

What is the impact of outdoor education on pupils with complex needs?

Introduction

When I first began my research into this question, I had originally asked “Does outdoor education have a positive impact on pupils with complex needs?” This question is interesting but it became apparent within a few days of beginning my research into specialist outdoor education that the answer was, overwhelmingly, yes. I chose, therefore, to focus my research on the impact of meaningful outdoor education, rather than on the validity of outdoor education itself.

Outdoor learning is an area of education I have always been interested in. However, I had limited opportunities to engage in outdoor education as a subject specialist in RMPS and Philosophy in mainstream secondary school. 4 years ago, I made the move to Special Education and my interest in outdoor learning was piqued. Initially, I was fascinated with responses to stimuli and different behaviours my own class displayed when engaging in outdoor learning. As I developed my teaching practice and enhanced lessons for pupils with special educational needs, I gained confidence in my understanding of special education and the place I felt outdoor learning had to offer to young people with complex needs. I made a funding application for a sustainability garden in my school with designs to provide a specialised, accessible outdoor learning environment for children and young people with learning and physical disabilities. Funding was granted and the garden was opened in August 2018. It was to form the basis of my research for this paper. However, during my research I was seconded to a promoted post. I have been very fortunate in my current role as Acting Deputy Head, therefore, to enjoy a unique opportunity to explore the impact of outdoor learning across two special schools in Edinburgh.

Background: Policy Context and Review of the Literature

There are many and varied documents on outdoor learning in education. Outdoor learning is highly valued in the Scottish education system and access to outdoor learning is considered of utmost importance in helping children and young people to develop vital skills in the 21st century.

Curriculum for Excellence offers opportunities for all children and young people to enjoy first-hand experience outdoors, whether within the school grounds, in urban green spaces, in Scotland’s countryside or in wilder environments. Such experiences motivate our children and young people to become successful learners and to develop as healthy, confident, enterprising and responsible citizens.

Well-constructed and well-planned outdoor learning helps develop the skills of enquiry, critical thinking and reflection necessary for our children and young people to meet the social, economic and environmental challenges of life in the 21st century. Outdoor learning connects

children and young people with the natural world, with our built heritage and our culture and society, and encourages lifelong involvement and activity in Scotland's outdoors.¹

However, throughout my research, it has been challenging to find specialised policy on outdoor learning within the context of Special Education in Scotland. There are several academic papers based on research in England and Wales and a comprehensive document on outdoor education in Scotland, which states:

Research... has identified that outdoor learning has the potential to do much more than encourage such development, and can be facilitated in school grounds and local areas. It can be rooted in local contexts, raising children's awareness of environmental and sustainability issues, and closely tied to all aspects of the school curriculum; maths, social sciences, health and wellbeing, and physical sciences lend themselves particularly well to learning in 'authentic', outside-the-classroom contexts.²

While useful, most focus on mainstream learners, with a caveat of inclusion for SEN pupils within a mainstream environment and an assumption that a nursery or early primary curriculum of outdoor learning will suffice for more complex learners. As practitioners seeking inspiration for outdoor learning opportunities, colleagues have stressed that these articles can be useful but that reading through them is time consuming, often with little reward. It would seem that a large part of the complexities surrounding relevant reading material is accessibility – many teachers will happily spend time engaging with academic studies as part of professional reading. However, where there appears to be little reading material available *outside* of academic studies, the desire to engage with them seems to decrease. The majority of practitioners I interviewed said they find such theoretical studies less useful within the context of their professional environment. Where highly relevant material is less accessible, many turn to less specific, user friendly material for inspiration, which circles back to pupils with complex needs being "catered for" within mainstream documents and research papers. However, availability of outdoor learning material for professional reading is not the subject of this research paper. What my research may point to is that, although across a concentrated area, teachers are seeking a user-friendly outdoor learning document which applies specifically to Special Education, within Curriculum for Excellence.

