact of life's stresses on children and helps them deal with adversity. The greater the amount of nature exposure, the greater the benefits (Wells & Evans, 2003).
- Children with Attention Deficit Disorder are positively affected by the calmness of natural playscapes (Taylor et al., 2001).
- An affinity to and love of nature, along with a positive environmental ethic, grows out of regular contact with and play in the natural world during early childhood (Chawla, 1998; Kals et al., 1999; Moore & Cosco, 2000; Sobel, 2004; Wilson, 1984).
- Early experiences with the natural world have been positively linked with the development of imagination and the sense of wonder (Cobb, 1977; Louv, 2005).
- Wonder is an important motivator for lifelong learning (Wilson, 1984).
- Children who play in nature have more positive feelings about each other (Moore, 1986).
- Natural environments stimulate social interaction between children (Bixler et al., 2002; Moore, 1986).

However, the way that outdoor learning 'looks' varies across the world. The challenges that many people face when trying to embed it in the setting include:

- awareness and understanding of what learning outside looks like;
- physical access to outdoor space;
- structure of learning in the outdoor space;
- inclusion of the outdoor area in planning and assessment;
- involvement of parents and carers;
- development planning.

The Diagrams of Practice can support all of the issues above in that they evaluate practice. When the team audits their practice and considers where they are on a continuum, they can begin to consider what they need to change in order to improve.

Diagrams of Practice (DOP)

Diagrams of Practice can focus on one aspect of practice in detail or many dimensions. To begin our awareness of the diagrams, let us start by exploring some single dimensions that affect children learning with nature. When we look at the management of outdoor learning we can focus on issues such as:

- physical access to natural spaces – in relation to distance from the building, movement to, from and within the space, subdivision of space, and the connection in learning across multiple spaces;

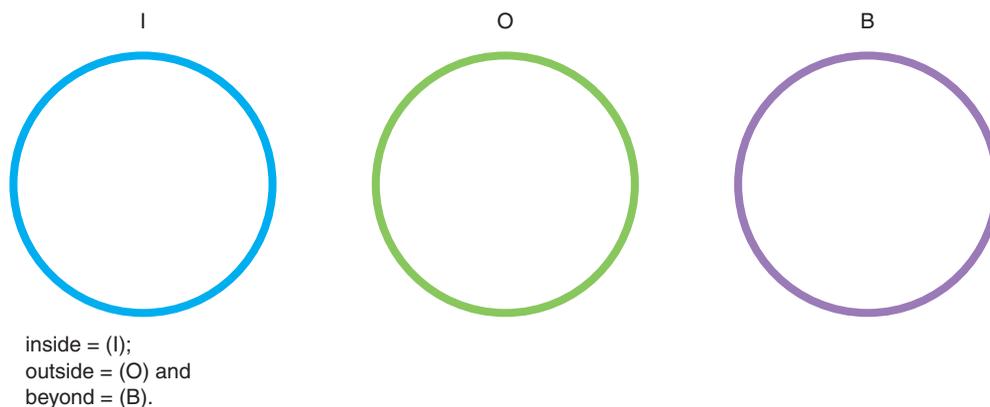
- resource allocation and use – use and movement; type and function; choice and ownership;
- time spent outside in nature – structure and duration; frequency and connectivity to learner;
- adult role and relationship – style of interaction; perception of role; methodology of teaching and learning.

Each of these sits along a continuum of structure, where many dynamics interplay to create the phenomena of experience that makes learning with nature effective. For the ease of communication and to encourage attention, the diagrams have been simplified to look at single dimensions. The integrated diagrams are presented in Chapter 6.

Space

Outdoor spaces for children vary between small hard-surfaced areas and large nature play areas with trees and grass. However, what we have in our space does not mean that we use it frequently, or that we make connections to it in our learning programmes. In the diagrams that follow, we look at three aspects of space: connection in learning between spaces; consideration of use of transitional spaces; and the use of spaces beyond the fenced outdoor area.

