Exploring Outdoor Learning in Primary Education for Children with Special Educational Needs and Disabilities.

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Abstract

This research explores outdoor learning for children with Special Educational Needs and Disabilities (SEND) in two case study primary schools (a mainstream and a special school) in the West Midlands. It uses Attention Restoration Theory (ART) as an analytical and interpretive tool, and addresses the paucity of knowledge in this area.

Data was collected through semi-structured interviews with six members of staff and non-participatory observations of outdoor learning of 14 children. Findings from these are analysed, alongside evidence from previous research and Government policies, underpinned by ART to explore the benefits of outdoor learning for children with SEND.

The findings suggest that outdoor learning allows children with SEND to progress understanding, and build opportunities for social skills and independence.

ART proposes that focused attention can be restored through exposure to alternative, often natural, environments (Kaplan and Kaplan, 1989).

The use of ART as the theoretical framework in this study is novel. ART has not been used previously when researching with children with a range of SEND or in relation to outdoor learning in primary schools for children with SEND.

Using ART allowed for the identification and consideration of the benefits of outdoor learning for children with SEND in relation to their learning, well-being, and interaction with the environment.

The study identifies opportunities for children with SEND when learning outside; it shows evidence for engagement in outdoor activities; and highlights social connections and recollection of prior learning. In this way, the study provides novel findings into the urgent and vital need of changing practice to ensure that all children with SEND can, and do, access outdoor learning.

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Table of Contents

Tables

Figures

Abbreviations used

- ADD - Attention Deficit Disorder
- ADHD – Attention Deficit Hyperactive Disorder
- ASD – Autistic Spectrum Disorder
- CoP - The Special Educational Needs and Disability Code of Practice: 0 to 25 years (DfE, 2015)
- CT (in Appendix K - Observation Notes) – Class Teacher
- DfE – Department for Education
- DEFRA – Department for Environment, Food and Rural Affairs
- HI - Hearing Impairment
- MLD – Moderate Learning Difficulties
- MSI - Multi-Sensory Impairment
- PD - Physical Disability
- PECS – Picture Exchange Communication System
- PMLD - Profound and Multiple Learning Difficulties
- SEMH - Social, Emotional and Mental Health Difficulties
- SENDCO - Special Educational Needs and Disabilities Co-Ordinators
- SEND – Special Educational Needs and Disabilities
- SLCN - Speech, Language and Communication Needs
- SLD - Severe Learning Difficulties

- SpLD - Specific learning difficulties
- VI - Visual Impairment

Glossary of Terms Used

- Attention Restoration Theory – Kaplan and Kaplan's (1989) theory that proposes that there are two types of attention- automatic and directed. Directed attention requires more mental effort and high levels of directed attention and the use of focused effort to aid concentration can lead to mental fatigue (Chawla, et al, 2014). Attention Restoration Theory suggests that focus and capacity for directed attention can be restored through exposure to alternative, often natural, environments which provide an opportunity for automatic attention to be exercised. This can be achieved through time spent in environments that provide 'soft fascination' (exposure to effortless experiences, such as breeze and the sound of water), 'being away' (from usual spaces), 'extent' (connectedness with the new environment) and 'compatibility' (the participant showing an inherent interest in the new environment) (Kaplan and Kaplan, 1989 and Chawla, et al, 2014).

- Child's Voice (also, Pupil Voice) – The right of every child to form an opinion and to express it freely (United Nations Convention on the Rights of the Child, 1989). In the context of this study, I will be adapting Lansdown's (2009: 12) statement that consideration of child/pupil voice 'requires recognition of and respect for non-verbal forms of communication such as play, body language, facial expression or drawing and painting.'

- Curriculum – Ofsted (2019: 4) define curriculum as 'a framework for setting out the aims of a programme of education, including the knowledge and skills to be gained at each stage (intent); for translating that framework over time

into a structure and narrative, within an institutional context (implementation); and for evaluating what knowledge and understanding students have gained against expectations (impact).'

- Exploratory Research – the process of investigative research into an area that has elements worth uncovering. Stebbins (2011: 6) suggests that exploratory researchers need to approach their research with '*flexibility* in looking for data and *open-mindedness* about where to find them.'

- Lesson – In the context of this study, by 'lesson' I am referring to a structured period of time, guided by a teacher or instructor for educational purposes. This definition aligns with and expands the Cambridge English Dictionary (2022) definition of 'a period of time in which a person is taught about a subject or how to do something'. In the context of this study the lessons I observe take place outdoors in the grounds of the schools, but are conventional in terms of being bounded by time limits, led by a teacher and guided by a curriculum.

- Outdoor Learning - this is particularly important to define in relation to this study as there are many types of outdoor education learning and teaching environments and play experiences.

  In this study I use outdoor learning to refer to a lesson which takes place outside and which uses the aspects of the natural environment to inform and guide the learning objectives. This aligns most closely with the definition of

outdoor learning used by Grigg and Lewis' (2016: 19) who use the term to mean 'children learning about people, their heritage and natural environment…in a wide range of contexts.' They stress that outdoor learning differs to out-of-class learning as it is based outside (rather than, for example, a visit to a museum or art gallery). Grigg and Lewis (2016) acknowledge the importance of engagement with and caring for the environment, developing personal and social skills, and problem solving in real life contexts as part of outdoor learning.

Not all the outdoor lessons observed in this study take place in a natural environment, some are in a man-made playground, but as the experience of the lesson is outside and important aspects of the outdoor experience remain (weather, fresh air, absence of walls….) I include these lessons within my understanding of outdoor learning.

- SEND - The Special Educational Needs and Disability Code of Practice: 0 to 25 years (DfE, 2015: 15-16) defines as a child or young person having SEND if they have 'a learning difficulty or disability which calls for special educational provision to be made for him or her.' This learning difficulty can refer to 'a significantly greater difficulty in learning than the majority of others of the same age, or a disability which prevents or hinders him or her from making use of facilities of a kind generally provided for others of the same age in mainstream schools or mainstream post-16 institutions.'

- Social Constructivism – Vygotsky's seminal socio-cultural theory which suggests that learning is a social construct, enabling children to learn through their interaction both with their peers and the environment itself (Vygotsky, 1962).

- Typical (lesson) - In many ways there is no such thing as a typical lesson, whether indoor or outdoor, but I use the term in the thesis to describe a lesson that is typical for the school and class which I am observing. In the context of this research, a 'typical outdoor lesson' is considered to be one that is everyday for the children. It does not include any unusual off-site elements, activities that are different to those usually seen as part of outdoor learning at the school. The lessons are planned and taught by those members of staff usually responsible for outdoor learning at the school and the class consists of the usual children. For River Primary this involved outdoor sessions being led by the Forest School Lead, supported by the class teacher and Teaching Assistants with children spending whole afternoons sessions outside. For Fields School a typical outdoor lesson consisted of the class teacher leading the session, supported by Learning Support Assistants. Sessions were linked to learning in other lessons, and took place when the subject being taught was timetabled for, to support structure of the day.

Embedding Outdoor Learning in Primary Education and Enhancing Provision for Children with Special Educational Needs and Disabilities.

Chapter 1 Introduction and Context

1.0 Introduction

Maynard and Waters (2007: 256) suggest that outdoor learning is, 'one of the most natural and powerful modes of learning for young children.' Advocacy of the approach has become more prominent recently with many studies recognising the positive aspects of outdoor learning (Chawla, et al, 2014; Becker, et al, 2017; Quibell, et al, 2017; Davies and Hamilton, 2018). Indeed, as Blundell (2017: 4) observes 'recent years have seen an upsurge in the popularity of the argument that children need exposure to nature as part of a properly appointed childhood.'