Another area of contention which makes much of existing policy difficult to engage with is the range of the Special Education spectrum. Almost every journal, essay and article I engaged with during my research talks of opportunities to enhance skills in reading, writing and mathematics for pupils with special needs. Similarly, most of these pieces only referenced primary education. Both special schools involved in my study offer all-through education (3-18) for pupils with complex learning disabilities and/or autism and physical disability. The majority of learners within these contexts work at early level for literacy and numeracy

¹ Curriculum for Excellence through Outdoor Learning - <https://education.gov.scot/Documents/cfe-through-outdoor-learning.pdf>

² Moray House School of Education Research - <https://www.ed.ac.uk/education/rke/making-a-difference/outdoor-learning-and-policy-development-scotland>

throughout their school careers and into adulthood. Most will never read, write or comprehend simple addition and subtraction. However, that is not to say that these scholarly articles haven't produced ideas or inspiration. It is rather to point out that, when teachers within arguably the most complex branch of Special Education attempt to engage with literature designed to enhance their practice, there is very little available to them that can act as a real catalyst without also being somewhat experimental, thus requiring some bravery and justification within planning. Justification for untested methods can be difficult to achieve and, despite planning, appear tenuous. This then, may raise eyebrows among the Senior Leadership Team (SLT) within schools, which, in turn, may highlight potential inequalities in outdoor learning throughout special schools, where efforts in this area may be based on a willingness to engage with unknown, and trying out untested methods in relation to tracking, monitoring and achieving learning outcomes.

Research Design

To examine the impact of outdoor learning on pupils, I worked with a selection of pupils to determine what they thought outdoor learning was, whether they enjoyed it and, if they could communicate a reason, why this was. Pupils were chosen from a variety of classes throughout primary and secondary, across both schools. I further observed whole classes participating in outdoor learning, to gauge pupil reaction to specific activities.

I conducted my research across 2 schools through interviews with a selection of pupils, parents and practitioners, as well as 2 focus groups of practitioners. Both schools have access to outdoor learning facilities within their grounds. As mentioned in the introduction, one of these learning environments is new and designed to promote accessibility and equity for pupils with learning and physical disability. The second school has several areas available for outdoor learning but has recently lost staff trained in Forest Schools who delivered a bespoke outdoor learning curriculum for able-bodied pupils with complex learning disability and/or ASD. Through working with both schools, I recognised an opportunity to build a more comprehensive picture of what quality outdoor education looks like and its impact on pupils within Special Education.

For discussions with whole staff, I conducted two focus groups through a post-it note activity during CAT sessions. This allowed the widest possible range of views from nursery all the way through to S6 and provided a bigger picture into the impact of outdoor learning on pupils with complex needs. I asked staff two questions: what they felt successful outdoor education looked like in their relevant schools and what they thought were the challenges to successful outdoor learning. Across both schools, answers were almost identical. I have used key words from the focus groups to build a "Word Wall" which highlights general views in special schools on outdoor education. I followed up these focus groups with 4 interviews in each school, 1 teacher, 1 nursery nurse, 1 pupil support assistant and 1 member of SLT. These are outlined in the findings and analysis section of the report. I felt that, although concentrated, these views would give a balanced and in-depth analysis of outdoor learning, from a range of positions within education.

Findings and Analysis

When I first began my research, I had hoped that I would find that outdoor education has a positive impact on pupils with complex needs, and that is indeed the case. The practitioner interviews and focus groups were an informative piece of research. This is not surprising: most teachers, in my experience, are motivated, enthusiastic, thoughtful and keen to discuss both barriers to education and how to overcome them. What I was unprepared for was how valued outdoor education is by pupils with complex needs, how well these pupils respond to outdoor learning opportunities and how this, alongside practitioner views, points to an overwhelmingly positive picture of the impact of outdoor education on children and young people with complex needs.