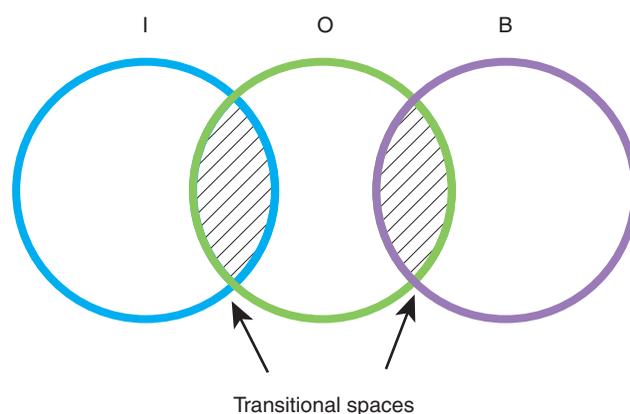
In many situations, the outdoor space is directly accessed through a patio door. However, the doorstep seems to create a perceptual boundary that affects what happens outside. Whole curriculum provision is put aside for an over-reliance on physical play; the space beyond the doorstep can be seen to be less important than the indoor space; and the intentional teaching of experiences and opportunities that link the inside (I) to the outside (O) and beyond (B) is not apparent. The diagram below shows the distance between circles as it indicates adult perception of the linkage between spaces (DOP 1:1).



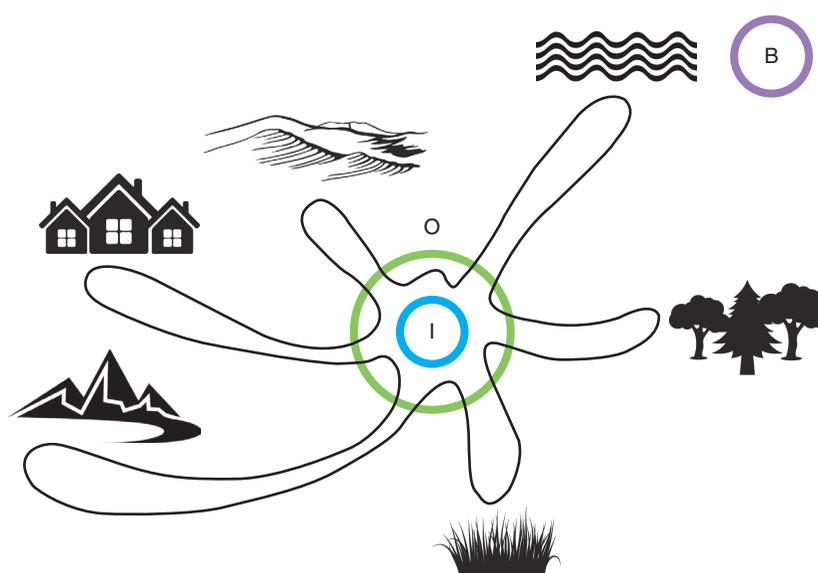
DOP 1:1 Connection in learning between spaces

An example as shown in DOP 1:2 on the following page, would be the creation of transitional spaces that are used between physical spaces to aid the intellectual, emotional and physical transition of children and adults in meeting areas outside, cloakrooms, verandas, etc. (refer to the example from the practice at Auchlone Nature Kindergarten in Chapter 6, Case Study Two).

DOP 1:3 also on the following page shows the variety of options and forms that outdoor learning can take. We can work with nature on a beach, a moor, a mountain, in a forest, in urban spaces and in the desert. Nature presents itself in a variety of ways to people around the world. The journey is part of the learning experience and all the natural areas they visited are then used in an integrated way as multiple learning spaces, as shown by the black line.



DOP 1:2 *Use of transitional spaces*



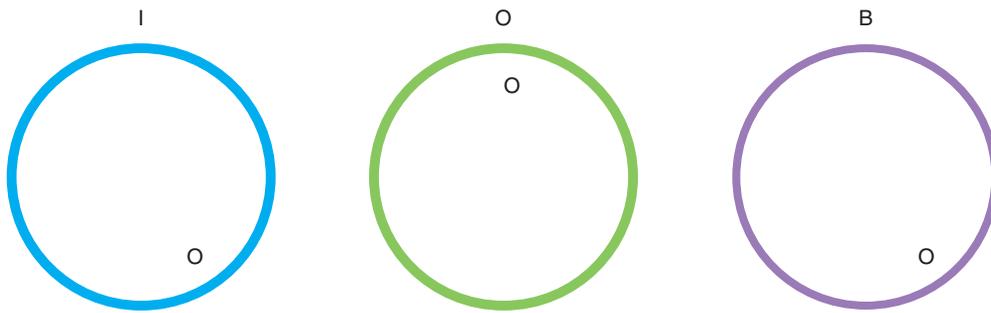
DOP 1:3 *Use of spaces beyond the fence*

These first-layer diagrams can be further explored through elements such as the following:

- Access routes and desired paths.
- Boundaries and territories.
- Transitions.
- Behaviours in space, journeys, meanderings, settling.
- The flow of learning between spaces (as defined by the intentionality of the adult).
- Multiple spaces which seem to support similar behaviours both in the centre/school and beyond into the community.
- New/infrequent spaces to raise excitement or intrigue.
- Frequent and known spaces that evoke traditions.
- Social justice – equality of opportunity.