Outdoor learning has the potential to impact upon children's academic performance, as well as well-being, social communication and interaction and physical activity (Merewether, 2015). Research has highlighted it as an approach that can also help to support pupils' mental health (Chawla, et al, 2014; Grigg and Lewis, 2016; James, 2018; Li, et al, 2018).

According to the Department for Education (DfE) (2019), of the 4,727,090 children educated in a state-funded primary school in January 2019, 670,110 had a diagnosis of Special Educational Needs and Disabilities (SEND) – equating to 14.2% of the (state-funded mainstream) primary population. If the 121,740 children educated in a state funded special school (DfE, 2019) are added to this total, there are 791,850 children with SEND in state funded education (not including secondary mainstream education or independent schools).

There has been an increase in the popularity of outdoor learning in recent years, partly through the rise of adoption of the Forest School approach since the mid-1990s (see section 4.2.3 for further details). However, despite this, and the recognised benefits,

there is a lack of research about children with SEND in the area of outdoor learning. It is within this space in current understanding and practice around the benefits of providing opportunities for outdoor learning for children with a range of special educational needs and disabilities that this research project is located. The gap in the current knowledge will, in part, be addressed by this research.

The Special Educational Needs and Disability Code of Practice: 0 to 25 years (CoP) (DfE, 2015: 15-16) defines a child or young person having SEND if they have 'a learning difficulty or disability which calls for special educational provision to be made for him or her.' This learning difficulty can refer to 'a significantly greater difficulty in learning than the majority of others of the same age, or a disability which prevents or hinders him or her from making use of facilities of a kind generally provided for others of the same age in mainstream schools or mainstream post-16 institutions.'

The CoP refers to the Equality Act (2010: 6) to define Disability. There, it states that a person has a disability if they have 'a physical or mental impairment…that…has a substantial and long-term adverse effect on their ability to carry out normal day-to-day activities.'

The aims and objectives of my research are focussed on the provision made for children with SEND with regards to outdoor learning and learning. I aim to critically appraise the actions of schools and the opportunities in developing these opportunities. I will also consider the extent to which these experiences are embedded into the school's curriculum, and how children with SEND can best be supported in responding to outdoor learning (for a definition of curriculum, please see the glossary). It is my intention with this research to both consider the value and importance of including children with SEND in outdoor learning experiences and also to use my

findings to provide practical recommendations to assist educators in achieving this with their students.

Clearly the category of children with SEND is extremely broad and encompasses a wide range of cognitive and physical needs. The children with SEND in this study are necessarily a sub-group of this category and include a number of children on the autistic spectrum. How the findings of this study may be transferable to apply to other groups of children with SEND will be outlined in the discussion chapter.

1.1 Theoretical links

The research will adopt a Social Constructivist framework, considering the links between this theoretical approach and outdoor learning (Knight, 2016). Indeed, Harris (2017) suggests that children learn through their interaction both with their peers and the environment itself. The research will also look at the opportunities provided by a focus on Attention Restoration. Attention Restoration Theory (Kaplan and Kaplan, 1989) considers the impact of different environments to that usually resided in, and how this can support restoration of attentiveness, which, in turn can support learning (see section 5.3 for further details).

This research will focus on the outdoor environment, using learning that takes place outside of the classroom, in this instance, using data collected from outdoor learning that took place on the school site itself (see section 1.5 for definitions of outdoor learning). Attention Restoration Theory posits that alternative environments to the norm, particularly more natural environments, support people in 'redirecting attention, deal(ing) with unresolved concerns and reflect on priorities (which) can all be better achieved in a supportive environment that includes green vegetation' (Sivarajah, et al, 2018: 9).

The research in this thesis will consider and discuss the methodology, data collection methods and ethical considerations used, taking into particular account the considerations of researching and working with children with SEND (see section 1.51 for a definition of SEND and 6.4.21 for contextual data of participants).

1.2 Research questions

The research questions are:

- In what ways do two primary schools in the West Midlands provide Outdoor Learning experiences for children with SEND?
- What is the role of Outdoor Learning in supporting the needs of children with SEND in primary schools?
- How useful is Attention Restoration Theory as an interpretative tool/framework in enabling us to understand the ways in which outdoor learning supports the needs of children with SEND in primary schools?

1.3 Existing literature and research

Although schools are increasingly using outdoor learning (Becker, et al, 2017; Edwards-Jones, Waite and Passy, 2018), the literature review shows that there is very little research into how this is both adapted for children with SEND, to what degree it needs to be adapted, and how, and whether, it supports learning for these children in particular. Whilst much research identifies how children in mainstream primary schools respond to outdoor learning, studies largely fail to consider children with SEND or children in special schools (Chawla, et al, 2014 and Quibell, et al, 2017). For example, in their study on the physical environment and its impact on children with Autism

Spectrum Disorder (ASD), Li, et al (2018: 71), comment that there are ‘relatively few studies’ that exist.

1.4 Participants and methods

The data for this study is drawn from two case study settings in the West Midlands, a mainstream primary school (referred to in the research as River Primary) and a special school for children aged between 3 and 7 who are recognised as being in need of special educational provision (referred to in the research as Fields School). For each school, three class observations were carried out, across at least two different classes and on different days. In total, 4 children were observed in River Primary and 10 children were observed in Fields School. To provide an alternative viewpoint of outdoor learning provision and approaches in the school, members of staff were interviewed in both schools. Three members of staff from each school were interviewed (transcripts of the interviews are included in Appendix I). These members of staff were all teaching staff who are involved in outdoor learning provision.

1.5 Terminology

It is important to define some of the key terms used in this study for clarity. Becker, et al, (2017) and Quibell, et al (2017) argue that there is ‘little consensus on what defines an outdoor learning programme’ (Quibell, et al, 2017: 574) and that different settings will define their provision individually. Waite (2017), comments that what children are

learning outside also impacts on the understanding of what constitutes outdoor learning, suggesting that relevance and authenticity of experiences is important when considering outdoor learning and understanding outside of the classroom. Grigg and Lewis (2016) are more deliberate with their definition, stating that outdoor learning is, 'children learning about people, their heritage and natural environment…in a wide range of contexts beyond the classroom.' The importance of engagement with and caring for the environment, developing personal and social skills, and problem solving in real life contexts should be seen as part of outdoor learning (Grigg and Lewis, 2016).

Consequently, for the purpose of this research, outdoor learning will be based on Grigg and Lewis' (2016) definition. It will be taken to be learning which is undertaken outside; this can be undertaken locally, either on the school site or close by, or further afield. It is also identified as that which uses the natural environment as a resource, rather than learning which may happen outside, but does not refer to the outdoor environment as an input. For example, for the purpose of this study, research into Physical Education will be excluded; this subject may take place outside but it does not engage with the natural environment as a resource in the same way as, for example, Forest School. Whilst it should be acknowledged that outdoor learning can take place in any outdoor environment, the focus in this study is on the use of the school site, and their use of more natural environments. Outdoor learning, in this study, will be taken to be the direct and indirect learning that occurs during outdoor learning, as defined above.