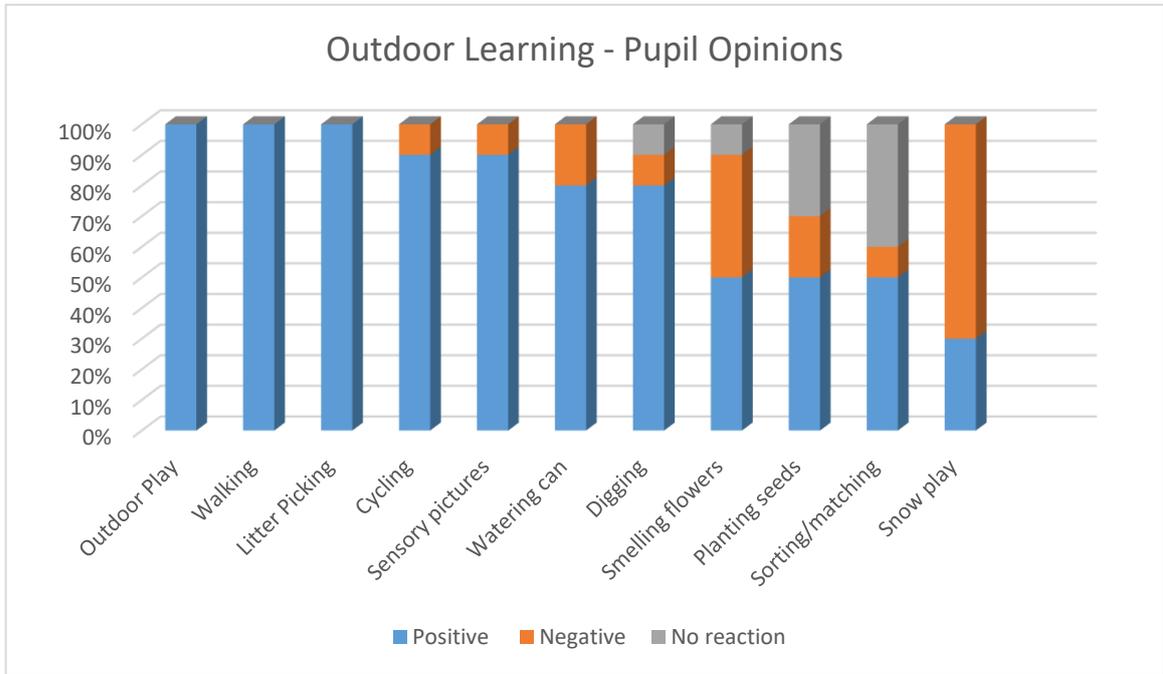
It can be very difficult to gauge opinions with pupils in Special Education. When I conducted my focus groups with 20 learners, I used practical activities and available forms of communication to gauge their opinions on their learning experience. One example was setting up an outdoor gardening activity and giving pupils a chance to try everything e.g. digging, sowing seeds, using a watering can etc., then asking which activity they would like to do again through symbols, signing, speaking or simply observation of which activities were returned to. By using these methods, I gained an insight into what activities learners enjoy outdoors and which activities help them over time to build skills. To develop understanding, even for pupils learning within Early Level throughout their school careers, pupils can be encouraged to follow and repeat a series of steps each lesson using adult guidance, photos or symbols. To enhance skills, a variety of sequencing and matching activities can be built into the lesson. Symbols/photos these can then be labelled or replaced with numbers (if appropriate), sequenced in the correct order, linked to a secondary item e.g. watering can links to water, garden fork links to soil, as part of a learning activity. Over time, through meaningful repetition, pupils can build skills and understanding, allowing some to follow steps more independently.

With activities such as litter picking, skills development could be seen quite clearly over a short period of time. Pupils were often unsure or afraid of litter pickers when first encountering them. Many lack the fine motor skills to work the pulley mechanism. However, after just 4 sessions of around 30 minutes, pupils in both schools were familiar with the activity and able to participate in litter picking with support. All were engaged with the activity, with one class moving around the playground and operating the litter pickers completely independently. More importantly, pupils seemed to enjoy this activity and, based on a selection of items that were distributed across the playground between other, non-litter items, pupils could clearly identify what constituted as "litter". This is a remarkable piece of understanding for pupils with complex needs and opens the door for further learning on global issues such as conservation and recycling. Through links to school projects and meaningful partnerships with a wide range of organisations, we can offer further opportunities to embed learning across school and the wider community.