Resources

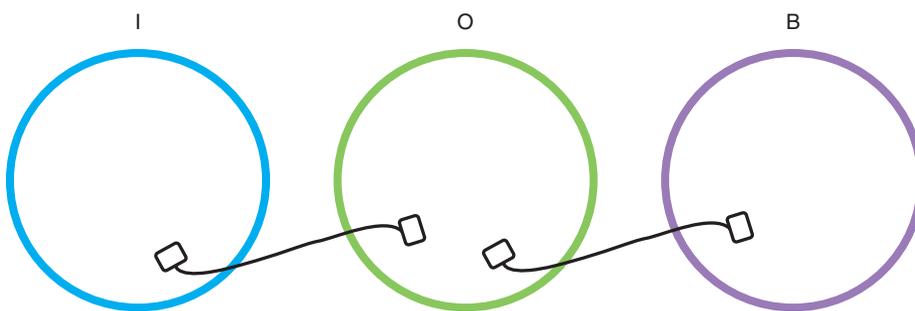
Most of the issues surrounding resources link to the management of them. Consider where to put them, how to offer them and what kind of resources to use. The most effective systems are those that are reliant on a similar methodology to the indoor environment, and so are traditionally self-help. Open-mesh shelving with clear labelling, or carry systems such as a Tool wrap, allow the detailed support for learning to be readily available.



DOP 1:4 *Movement of resources*

This set of diagrams considers the movement of resources, the collection and movement of resources, and the type of resource.

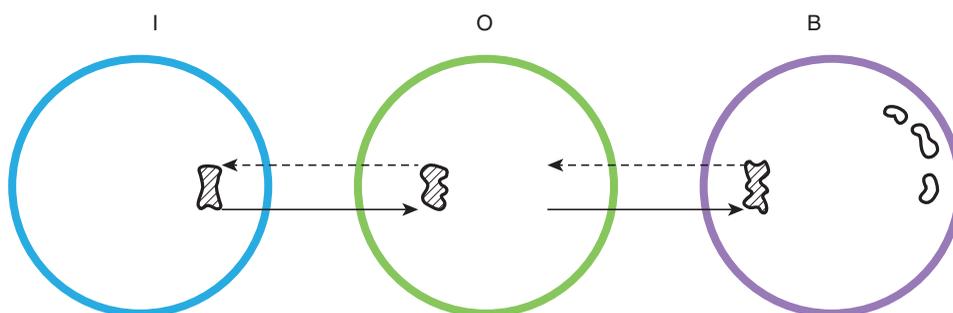
In some cases, settings prefer to view inside and outside as separate spaces with their own unique materials and do not allow the transfer of materials across environments. In some bush school programmes, it is intentional that nothing is taken to the wilder space in order to encourage children to look at the play opportunities of the materials for the six-week half-day programme. This has been shown graphically in DOP 1:4.



DOP 1:5 *Collection and movement of natural resources*

In this case (DOP 1:5), there is a key selection of the indoor resources that go outside and then some of the outdoor resources are taken to the forest. In temperate environments, this model can be seen in topic boxes such as fire people or in area boxes such as construction. The resources are put out in the morning, often by the adults. Weather fluctuations can affect the quality of the outdoor experience over the year if the staff rely on indoor resources that will be affected by the rain and snow.

The outdoor space works most effectively when it has materials in it that are designed to be outside. Natural loose materials such as stone, sand, rock, sticks and leaves can move across all physical spaces. Since they are full of play opportunities, they change in use (this is shown by the symbol of the resource in DOP 1:6). Nature's treasures can be brought back



DOP 1:6 *The type of resource*

as transfer objects to aid recall and teach children about sustainability and harvesting in a practical way (this is shown by intentional planning by the adult in the solid line and the more open possibility in the dotted line). The spaces beyond can be the store cupboard for the connected experiences in the outdoor space.