1.51 Definitions of terms used in this study

The research addresses the experiences of children with SEND. The CoP (DfE, 2015: 15) defines SEND as a child or young person who has 'a learning difficulty or disability

which calls for special educational provision to be made for him or her.' The CoP (DfE, 2015) identifies that there are four main areas of SEND –

- Communication and interaction – covering speech, language and communication needs (SLCN) and Autism Spectrum Disorder (ASD)
- Cognition and learning – covering Moderate and Severe Learning Difficulties (MLD and SLD), profound and multiple learning difficulties (PMLD), as well as Specific learning difficulties (SpLD), which includes conditions such as dyslexia, dyscalculia and dyspraxia
- Social, emotional and mental health difficulties (SEMH) – covering a range of conditions such as anxiety or depression, attention deficit disorder (ADD), attention deficit hyperactive disorder (ADHD) or attachment disorder
- Sensory and/or physical needs – covering sensory conditions such as visual impairment (VI), hearing impairment (HI) or multi-sensory impairment (MSI) as well as physical disability (PD)

The DfE identified that, as of January 2020, in England's State Funded Nursery Schools, State Funded Primary Schools, State Funded Special Schools and Non-maintained Special Schools (across Early Years Foundation Stage, Key Stage 1 and Key Stage 2), the numbers of children diagnosed as falling into one of the four main areas of need were as described in Table 1:

Table 1: Areas of need January 2020 (DfE, 2020)

Area of need	Subcategories of need	Total number of children
Communication and Interaction	ASD – 101,448 SLCN – 227, 923	329, 371
Cognition and Learning	MLD – 149, 320 SLD – 31, 533	258, 723

	PMLD – 10,481 SpLD – 67,389	
Social, Emotional and Health	SEMH – 67, 389	67, 389
Sensory and/or Physical Needs	HI – 13,310 VI – 7,211 MSI – 2,558 PD – 23,201	39, 790

The participant children in this study have been diagnosed with the following conditions: ASD, VI, speech and language difficulties, global delay, difficulties with fine and gross motor control and specific learning difficulties (predominantly dyslexia). The research cannot represent or be generalised to all categories of SEND as identified by the CoP (DfE, 2015), but, rather, considers the experiences of children with various SEND in relation to outdoor learning. Wider implications and usefulness of the findings will be reflected upon in the discussion.

The research applies Attention Restoration Theory in this context, as an underpinning framework, in order to understand the process of these potentially beneficial outdoor learning experiences for children with SEND.

1.6 Structure of the thesis

The thesis will be structured as follows:

Chapter 2 discusses the research aims and positionality. The chapter includes a discussion around the research questions. It will also consider the positionality of the researcher and the prior experiences and understanding that have led to this area of research interest.

Chapter 3 discusses policy analysis. The Governmental Acts and Legislation that have impacted on the provision for and education of children with SEND are considered. The chapter also looks at the impact of policies and national guidance that have affected outdoor learning

Chapter 4 is focused on the literature review. A critical review of the history of outdoor learning provides background information about the development of outdoor learning both in England and internationally. The chapter provides a critical review of the barriers and advantages of outdoor learning and considers research that has taken place into outdoor learning for children with SEND. The underpinning theoretical frameworks used in this study are discussed and considered within previous research.

Chapter 5 details the underpinning theoretical frameworks used within the research and provides a rationale for the theories selected. Attention Restoration Theory and Social Constructivism are considered in the context of outdoor learning for children with SEND.

Chapter 6 discusses the qualitative, interpretative methodology used for this research. The chosen methodology of case studies is discussed in tandem with the underpinning theoretical framework which incorporates Attention Restoration Theory and Social Constructivism. The participants: school, staff and children, are considered in terms of the data that was collected from each group and the ethical considerations that underpinned the research

Chapter 7 presents the findings from the data gathered from the six observations of learning (three per school).

Chapter 8 presents a discussion of the research findings. The six observations and six interviews with staff (three per school) are presented in this chapter along with

contextual and environmental information on the data collection settings. The initial research questions are considered in light of the data collected throughout the study. The discussion includes reference to the literature review, relevant policies and the findings from the observations and interviews, integrated with underpinning theory from Attention Restoration Theory and Social Constructivism. The theoretical frameworks were used as analytical tools to interpret the research findings, considering the relationship between natural environmental experiences and children's learning through the lens of Attention Restoration and Social Constructivism.

Chapter 9 draws together the evidence in a conclusion. The data gathered is considered to reflect on the extent to which the research questions are answered by the data collection, reflect on choices made in the research, consider any limitations of the study and state implications for practice and/or policy and direction of future research.

Chapter 2 Aims and Positionality

2.0 Aims of the research

The aim is to consider the use and practicalities of outdoor learning in two primary settings (special and mainstream schools) in one area of England, focusing on the provision of outdoor learning for children with SEND, considering how this can be embedded in practice in both mainstream and special settings, and how this provision may differ across settings.

The research questions are:

- In what ways do two primary schools in the West Midlands provide Outdoor Learning experiences for children with SEND?
- What is the role of Outdoor Learning in supporting the needs of children with SEND in primary schools?
- How useful is Attention Restoration Theory as an interpretative tool/framework in enabling us to understand the ways in which outdoor learning supports the needs of children with SEND in primary schools?

2.1 Positionality

Considering my positionality within the research frame, I have become aware of certain ideologies which have impacted on my decision making both in my professional and personal life and have led me to research into opportunities for children with SEND, with a focus on outdoor learning.

From an early age, I have been a campaigner for equality and passionate about the environment. My own experiences of inequality stemmed from gender issues - at primary school, whether aware of it or not, my teachers were ascribing the cultural capital of gender on the school. The underachievement of girls in the sciences and maths was a noted concern during my primary school years (Cremin and Arthur, 2014), but I cannot remember any interventions or opportunities that addressed this. I was expected by my peers (and teachers) to align to their traditionally female interests: playing with dolls and wearing dresses. Instead, I wore trousers, ignored the dolls and started a herb garden, already craving an outdoor environment. This love of the environment and an outdoor setting continued throughout my own education and led me to a geography degree, a specialism in primary geography whilst completing a PGCE, and, subsequently, a career in teaching trainee teachers about geography and the outdoor learning environment.

My route to working against inequality has developed throughout my career in education. Bourdieu (1990: 631) describes habitus as "…the way in which the culture of a particular group is embodied (internalised) in the individual." With regards to institutional habitus, this "can be understood as `the impact of a cultural group or social class on an individual' s behaviour as it is mediated through an organisation" (Reay et al, 2001: 430). The institutional feel and habitus of the three schools I have previously worked at, their policies, examples of teaching that I saw and experiences of working with senior staff in a variety of contexts, have all impacted on my current practice and research interests.

My experiences have led me from being (against my better judgement) a behaviourist teacher at my first school (led by a head-teacher who was focused on behaviour

management), to someone who values Constructivism (in particular, Social Constructivism) and experiential learning, encouraging students and teachers to come together to teach and learn from each other. Throughout my career, and now, as a Senior Lecturer in primary geography and currently Course Leader for the BA (Hons) Primary Education with QTS, I have ensured that the needs of my class, whether these are confidence, security or engaging lessons, are met so that the students can progress to the best of their ability. I value offering a range of educational experiences to my classes, with my geographical background leading me to look at opportunities afforded through outdoor learning.

Some teachers I have worked with (across all of my previous schools) have dismissed children with SEND as those who cannot achieve and who can (and sometimes should) be excused, or prevented from attending activities, such as fieldtrips ('as they won't get anything out of it'). I believe that if these children were given more opportunities to show their ability, we could unlock potential and engagement (Glazzard, et al, 2010). Indeed, Stafford (2017), notes that children with SEND's voices are often unheard, and their everyday experiences not understood (please see the glossary for a definition of child's/pupil's voice).