It is also worth noting that I observed pupils, on several occasions, make secondary connections to activities that we take for granted but that are often rare moments in Special Education. 4 pupils involved in my survey made the connection between outdoor learning and appropriate clothing by either going to collect or asking for their coats, unprompted. One pupil refused to leave the classroom one day and found the symbol for “rain”. It was indeed raining! What makes this so remarkable is that many pupils with complex needs do not have the observation skills or interest in the wider world that make links to weather conditions and what will happen to them if they go outside in these conditions. This can be seen more clearly through the “Snow Play” activity. All pupils were happy to go outside into the snow, yet most detested it once they were there. While neurotypical children might find snow cold and wet, they can reason that there is fun to be had, that they can move around, keep warm and that they can go inside to dry and change later. For children with complex needs, the ability to process cause and effect is limited, so the overwhelming feeling of being out in snow is most likely “I am cold and wet!” With this immediate sensation being so overwhelming, particularly for pupils with ASD, there can be little or no follow up processing, therefore it is an unpleasant experience. So, for a pupil to show an understanding of cause and effect through just a few weeks of outdoor learning activities and to use that understanding to communicate a preference for staying indoors, is cause for celebration.

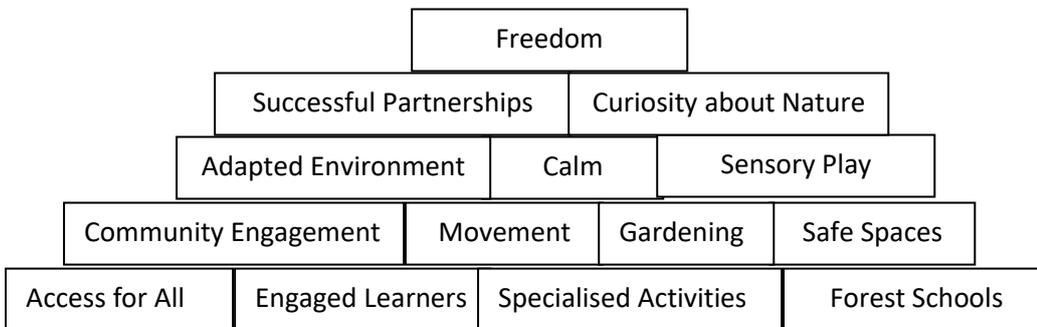
Below is a table and graph of measured outdoor activities, according to learners and based on their reactions, concentration and time spent engaging with a particular activity.

Activity	% of learners who reacted positively	% of learners who reacted negatively	% of learners who did not react
Specialised Outdoor Play areas e.g. The Yard, accessible playground toys	100%	0	0
Walking in Nature	100%	0	0
Litter picking	100%	0	0
Cycling Lessons	90%	10%	0
Collecting and making sensory pictures from items in nature e.g. leaves, pine cones	90%	10%	0
Using a watering can	80%	20%	0
Digging soil with a garden fork/trowel	80%	10%	10%
Smelling flowers	60%	30%	10%
Planting seeds	50%	20%	30%
Outdoor sorting and matching activities	50%	20%	30%
Playing in Snow	30%	70%	0

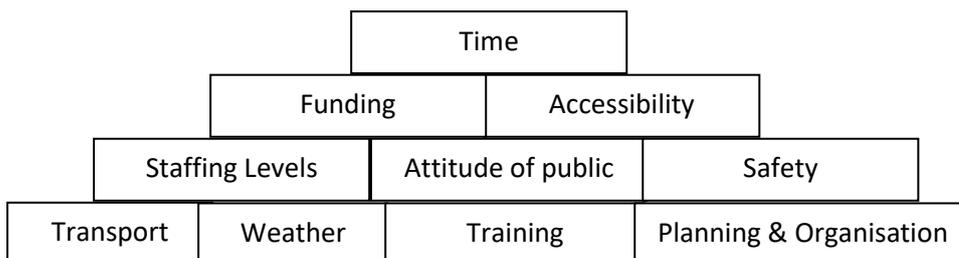


Following this are the previously noted “word walls” from both focus groups. The words which make up the wall are formed from the greatest quantity of the same or similar words written on post-it notes across both focus groups.

What does Successful Outdoor Learning Look Like in Special Education?



What are the Challenges to Successful Outdoor Learning in Special Education?