These first-layer diagrams can be further explored through elements such as:

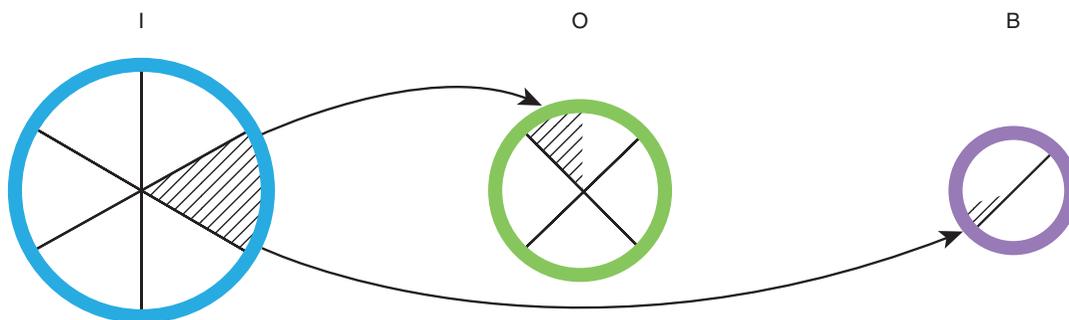
- access to natural materials;
- integration of embedded knowledge of the land;
- movement of natural materials;
- use of supplementary equipment;
- mapping types of learning and resources;
- levels and perceptions of risk.

Time

Children's learning is structured by time as soon as they enter a setting. We can, however, consider how segmented we have made time as a result of timetabling of learning.

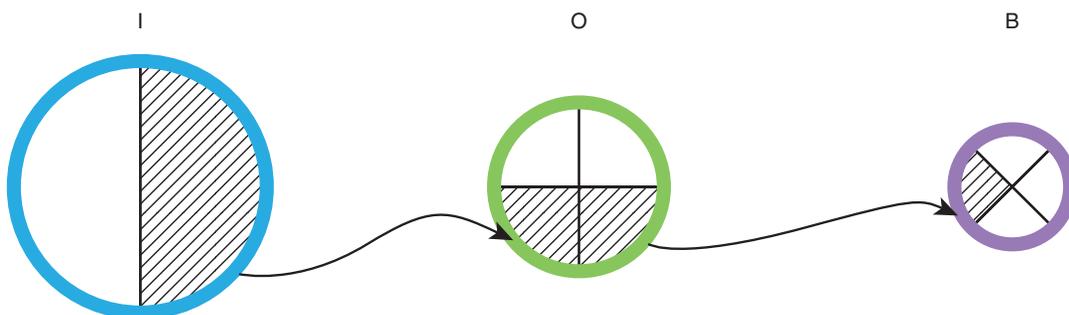
In these diagrams, the size of circle was used to represent the amount of time spent in the space, not the size of the area. Segmented time is shown by the division of circles. The straightness of lines indicates the level of flexibility in timetabling that allows settings to respond and work with the weather.

This set of diagrams explores the effect of timetabled outdoor experiences, the linked use of the Forest School, and the connected learning experiences.

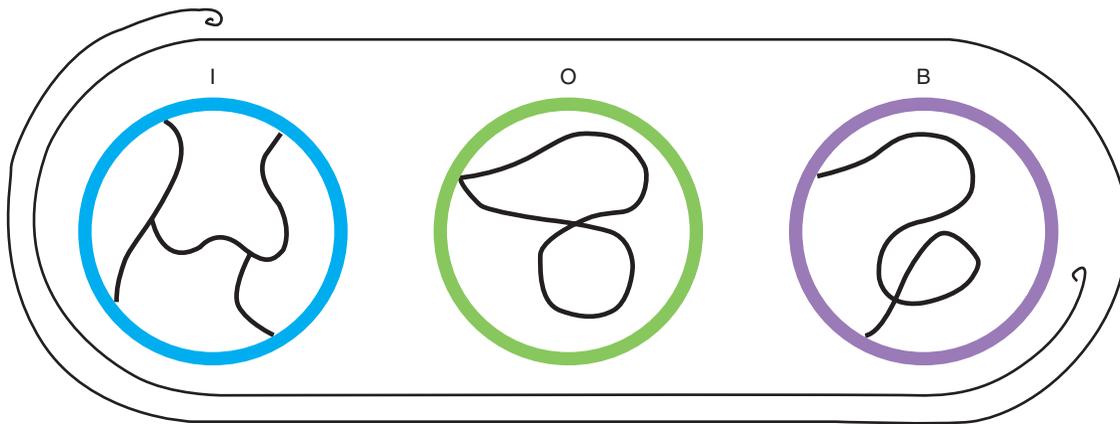


DOP 1:7 *Timetabled outdoor experiences*

In many settings, the day is timetabled either through visiting specialists, curriculum delivery or access to spaces. When the learning and teaching falls into a timetable, the effect can be to allocate outdoor play a 'slot'. Children need time to engage in learning, so sessions that are shorter than an hour often result in superficial engagement. Timetabling has an effect across inside, outside and even beyond if the adults have an activity-driven