I have always seen potential in all of my students and am defensive of and promoting of their abilities. It is this recognition that initiated the focus of this research. As Robinson (2006) points out, there are more versions of intelligence than maths and English. If we limit the experiences of children, are we also limiting their overall achievement?

The move into research into opportunities for children with SEND is a natural extension of my experiences. I see value in providing a range of experiences for all children and,

through my interest in geography and having seen Forest School in practice, I developed a wider interest in outdoor learning.

I have developed a particular interest in the use of Attention Restoration Theory as an interpretive approach in this research, which has allowed for the consideration of the use of the natural elements seen in outdoor learning and how children with SEND respond to these elements. It is noted that exposure to natural environments can reduce symptoms commonly seen in children with ASD and can be supportive in developing social and communication skills in pupils who traditionally struggle with these (Li, et al, 2018, James, 2018). Similarly, James (2018) notes, outdoor learning can support children with ASD with sensory processing, alleviating some of the hypersensitivity challenges that aspects of hard fascination can bring (Kaplan and Kaplan, 1989). The needs of children with ADHD is also supported through the use of a more natural environment, which Kuo (2013) and Li (2018) suggest could support refocused attention. Kuo and Taylor (2004: 1581), too, suggest that, 'there is evidence to suggest that nature can be helpful in addressing the impulsivity/hyperactivity axis of ADHD.' These challenges of attentiveness, whether through social skill development or through reduction of sensory overload, are supported through the use of an outdoor learning environment.

The opportunities afforded as a hybrid inside-outside researcher have allowed me to consider the experiences of children with SEND in outdoor learning from various standpoints. Whilst as someone familiar with the school participants, my role as an insider researcher allows me to have an understanding of the environment being utilised, as well as the school structure itself. However, despite being familiar with the schools themselves, the child participants, staff participants and outdoor learning

sessions observed were all unfamiliar, creating a hybridity of an insider-outsider research standpoint. Corbin Dwyer and Buckle (2018: 1) suggest that a ‘third space’ exists for researchers in this position occupying ‘the space between as we cannot fully occupy one or the other of those positions.’ Whilst Kelly (2014: 255) suggests that unfamiliarity with a setting will limit the researcher’s ability ‘to share understandings with other participants’ the hybridity of my position allows for both the familiarity of an insider researcher to be coupled with the impartiality of an outsider researcher.

The following chapter considers the policies, legislation and notable events that have concerned Outdoor Learning and Special Educational Needs provision in schools.

Chapter 3 Policy Analysis

3.0 Introduction

There have been numerous Governmental Acts and Legislation that have impacted on the provision for and education of children with SEND. This section considers some of the key pieces that have affected English education policy and practice. Although this research focuses on the experiences of children aged 5-7, Governmental Acts, Legislation, policies and guidance that concern the EYFS has also been included as this has a rich history of outdoor learning and includes specific consideration of children learning in the outdoors (for example: Qualifications and Curriculum Authority, 2000; DfE 2012, 2014, 2017, 2021a, 2021b).

Outdoor learning has also been affected by historical development and national considerations, both as part of policy and on a voluntary or advisory basis. This section will also consider the range of policy and guidance that has affected outdoor learning.

Key advancements that have been identified in both SEND and Outdoor Learning have been summarised in Appendix A and will be analysed.

3.1 Policies, Acts, Legislation and Key Events

The outdoors has long been used by class teachers for a variety of educational purposes (habitat studies in science lessons, outdoor art lessons using the natural world and Physical Education lessons for example). This has not always been a recognised requirement for education and outdoor provision has a history of variation in frequency, quality and relevance between schools. Indeed, MacQuarrie (2018) notes that the provision of outdoor learning historically has changed, from being

primarily an off-site, adventure activity, to being a learning opportunity that can take place on or near the school grounds, and focused more on understanding the local and natural environment.

Changes of focus in the wider education policy have exerted pressures on the provision of outdoor learning in primary schools. The focus on measurable achievement and attainment has meant that schools focus more on ‘standardised, test-based accountability policies that are linked to a narrowing of the curriculum’ (Passy et al, 2019: 73), rather than the social and personal development and developing self-confidence that can be brought about by outdoor learning (Farnham and Mutrie, 1997; Whincup, et al, 2021).

Funding has also been an issue in providing outdoor learning. Prince (2019) notes that schools list the expense of outdoor learning as a major challenge, leading to provision being inhibited. Expense also impacts on outdoor learning taking place at residential centres, with funding for these being reduced over the past twenty years (Prince, 2019).

In Appendix A, key legislation, policy, papers and events have been noted considering the development of outdoor learning in the UK (and, since devolvement of the UK, begun in 1997, legislation for England). Whilst there are many examples of Education Acts and legislation, few of these directly reference outdoor learning. However, as outdoor learning has developed outside of an official, legislated requirement, I have also looked at seminal events that have occurred that have shaped outdoor learning, or been approved of by politically established bodies.

The legislation, policy and events that have occurred based around outdoor learning have been interspersed with legislation and policy concerning Special Educational

Needs. As both aspects of education have developed separately, it is interesting to consider their progress in parallel. Both aspects are discussed in detail below.

The different approaches to outdoor learning (Open Air Schools, Outward Bound, Duke of Edinburgh Awards and Forest Schools are discussed in sections 4.2 to 4.2.3).

3.11 Policy in Scotland and Wales

Whilst this research addresses children with SEND's experiences in England, it should be noted that the position of outdoor learning across the United Kingdom is not a common approach between countries.

In Scotland, unlike in English provision, the curriculum for pupils aged up to 16 includes reference to the environment in sciences, and a requirement to experience outdoor learning in expressive arts, social sciences and health and wellbeing, where it is noted that outdoor learning, 'encourages and capitalises on the potential to experience learning and new challenges in the outdoor environment' (Education Scotland, 2019:10).

Similarly, in Wales, the curriculum for pupils up to 16 includes references to the environment in science and technology and mathematics, as well as a requirement to study in outdoor learning sessions in humanities and health and well-being (Education Wales, 2019).

The provision in both Wales and Scotland identifies the importance of outdoor learning for pupils in both primary and secondary education, up to the age of 16, and across a range of subject areas. It is notable that this is very different to the requirements in England.

3.12 Guidance concerning outdoor learning

The Curriculum Guidance for the Foundation Stage (Qualifications and Curriculum Authority, 2000) promoted the use of indoor and outdoor environments for children in the EYFS, to promote enjoyment and challenge. The guidance frequently mentioned the use of the outdoors, suggesting that, 'to be effective, an early years curriculum should be carefully structured... (to include) planned and purposeful activity that provides opportunities for teaching and learning, both indoors and outdoors' (Department for Education and Employment, 2000). This was noted to be key to providing a stimulating environment for children (Department for Education and Employment, 2000). However, it was not until the 2000 National Curriculum that it was formally included in requirements for Key Stages 1 and 2. In the geography requirement, fieldwork skills were mentioned 'developed during fieldwork investigations outside the classroom' (DfE, 1999) and, 'in their study of localities, pupils should: carry out fieldwork investigations outside the classroom' (DfE, 1999). The Qualifications and Curriculum Authority (1998) too, included outdoor opportunities within their proposed schemes of work.