From the word walls, it is obvious that outdoor learning is highly valued within the context of Special Education by all staff. The understanding of the place for outdoor learning within Special Education is clear to all who work with children and young people with complex needs. *“Sometimes, the best way to get the most out of the classroom is to leave it and take learning outside. Outdoor learning can make for happier, healthier, well-rounded students – particularly for those with special educational needs (SEN).”*³

For the interviews, I asked individuals to write short statements about their understanding for as many of the words within the word wall as they could, in relation to outdoor learning. It came across very strongly that all staff who work with children with complex needs consider that outdoor learning has a positive impact. Below, I have chosen a selection of statements that I think highlight the biggest impact that outdoor learning has on children with complex needs.

Freedom: “How many times do our kids get to actually be alone, or having the feeling of being alone, just to breathe, to take something in, to look at nature? We are around them all day, every day. We sit beside them and help them learn, we take them to the toilet, we feed them, we help them change, we help them move, we sit with them on the bus, we put them to bed. They never get a chance to be on their own. It must be infuriating! When I go home at night, I like to sit in my garden and just listen to nature, have a cup of tea and unwind. It only takes 15 minutes but I feel so much better afterwards. I think being outdoors, being allowed to wander under a tree, sit in a park, look at a leaf or pick bits of grass, not be left alone but not be constantly overcrowded or given an instruction, just to be free for 5 minutes, must be one of the best bits of my pupils’ days. I know we need to be vigilant for safety. But I also try to step back, just to let children explore and enjoy getting to know their world.”

Curiosity: “I think the biggest impact that outdoor learning has is when you watch pupils look at a tree, a bird, a river and think “what is THAT?” We played nature bingo once with our pupils, we took them out in the woods and had to collect leaves, twigs etc. They had a ball, you should have seen them throwing leaves and pine cones around! All the way on the walk, pupils were looking, noticing, paying attention to their world and being curious about it. It was amazing.”

Calm: “Every day, at lunch time, I go for a walk in the park. Work can be stressful and it calms me down. When we go outdoors with our class, you can see it happen to them. They might charge around for a while but then they get quieter, calmer. I love outdoor learning because pupils are calmer out there, and if you go outside, they’re also calmer when they come back in.”

Environment: “I love our new garden. Pupils love planting things and watching them grow. It’s so lovely to see them able to do something outside that was built just for them.”

³ <https://www.theguardian.com/teacher-network/2016/may/01/nature-nurture-pupils-special-educational-needs-outdoor-education>

Engaged Learners: “When we do outdoor learning, we try to link it to what we’re doing in class. We had a treasure hunt one day – we had to find things that were in the book we were reading, I think it was *The Gruffalo*. We collected lots of stuff and made sensory pictures of our book. Pupils absolutely loved it, I’ve never seen them so engaged.”

Across both schools, most noted was the change in behaviour. One teacher referred to it as the “breathing space” which children can have when processing information outdoors. All participants enjoyed outdoor learning activities with pupils and considered these to be vital when learning about nature.

It is also very clear that the challenges to successful outdoor learning in Special Education run parallel to wider challenges to education in general. However, statements such as “Accessibility” and “Attitude of Public” are, I feel, quite specific to Special Education and paint a telling picture of the restricted opportunities that exist for pupils with complex needs. The idea of restricted opportunities was reinforced during the interviews with individual staff, regardless of position within the school. I asked each participant to explain some of the challenges from the “challenge word wall”. A selection of statements below gives further insight into why those interviewed felt these challenges are relevant.