DOP 1:8 *Linked use of the Forest School*



DOP 1:9 Connected learning experiences

approach. There is an increase in time flexibility across the multiple spaces, although this diagram (1:7) suggests taking a task from the maths curriculum, for example, to deliver in the outside area and a smaller task in the wilder space. The single arrow of direction suggests that there is little time spent processing or connecting the experiences after the timetabled block.

The next step on the continuum can be seen in DOP 1:8, as the timetabling inside has been simplified to allow the pacing to be shaped by the needs of children and the adult working with them. It can represent core skills and integrated learning in the primary school, or continuous provision in the early years. The outside area is still timetabled to have less time outside than in, but it has longer uninterrupted blocks of time when the children do go outside. Children go on a trip to sites, such as the Forest School, in the spaces 'beyond' for short blocks of duration and frequency (often six weeks for a half-day a week).

When all three spaces are given equal status, as in a Nature Kindergarten or a Green School, the diagram looks more connected, as shown in DOP 1:9, as the curriculum is experienced as spiralling across many learning spaces. Flexible timetabling inside still supports the teaching of core skills but in ways, and at times, that are authentic to children. The same approach to time is taken across all three spaces to give a consistent message to children.

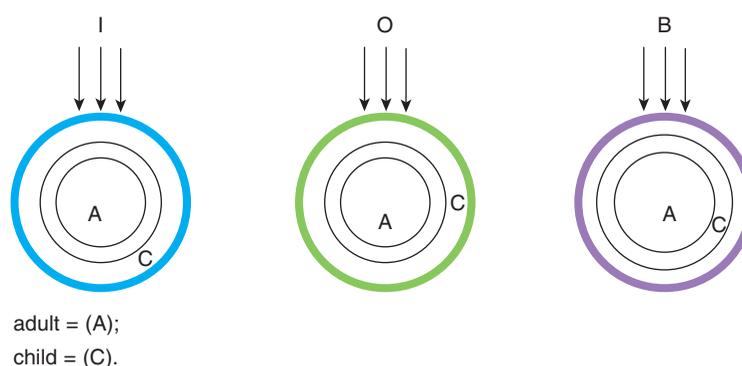
These first-layer diagrams can be further explored through elements of practice such as:

- time spent outside;
- seasonal/weather-based variations;
- ownership of use of time;
- balance of time engaged in epistemic and structured play.

Adult role

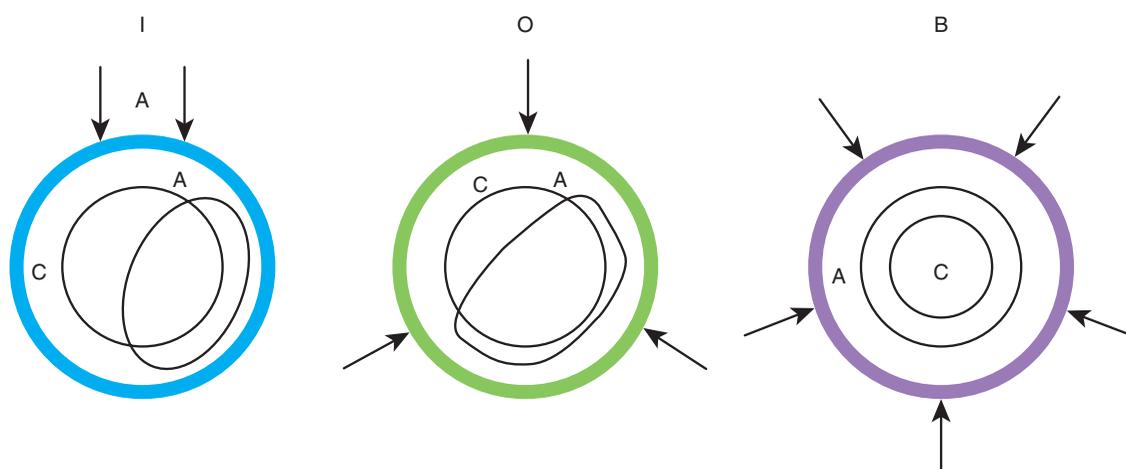
Children need all the adults around them to understand why outdoor learning is essential for them. A practitioner's attitude, understanding and commitment will be key to the development of child-led experiences. Adults need to harness the special nature of the outside and be able to be responsive to the day-to-day changes nature offers. Reflexivity is an important aspect of the change process towards improvement. A low level of reflexivity would result in an individual shaped largely by their environment and the dominant group in the setting. A high level of social reflexivity would be defined by an individual shaping *their own* norms, tastes, politics, desires and so on. The practitioner needs to be the advocate for outdoor learning, irrespective of the team dynamic in the setting.