Pressure has been placed on the Early Years Foundation Stage (EYFS) in recent years, since directorates from the DfE in 2012 and 2014 indicated that the key stage's main aim was to focus on school readiness, with an emphasis on maths and English (Waite, 2017). This places additional pressure on Early Years teachers, who need to decide on priorities between life experiences and social skills and more formal academic attainment.

However, as part of the Statutory Framework for the EYFS (DfE, 2021b: 30), outdoor opportunities do feature as a requirement, 'Providers must provide access to an outdoor play area or, if that is not possible, ensure that outdoor activities are planned and taken on a daily basis.' Indeed, one of the characteristics of effective learning in

the EYFS discusses the use of varied environments: ‘Arrange flexible indoor and outdoor space and resources where children can explore, build, move and role play’ (Early Education 2012). The Understanding the World: The World Early Learning Goal, too, aimed to enable children to know more about their world through exploring places and the environment (DfE, 2017). The updated Development Matters non-statutory guidance (DfE, 2021a: 111), too, promotes outdoor learning across a range of learning areas, suggesting that teachers should, ‘encourage interactions with the outdoors to foster curiosity and give children freedom to touch, smell and hear the natural world around them during hands-on experiences.’ It is interesting to question if, with outdoor learning being recognised as important for children in the EYFS, whether this could be also part of the requirements for provision for children with certain type of SEND. The suggestions for ways that this can be achieved include developing a use of geographical skills, such as mapping, as well as visits to the local area.

The Learning Outside the Classroom Manifesto (DfE, 2006) encouraged schools to develop their use of outdoor learning, suggesting that there should be ‘more widespread use of outdoor learning opportunities outside the classroom’ (Waite, 2017) as these create more memorable learning experiences, supporting the development of skills, understanding and personal development (DfE, 2006). The Office for Standards in Education, Children’s Services and Skills (OFSTED) (2008: 5) agreed, suggesting that, when well planned, outdoor learning, ‘contributed significantly to raising standards and improving pupils’ personal, social and emotional development’ and were able to make learning more vivid and engaging. However, whilst the Learning Outside the Classroom Manifesto (DfE, 2006) promoted the use of outdoor learning, it failed to acknowledge why it was beneficial for children (Waite, 2017). The

responsibility for Learning Outside the Classroom was formally passed to the Learning Outside the Classroom Council in 2009, taking it outside of political control.

It was not until the National Curriculum of 1988 (from the Education Reform Act of the same year) that all schools in England and Wales were required to teach from a nationally approved document, detailing the subject content, and, indeed, which subjects had to be taught. In this curriculum, geography (and Physical Education, the two later subjects that are linked to outdoor learning in the 2000 and 2013 National Curriculums) was identified as a required foundation subject, and fieldwork was included, but, apart from this, outdoor learning did not feature.

In the current National Curriculum (2013) the inclusion of outdoor learning was updated, with the requirements for geography including outdoor opportunities '…use simple fieldwork to study the geography of their school' and for Physical Education requiring children from Key Stage 2 to 'take part in outdoor and adventurous activity challenges both individually and within a team' (DfE, 2013). However, as with the rest of the National Curriculum, it is left to the discretion of individual schools to ultimately decide how to use the outdoors and meet requirements.

The Department for Environment, Food and Rural Affairs (DEFRA) noted the National Curriculum's (DfE, 2013) inclusion of fieldwork when discussing their aims for schools to support children's understanding about the natural world. DEFRA's A Green Future: Our 25 Year Plan to Improve the Environment (2018) aims to detail 'government action to help the natural world regain and retain good health' (DEFRA, 2018: 9). It included recognition of school actions to promote outdoor learning, such as Forest School (see section 4.2.3) and the National Curriculum's (DfE, 2013) requirement of fieldwork in geography. It did not, however, expand on the role of these in promoting outdoor learning or comment on the benefits these approaches bring. The Plan also aimed to

support regular school visits to natural spaces ‘where they can combine learning with feeling healthier and happier’ (DEFRA, 2018: 76), recognising the link between outdoor spaces and well-being, and established the Nature Friendly Schools Programme (see section 4.3), which aimed to support schools in developing children’s understanding about the natural world. Whilst The Plan did not specifically mention children with SEND, it did suggest that it aimed to support schools in facilitating visits ‘to natural spaces on a regular basis where (children) can combine learning with feeling healthier and happier’ (DEFRA, 2018: 76). The Plan stated that children with ‘individual needs’ may receive a bespoke itinerary, though this was not expanded upon.

Additional considerations for children with SEND when learning outside can impact on the delivery of any outdoor sessions but have not been considered within official guidance. For example, some children may feel anxious about learning outdoors due to the unfamiliar and unpredictable nature of the outdoors, or may feel attachment to the familiar environment of their classroom (Mathison, et al, 2007; Harris, 2017). This would require outdoor sessions to be planned and prepared for in advance, to support familiarity. James (2018), too suggests that locations are checked in advance, to support any children with physical mobility needs, due to the physically uneven environment of some outdoor learning spaces. However, it should also be noted that learning outdoors can be a positive change to the classroom for some children with SEND. James (2018) notes that some spaces, with hard elements of fascination, such as fluorescent lighting and electronic devices, can be quite challenging environments for those with a sensory processing disorder (such as ASD), and that natural outdoor environments can provide a more relaxed sensory experience.

3.2 SEND developments

Parallel to the events and Acts concerning outdoor learning, legislation affecting children with SEND has also developed over time.

Policy concerning the education and rights of children with special needs dates back to the late nineteenth century (although the term Special Educational Needs was not used at this point). At this time, a number of charitable institutions and religious orders provided education for children with disabilities (Ainscow and César, 2006). Provision was segregated, and children with disabilities were educated in separate classes and schools (Norwich, 2008). By the 1890s, the efforts of these charitable and religious schools were acknowledged by Government policy and school authorities were required to provide education for children who were blind or deaf from five to sixteen. The Elementary Act (Blind and Deaf Children) 1893 and the Elementary Act (Defective and Epileptic Children) 1899 sought to establish educational requirements for children with certain disabilities.

The segregation of children with disabilities was seen as being beneficial, both for the pupils who were placed in special schools and those who were educated in mainstream education. It was suggested that the needs of children could be met more readily in special provision as specialist staff could be recruited.

The Education Act, 1944, as well as establishing the overview of primary and secondary education, also considered education for children with special educational needs. The Act acknowledged that mainstream schooling might offer some benefits for these children, recognising that, where special school education ‘is impracticable, or where the disability is not serious’ children should be educated in schools maintained by the Local Education Authority (Education Act, 1944). The Act also gave

rise to the use of the term ‘special school’ for providing education for ‘pupils who suffer from any disability of mind or body by providing, either in special schools or otherwise, special educational treatment. That is to say, education by special methods appropriate for persons suffering from that disability’ (Education Act, 1944). However, still, the focus was on segregation of education for children with SEND (although children with SEND were referred to by other terms until as such until the Education Act, 1981, previously being known as, amongst other terms, ‘ineducable’ (Jordan and Powell, 1995)).

The change in position of education for pupils with SEND can be traced back to the Warnock Report of 1978, and the subsequent Education Act of 1981. For the first time, Special Educational Needs, as a term, was defined and inclusion of children with SEND was officially suggested as a strategy; the principle of educating pupils with SEND in a mainstream school and giving parental preference consideration (Norwich 2008). The Warnock Report acknowledged that, although 20% of a school’s cohort may have SEND, only 2% of those children needed support above that which could be provided in a mainstream classroom. This was supported by the Salamanca Statement (UNESCO, 1994), which stated that education should be inclusive and that mainstream schools should accommodate children with SEND (Webster, 2022).