- **Funding** – “We need specialised gardening equipment, accessible raised beds, adapted play areas and all sorts of things to make outdoor learning available to pupils. Most of the equipment is very expensive.”
- **Accessibility** - “It makes me angry when we can’t go places or do things outside of school because there’s nothing suitable for our kids. Why can’t we take children with disabilities to parks? How is it possible that in 2018, there are hardly any wheelchair accessible parks in Edinburgh? Education programmes too. We can’t join in with things like John Muir Awards because our kids can’t follow the programmes of work, apparently. So why don’t they create an award that we can access? I get really fed up of everyone saying they provide inclusion because, when you actually look at it, they really don’t.”
- **Attitude of public** – “It can be quite difficult sometimes, depending on where we go. Most people are lovely but I’ve had people telling me I shouldn’t have my pupils out ‘because of their needs, it’s not fair on the public’. As if my pupils somehow don’t belong in the community! I remember one incident in a shop where a member of staff told me they couldn’t serve my pupil at the checkout – but then served someone else immediately afterwards. I’ve worked with all sorts of young people. In my experience, when pupils have physical disabilities, people can be quite sympathetic. But when a disability is more ‘hidden’, like autism, people sometimes assume that children are being difficult because they’re spoiled or want attention. It can be quite upsetting for us when members of the public pass comment on how we are working with our

children. I don't expect everyone to understand the needs of our kids but I don't think it's too much to ask for people to be kind."

- **Safety** – "Safety is a huge issue for outdoor learning. Tools, plants, enclosed spaces, away from roads, safe for wheelchairs. Spaces like this need to be designed carefully. It would be great if we were consulted before they were built. Or better yet, have people with disabilities on planning committees so that they can identify issues with safety, access etc."
- **Transport** – "Public transport is difficult to use with a class of 8 wheelchair users as only 2 chairs can go on a bus at one time, 1 if there's a buggy. We have school buses but they are used a lot already. We go out into the community for outdoor learning but some of the pavements are a joke – not suitable for chairs at all."

Conclusion

What resonated most throughout this research project is that, in providing a range of outdoor learning activities for children and young people with complex needs, there was an immediate and noticeable increase in pupil enjoyment and positive behaviour. There was also an increase in awareness of surrounding environments, enhanced skills development and, for some, secondary connections and understanding of more complex processes in relation to activities. All pupils expressed an opinion on activities through action or reaction. Within the context of a very concentrated area of research, the focus groups and interviews show that education staff consider outdoor learning to have a positive impact on the behaviour, understanding and processing skills of children and young people with complex needs. All staff interviewed expressed a desire for more outdoor learning but are concerned about a lack of opportunities and acceptance for our most vulnerable young people. For issues specifically related to Special Education, it may be possible to highlight a disparity in the equity of outdoor learning opportunities for children with complex needs.

Equity is giving everyone what they need to be successful. Equality is treating everyone the same. Equality aims to promote fairness, but it can only work if everyone starts from the same place and needs the same help. Equity appears unfair, but it actively moves everyone closer to success by "levelling the playing field."⁴

It appears we still have some catching up to do to provide some pupils with the opportunities that others enjoy in relation to outdoor learning. There are programmes of outdoor education and awards available which special schools can participate in. However, when entire schools are told they are welcome to follow ideas from community outdoor learning websites but that their children cannot receive community awards for their best efforts because their learning disability prevents them from filling in paperwork, I can't help but think we have somehow lost sight of the bigger picture. Outdoor learning has a positive impact on pupils

⁴ Amy Sun, "Equality is Not Enough", Everyday Feminism, 2014.
www.everydayfeminism.com/2014/09/equality-is-not-enough/

with complex needs. These pupils deserve an opportunity to have their achievements celebrated and to show their communities how they can impact positively on the world around them. There is a terrible irony in the knowledge that to build acceptance of children and young people with complex needs requires ensuring that they are a visible part of the wider community. However, there also needs to be special provision made for children and young people with complex needs *in order for them to have access* to the wider community. It is this that appears to be lacking, although through understanding of equity or other factors, it is difficult to tell. When considering the results of focus groups and interviews then, to further the impact of outdoor learning on pupils with complex needs, investment may be required in and around the communities serving special schools. Development of accessible programmes of work also seem to be necessary, allowing pupils to access outdoor learning centres, engage with professionals and volunteers through outdoor learning charities and agencies who provide opportunities for the wider community. Outdoor learning is at the forefront of Scottish Education policy. If we have a responsibility to provide equity of opportunity for all learners within the Scottish Education system, and initial research has suggested that outdoor learning has a hugely positive impact on children with complex needs, then surely our next move must be towards providing equity of opportunity in outdoor learning for those pupils who gain so much from experiencing learning outdoors and connecting with the world around them.

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