This set of diagrams explores adult views on learning, changing roles across outdoor spaces, and their approach to outdoor learning.



DOP 1:10 *Adult views on learning*

When the practitioner views themselves as the director of learning rather than a facilitator, it will be a challenge to flex and change across increasingly more natural outdoor spaces. The way adults teach often follows the way they were taught as children. To support adults to change the way they teach outside with nature can take a long time, and DOP 1:10 shows little reflexivity. Top-down pressure, where the adult is in charge of children, is shown here with the experiences for children being directed by the adult. Spaces are viewed as separate, with closed tasks taking place with defined end results.



DOP 1:11 *Changing roles across outdoor spaces*

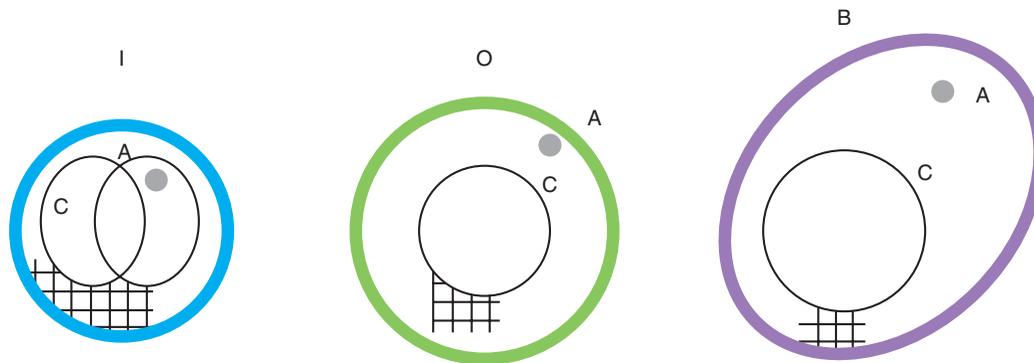
Another aspect to consider is the way adults perceive their role to change when they move outside. In DOP 1:11, the level of structure inside is balanced, and the child and adult interaction allows the child to have some time without direct adult input. When the situation moves outside, the adult role starts to move around the outside area as the adult takes on a security role. When adults perceive the hazards in wilder spaces to be greater, they increase the number of adults to increase the supervision, and revert to over-structuring children's learning to control the situation.

When the adult sees the children as confident and capable in nature, and see themselves as the co-constructor in the educational process across all environments, the diagram (DOP 1:12) begins to show some distance between the child and the adult icon. Children can be seen to have more freedom in this type of experience, where the adult planning is represented by decreasing amounts of scaffolding, as the experience moves from inside to outside and then into the wilder spaces.

These first-layer diagrams can be further explored through exploring elements such as:

- adult awareness of the significance of outdoor play;
- adult influence;
- adult reflexivity;

- adult interaction;
- approach to facilitation;
- importance of family and community;
- engagement of family and community;
- balance of adult roles, e.g. supervision of risk or support for learning.