However, inclusion was not always considered the best approach for all children with SEND as it can sometimes be to the detriment of those it seeks to support. Sherratt (2005: 58), suggests that, ‘inclusion can be a wonderful opportunity or a living nightmare for children on the autistic spectrum.’ Jordan and Powell (1995), too, write that there were ill conceived ideas evident in the Warnock Report and Education Act,

1981, suggesting that resources and ideologies were more considered than the actual education provided for the children with SEND. Webster (2022: 5) notes that, following the Warnock Report (1978), the systems supporting children with SEND had evolved into ‘a bureaucratic maze.’ He suggests that Warnock ‘condemned the system that her inquiry had helped to create as a ‘cynical’ and ‘disastrous’ battle for resources’ (Webster, 2022: 5). Merry (2019), too, suggests that inclusion, for some, was seen as an opportunity to save funds, as a cost-efficient way to deliver the legal right to education without specialist facilities.

Whilst considering support for children in the classroom, there are differences in opinion over whether an official medical diagnosis is useful for pupils with SEND. In some cases, Cheng (n.d) suggests, a diagnosis can lead to a child being considered as their diagnosis, rather than as an individual, causing changes in the way individuals are treated. Sobel and Alston (2021) suggest an alternate view, commenting that a diagnosis supports pupils with SEND as it aids educators and associated professional with foreknowledge when working with the pupil. At a far more practical level, the use of a medical term can open up avenues of support, both financial and physical.

3.21 Wider policies affecting England’s position

By the 1990s, the growing international human rights movement had produced two key documents which impacted not only on education in England, but provision across the world. The commitment of the UK Government to equal opportunities had to be demonstrated by adherence to both the United Nations Convention on the Rights of the Child (1989) and UNESCO’s Salamanca statement (1994).

The United Nations Convention on the Rights of the Child (1989), the most widely endorsed human rights treaty internationally (Lundy, 2012) sought to detail rights for children within education, highlighting key areas such as access to education, children's views and disability. The treaty recommended that children with disabilities were included in mainstream schools. Governments internationally were recommended to produce 'legislation prohibiting discrimination' as well as establishing 'early identification and intervention programmes; resources for specialised teacher training and equipment; stability in teacher employment; removal of physical barriers to enable effective access; public awareness campaigns' (Lundy, 2012: 399).

This was further supported by the Salamanca Statement in 1994, which suggested that inclusion is 'the most effective means of combating discriminatory attitudes, building an inclusive society and achieving education for all' (Ainscow and César, 2006: 231). The intention indicated from both documents was for all pupils to learn together and have equal rights and access to education and schooling.

3.22 The Special Educational Needs and Disability Act 2001

The Special Educational Needs and Disability Act (SENDA, 2001), contributed to the requirements of the Education Act (1996) and brought educational establishments in line with the Disability Discrimination Act (1995) (Ineson and Morris, 2007). This put legislation in place to ensure that disabled children cannot be discriminated against in terms of school admissions, education services (such as the curriculum, school trips and sports), and exclusions. It aimed to cement the rights of children with SEND and their parents by prioritising parental wishes.

SENDA (2001) stated that, as of January 2002, any child with a statement of special educational needs was entitled to attend a mainstream school, as long as this was in

agreement with parents' wishes and the education of other children in the school would not be affected. Schools and authorities were required to support the inclusion of children with SEND in mainstream education, with the proviso that schools were able to decline education as long as there were 'no reasonable steps that it or another authority in relation to the school could take to prevent the incompatibility' (SENDA, 2001). This led to a discussion of what 'reasonable' means, with provision being put at risk by varying interpretations (Heaven, 2004 and Ineson and Morris, 2007). However, the Act was still seen as providing significant and far reaching change to education provision for children with SEND (Clark, 2003).

3.23 The Equality Act 2010

The Equality Act (2010) aimed to protect people from discrimination in society. In education, this considered (amongst consideration of other protected characteristics) the provision made for pupils with SEND. The Act decreed that settings, such as schools, should not discriminate (whether directly or indirectly) against children with SEND (a disability defined within the Act, is something which has as a substantial and long term adverse effect on their ability to carry out usual day-to-day activities). It also aimed to ensure that settings made reasonable adjustments to support children so that they were not at a disadvantage compared to their peers. Goepel, et al (2014) note, however, that it is not the disability or need itself which impacts on barriers to learning, but the environment that the pupils are placed in and the way in which they interact with this.

3.24 Children and Families Act 2014

The situation for SEND provision was again updated in 2014 by the passing of the Children and Families Act which implemented significant change, as well as formally

defining SEND as ‘a child has special educational needs if he or she has a learning difficulty which calls for special educational provision to be made for him or her (Wearmouth, 2015: 55).

Ko (2015) suggests that parents had found previous systems of support to be challenging to manage, information was difficult to find and services difficult to obtain (particularly when children needed support from a range of providers across education and health services). One key aim of the 2014 Act was to support parents and children with SEND by removing the previous Statement of SEND and replacing this with Education Health and Care Plans (EHCP), which consider the child’s need through education, health and social care systems. This EHCP system, in contrast to the Statement system, consulted parents and children with SEND throughout the assessment and production process and took their views, wishes and feelings as central to decisions made (Wearmouth, 2015). Further to this, parents have the option to decide on the support provided for their child, through consideration of a local offer, which the local authority and schools produce to help inform what services and provisions are available (Wearmouth, 2015). Bainham and Gilmore (2015: 633) suggest that this process, whilst supportive of parental involvement (the absence of which was a criticism of previous legislation), can lead to a range of outcomes as the quality and success of the provision may depend on, for example, ‘parents' relationships and the personalities of those involved.’

3.3 Conclusion

Policy impacting on both outdoor learning and SEND has been updated continually, and with increased frequency during the 20th century and into the 21st. It is anticipated that this will continue to develop as new ideas, ideals and theories are implemented in

education. At all times, the aim of those involved has been to improve education and provision for all children and any new legislation will seek to adapt, improve and update the current positioning, for example, the amalgamation of identified support through EHCPs, established through the Children and Families Act (2014). However, there are still areas that could be developed to provide support for children's well-being and development. Outdoor learning has not been included as a requirement in any documentation past Early Years education provision (Development Matters, DfE, 2021a). As MacQuarrie (2018: 345) suggests, there is 'scant evidence to suggest that the inclusion of outdoor learning within policy and curricular documents has achieved the related outcome of increasing teachers' uptake of outdoor learning.'

The following chapter will consider the current literature and research into outdoor learning, and any discussion of outdoor learning for children with SEND.

Chapter 4 Literature Review

4.0 Introduction

This study considers the pedagogic use of outdoor learning (as defined in section 1.5) within the schools' curriculum and critically evaluates the ways in which a mainstream and special education primary school in the Wolverhampton area embed and adapt curriculum for children with SEND.

This chapter discusses relevant empirical literature with consideration of the research questions:

- In what ways do two primary schools in the West Midlands provide Outdoor Learning experiences for children with SEND?
- What is the role of Outdoor Learning in supporting the needs of children with SEND in primary schools?
- How useful is Attention Restoration Theory as an interpretative tool/framework in enabling us to understand the ways in which outdoor learning supports the needs of children with SEND in primary schools?

The chapter begins with a critical review of the history of outdoor learning. In order to provide some background information, first the chapter considers the development of outdoor learning both in England and internationally (particularly considering the development of programmes similar to those found in England) to set the English position in an international context.

The chapter then provides a critical review of the barriers and advantages of outdoor learning, for children with SEND considering any benefits and drawbacks. It also considers research that has taken place into outdoor learning for children with SEND, focusing on the experiences and opportunities provided for the children. This will

particularly reference any studies of special education in comparison to mainstream education. It should be noted that there is a large categorisation of pupils who would fall within the term 'children with SEND,' and that experiences for these children would all be very different. Therefore, the research conducted by others, as discussed in this literature review, and through this study, can only comment on the participants in these studies. They cannot provide a complete overview of children with SEND's experiences of outdoor learning.

Finally, the chapter discusses and justifies the underpinning theoretical frameworks used in this study and considers how they have been used in previous research.

4.1 Search parameters:

When selecting search parameters, a number of different terms were considered. Outdoor Education and Outdoor Learning are often used interchangeably and so all following searches were performed with both phrases.

After using 'Outdoor Education' as a search parameter, many results were forthcoming, including considerations of secondary and higher education. As this study is focused on primary education, further searches, with regards to age phase of education, were more specific. However, the results for 'Outdoor Education,' regardless of age phase, also produced a number of results not directly linked to the provision of outdoor education or outdoor learning for children with SEND. Therefore, this was also added to the search parameter, to narrow down results. Variations of phrase for SEND were used.

I chose to search for literature via Summon and Journal Storage (JSTOR) (see Appendix B for search terms). Search terms were trialled using full search terms (such

as ‘special educational needs’) as well as their acronyms. Specific terminology and search parameters were included, to narrow the focus to primary education, although these findings did not necessarily help to identify articles about SEND, rather, highlighting all primary education research. No search terms used narrowed the field to identify solely Outdoor Education and these were manually identified from the search results.

The literature search was focused on that which has been published since 2013. This is linked in with the publication of the latest National Curriculum (2013) as this will consider current educational provision and more recent education policy. It will include research taking place in schools currently, where outdoor learning and SEND provision is considered alongside current curriculum expectations and pressures such as OFSTED requirements and statutory assessments. In addition to this, older research may not take into account the benefits, advantages and disadvantages that newly produced resources may bring about.

Any studies which consider the history of outdoor learning, theoretical frameworks or discuss SEND conditions pre-2013 were included as these are not dependent on current education policy and are still, therefore, relevant. Texts considering historical education policy or international approaches are also included as these have not been affected by the current position of education in England.

The literature will be considered with consideration of the research questions, defined in section 4.0.

4.2 A brief history of outdoor learning in England and internationally

There is a long history of outdoor learning, both in England and internationally, with proponents advocating the benefits of using the outdoor environment (Davies and Hamilton, 2016). The historical stance has impacted on current provision in schools, and can be seen in the position of outdoor learning within English education policy. In order to fully appreciate the changing stance of outdoor learning, it is important to consider how it has developed over time in response to social, educational, medical and economic influences.

As early as the 19th century, at least, in England, there is evidence of leading philanthropic figures encouraging children's relationships with the outdoors, and, in nature in particular, when figures such as the art critic and social thinker, John Ruskin, encouraged children to develop their understanding of and experience in the outdoors (Loynes 2015 and Turtle, et al, 2015). Internationally, Froebel and Steiner, too, recognised the value of children's contact with nature and learning, providing practical experiences for children in the 19th Century. For example, Froebel developed the first kindergarten (literally translated from German as 'garden for children'), in Blankenburg, Germany, in 1837. There he encouraged children to work outside, experiencing nature and nurturing plants, as well as developing opportunities for creative play, and artistic physical pursuits, such as singing and dancing (Giardiello, 2014). The promotion of the outdoor environment was thought to provide calming spaces to help develop children's focus, independence and enquiry skills (Bruce, 2012; Constable, 2017), an idea supported by Attention Restoration Theory (discussed in section 5.3). Use of the outdoor environment embraced the opportunities for children to think for themselves (David, et al, 2016), seen today through outdoor activities such as Forest School (Knight, 2009; Bruce, 2012). Froebel believed that all people, particularly children, are intrinsically connected with nature, and have a fascination with it, a proposal shared by Louv

(2005), and that the use of the different, outdoor, environment provided a 'joy and freedom (that was) associated with pushing the boundaries beyond the limits of everyday experience, venturing into a new world' (Bruce, 2012: 53). The interaction with nature provided in the kindergartens allowed children to develop a greater understanding of both themselves and the world they live in (Strauch-Nelson, 2012).

These ideas were shared by the McMillan sisters (Margaret (1860-1931) and Rachel (1859-1917)), who pioneered naturalistic learning in England in the late nineteenth and early twentieth century, promoting child-led initiatives and engagement with the natural world. The sisters worked to better school conditions for children and aligned with the Open-Air Schools movement (see further information in section 4.2.1), recognising the value of outdoor learning, particularly for those living in more crowded urban areas, with little access to open space. Initially, the sisters set up an outdoor camp to support children living in Deptford, children there were able to take baths, have wholesome meals and attend schooling. The recognition that the natural environment that the children were exposed to, alongside the educational opportunities, led the sisters to note the benefits of outdoor living and the outdoor environment on children's health (Bilton, 2010). Through consideration of the Open-Air movement and Froebel's kindergarten approaches, the McMillan sisters later established an Open-Air nursery in London in 1914. Provision focused around similar themes to those seen in Early Years settings today, using a free-flow indoor-outdoor approach to allow children to choose where to work, and promoting learning through play (Giardiello, 2014). This has also, more recently, been identified as a fundamental right through the United Nations' Conventions on the Rights of the Child (1989) which recognised children's rights to play.

Margaret McMillan is widely acknowledged as a pioneer of the nursery school movement (Whitehead, 2014) which was founded following the opening of the McMillan sisters' nursery school in 1914. This school attracted attention and funding from the Government at the time, and became a focal point of the plans for nursery education in England (Whitehead, 2014). The aim of the school was to provide a setting that was conducive to learning, and removed from the traditional large cramped, indoor classroom. Consequently, the McMillans' nursery provide an 'interesting, enticing environment outside, where children could follow their interests' (Bilton, 2010: 72).

The 1918 Education Act supported the work of nursery schools, by enabling local authorities to provide nursery education for children between 2 and 5 years of age. However, these schools were not compulsory, councils did not have to provide them, and parents did not have to send their children (Monthly Labour Review, 1918). Bilton (2010) notes that, following this Act, as funding was not provided to support nursery education, it was not developed to become universally available.

However, there is evidence that nursery education still provides outdoor learning today – the maintained nursery schools have a positive history of supporting outdoor learning, and helping children with SEND to progress. Please see section 4.2.4.

Outdoor learning was further developed as an approach in the 20th century, when Montessori developed an educational environment that integrated both indoor and outdoor spaces, opening her first classroom in Rome in 1907. In contrast to Froebel, Montessori encouraged teachers to act as facilitators to learning, providing background support but allowing children to lead their own learning and develop their enquiry skills (David, et al, 2016). This allowed children to develop independence of

choice as they chose where to spend their time, a free-flow indoor-outdoor approach still used and advocated in many Early Years settings (Constable, 2017).

The development of outdoor learning in England has seen different approaches taken with focus on both academic, social and health concerns. Sections 4.2.1 to 4.2.3 consider the development of some notable examples since the start of the twentieth century, considering too, how these approaches are seen in current provision.