DOP 1:12 Approach to outdoor learning

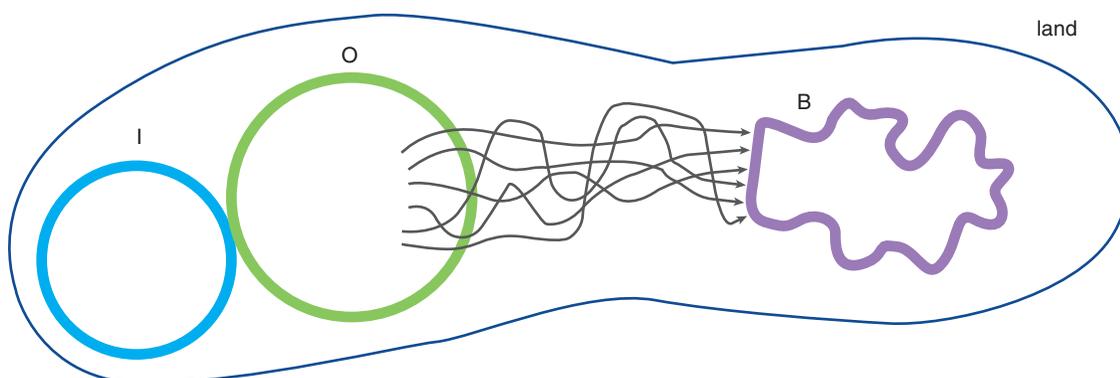
Intangibles

Outdoor learning is a phenomenon. In order to self-evaluate our practice and then embed it, we need to consider many of the intangible aspects of being in nature.

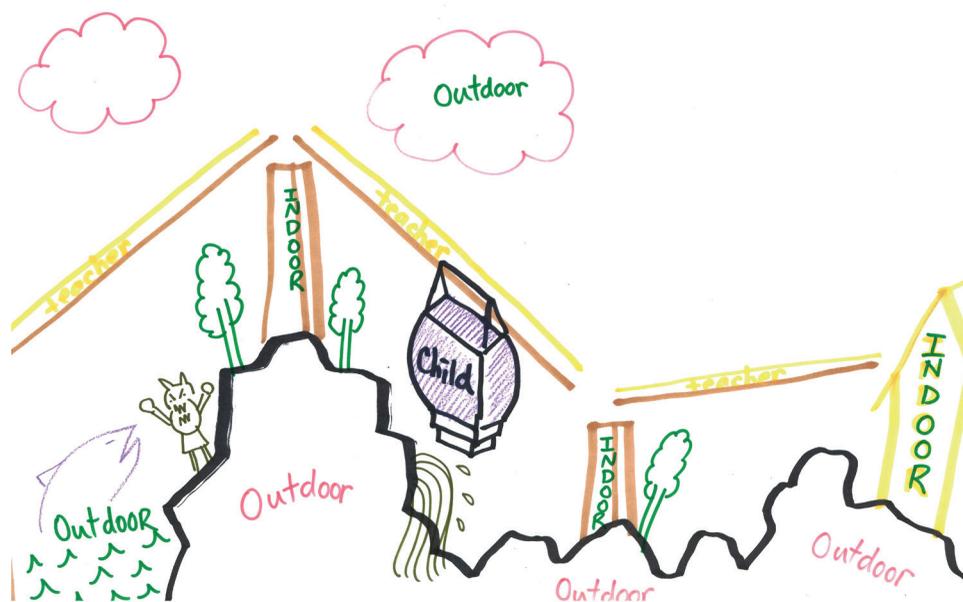
The connection to land needs to be shared by the people on it and in ways that share their way of knowing. The longevity of these trails and paths carries a sense of tradition and shared understandings. DOP 1:13 was drawn on country in a sacred site in Australia, where burial mounds, clay pits and fishing grounds carry a strong connection to ancestors. The use of symbols allows diagrams to be drawn in dirt, on wood and on stone. We can consider this aspect when we create our own diagrams of practice. They don't need to be on paper; we can create them outside, and the graphics allow diverse linguistic groups to engage.

These first-layer diagrams can be further explored through elements such as:

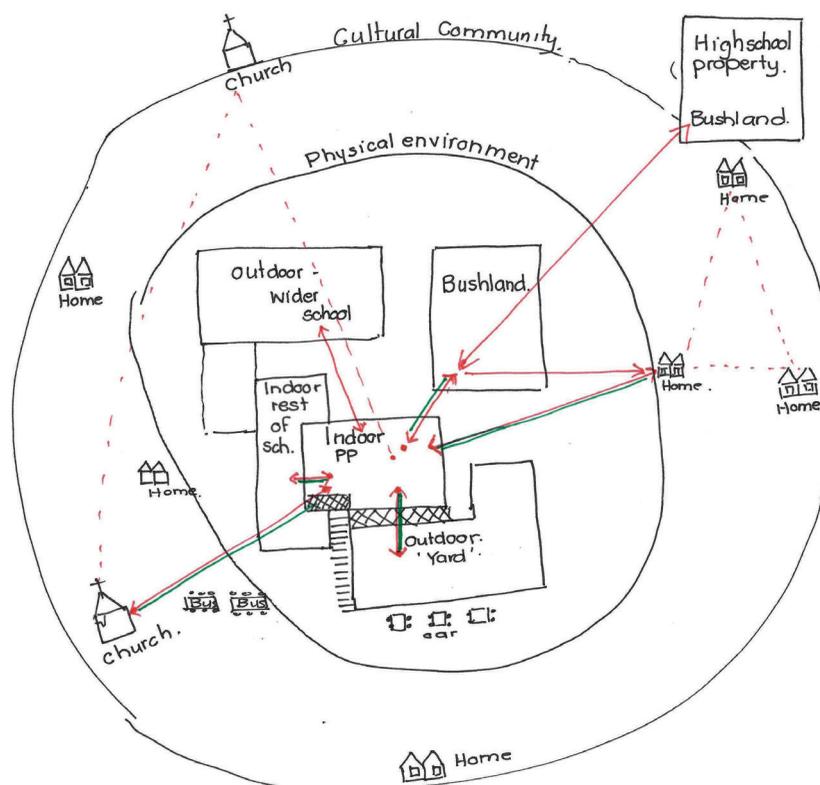
- emotional connectivity;
- sense of gravitas;
- cultural connections and influences;
- spirituality;
- engagement and well-being;
- relationships;
- memory and meta-cognition.



DOP 1:13 Connection to the land



DOP 1:14 Diagram of Practice (USA): Narrative and graphics are used to explore current thinking



DOP 1:15 Diagram of Practice (Australia): Creating a Diagram of Practice to raise awareness of place-based learning. Solid lines show intentional links – dotted lines are more casual

As the initial diagram evolves, so does the thinking and reflection. This focuses the team on the detail and nuances of the outdoor experience. The narrative that supports the diagram warrants the inclusion of the learning journey of the adults, children and parents when they were creating it. Chapter 6 demonstrates the effectiveness of case studies and learning stories that were used to allow the staff to detail and discuss at the micro-system level, before moving above to see the larger picture or meta-system.

Let us now look at some Diagrams of Practice (DOP 1:14 and 1:15) by people from across the world. These have shown, through their first creative representations, the inter-relationship of children learning with nature. The adults and children come from a wide range of backgrounds, such as landscapers, engineers, environmentalists, educators, nurses and parents. Only a few can be shown here. The names and countries of origin have been left off to allow the freedom of anonymity, so we can analyse them.

Everyone has a different way to share their values and the embedded knowledge that they bring to that moment in time. They are influenced by culture and the wider society and yet hold onto the individuality of thought and emotion. Our experiences have shaped our practice, but we do not have to be slaves to the dogma of perpetuating a system that may not support learning with nature.

We can use these creative forms and also push ourselves to unravel the multilayered and highly complex set of interactions that make up the phenomena that seem to exist in any type of wilder space that children are in, whether this is a forest, beach, bush, creek, desert or mountain. The subdivision of nature disregards the concept of nature pedagogy in that it seeks to make a difference while the work shared here seeks to find the connecting threads.

The diagrams allow us to unpick the many layers of outdoor learning. When we create them we self-evaluate, we pay attention to realities in a style of auditing. This allows us to define a starting point, create an action plan and define where we aspire to be. This is development planning creative style!

Points for practice

- Use the core diagrams as a starting point. Put them on the meeting-room wall and try to build a composite diagram that shares the use of space, time, resources and the adult roles within your setting.
- Use overhead transparencies to allow multiple layering.
- A facilitator can use the concept of the Diagram of Practice to start to map out the elements to include the views of children, parents and staff.

Further reading

- BARONE, T. & EISNER, E.W. 2011. *Arts Based Research*. Thousand Oaks, CA: Sage.
- CAPUTO, J.D. 1987. *Radical Hermeneutics: Repetition, Deconstruction, and the Hermeneutic Project*. Bloomington, IN: University of Indiana Press.
- WARDEN, C. 2010. *Nature Kindergartens*. Auchterarder, Scotland: Mindstretchers.
- WHITEHEAD, J. & MCNIFF, J. 2006. *Action Research: Living Theory*. London: Sage.