4.2.1 Open Air Schools

The beneficial nature of the outdoors was recognised by Dr. Bernhard Bendix and Hermann Neufert who established the first Open Air School in Berlin in 1904. The aim of the school was to support children who lived in urban areas and were deemed to be unhealthier than their peers who lived in more rural surroundings (Hughes, 2004 and Mirams, 2011). The lack of fresh air was believed to be 'damaging to health, particularly that of children' (Hughes, 2004: 444). The idea soon spread internationally, with the first Open Air School being opened in England (in London) in 1904.

Although taught in natural, open air settings, the Open Air Schools did not make use of the natural environment as a resource for exploration or investigation, but as a medical aid. Following the Education (Administrative Provisions) Act of 1907, the School Medical Service was established, which accepted the ideas of the Open Air Movement (Hughes, 2004). Subsequently, schools being built around the country were designed to incorporate the ideas promoting open air learning by including areas for outside study as well as more airy indoor spaces with increased natural light. As the main aim of the schools were to prevent tuberculosis, the introduction of antibiotics, to treat the condition, impacted on this outdoor approach, and the Open Air Schools became obsolete post World War Two (Châtelet, 2004). However, some of the

fundamental principles are still evident in schools today, for example, the use of outdoor environments for PE lessons, as well as encompassing natural light into a classroom. These principles help to promote children's relationship with a more natural environment. Although the medical reasoning today may be different, health benefits are still promoted, for example, Waite (2017: 250) states that outdoor learning 'supports the development of healthy and active lifestyles by offering children opportunities for physical activity, freedom and movement, and promoting a sense of well-being.' Morris (2003) also suggests that the health benefits are still a key benefit of time spent in the outdoor environment, suggesting that stress levels are lowered, linking this back to Attention Restoration Theory (see section 5.3).

4.2.2 Outward Bound Schools

Outward Bound Schools were established in 1941 by Kurt Hahn and Lawrence Holt, with the first school (in Aberdovey) running courses for young sailors to prepare them for harsh sea conditions. The Outward Bound Schools focused on developing confidence and self-esteem through outdoor adventure activities (Wang, et al, 2006). By 1944, professions, such as the police and fire service also made use of the approach to support their newer recruits.

Since 2000, the Outward Bound Trust has been developing links with schools, aiming to support children in reaching their potential through outdoor learning and adventures activities (The Outward Bound Trust n.d.). However, OFSTED (2008) have raised concerns with the use of residential outdoor centres and the provision made as these are not well-integrated with the academic activities seen within the classroom (Waite, 2017). This focus from OFSTED allies with the later approaches to outdoor learning

seen in the emphasis on readiness for schools in the EYFS through the development of core academic subjects.

4.2.3 Forest School

Forest School started to become established in the mid-1990s in England following a 1993 visit by teachers from Somerset to see Forest Schools in practice in Denmark (see more information about the history of Forest Schools in section 4.2.51). The outdoors-based approach used in Danish pre-schools and nurseries influenced the practice of the visiting teachers who initially established a Forest School setting at their college (Forest School Association n.d.). Whilst the Scandinavian approach of friluftsliv (connecting to and being 'free with nature' (Pickering, 2017: 142)) supported the philosophical approach to Forest School in Denmark, there was no inherent nature-based philosophy that could be used to support the Forest School approach in England (Leather, 2018; Blackham, et al, 2021). Consequently, the Forest School Association established its own definition, focusing on community learning, independence and creativity; moving away from the nature-based philosophy of its origins in Scandinavia.

By 1995, a formal qualification was being offered and the idea has since spread nationwide, being formally adopted by councils across England and Wales (and in Scotland by 2003), but not formally endorsed by the DfE (or its iterations of Department for Education and Employment, 1995–2001, the Department for Education and Skills, 2001–2007 and the Department for Children, Schools and Families, 2007–2010) (Waite, 2017). To date, there are now over 10,000 trained practitioners (Forest School Association n.d.). Whincup, et al (2021) suggest that it is the accreditation and qualification, aligning with England's school system and policy context, that leads to

Forest School being seen as an acceptable approach to outdoor learning. Leather (2018a) raises questions over qualifications and accreditation, suggesting that the rise of Forest School has led to an institutionalised approach to training and providers who may not fully understand the approach or principles behind the outdoor learning they are leading.

A high amount of Forest School Research emanates from the Forest School Research Group, or those affiliated with Forest School provision, however, dissenting voices also offer a more critical stance. Leather (2018a: 11), for example, questions whether a national, structured approach for outdoor learning is needed at all, suggesting that, 'it remains an open question whether a shared national model is needed or desired…having a national model may also reify the Forest School experience transforming it into a product that organisations can market and sell, rather than allowing it, as an educational philosophy, to inform a range of approaches.'

However, there are those who identify positive aspects about the Forest School approach. Constable (2017), herself a Forest School Coordinator in a school, states that the Forest School programme aims to encourage children to be independent learners and explore the environment themselves through a range of nature-based activities. It does not align to any one subject or area of the National Curriculum (DfE, 2013) but studies suggest that is does positively impact on children's self-esteem, confidence, as well as their development of skills (such as use of tools) and understanding of the natural environment, which are highlighted as key gains in research (O'Brien, 2009; Harris, 2017). However, due to the challenge of timetabling the required elements of the National Curriculum (2013), Whincup, et al (2021: 5) note that practitioners are often required to link Forest School sessions to curriculum areas, creating a formal element of planning and structure to sessions that would make it less

child-led' and moving away from the aim of Forest School developing independent learners.

The rise in popularity of the Forest School approach led to a number of interpretations as to what Forest School actually is. Waite (2017), a member of the Forest School Association Research Group, suggests that not all schools who refer to Forest School are providing what the original definition of it was, with a variation of approaches being seen. Leather (2018a) argues that this rapid expansion has left a number of providers unclear about the underpinning theoretical approaches and that this leads to experiences which do not readily support children's development and understanding in the cross-curricular values that Forest School could benefit. Whincup, et al (2021) agree, suggesting that, across primary schools in England there is a lack of consistency in Forest School practice. Whilst providers may have the formal Forest School qualification, some are not registered with the Forest School Association, which the Association considers 'problematic for understanding FS provision' (Whincup, et al, 2021: 2). Though, as a commercial company, it should be questioned whether the lack of registration with the Forest School Association is an issue for understanding of outdoor learning, or whether the engagement of children in outdoor learning itself should be the priority. Again, as per the Outward Bound approach, the focus on academic subjects and, in particular, readiness for school in the Early Years Foundation Stage, and budgetary constraints, has meant that local and national governmental support has started to diminish (Waite, 2017). David, et al (2016) noted that this focus on academic standards and a narrowing of approaches is in direct contrast to the creative, independent learning approach promoted by Froebel in his early kindergartens. They claim that this, instead of progressing education and taking note of the opportunities of independence and a wider range of embedded opportunities in the curriculum, is reverting education back to the 1890s. They argue

that prescribed teaching approaches, such as ‘phonics lessons using narrow methods and content of teaching, with a belief that creativity can be transmitted from teacher to people and directly taught alongside an emphasis of testing and the 3Rs’ (David, et al, 2016: 21) is limiting opportunity for children.

4.2.4 Maintained Nursery Schools

Nursery schools developed across England following the 1918 Education Act, which permitted local authorities to provide education to 2 to 5 year olds. The development of nursery provision across England was slow, due to a lack of funding and lack of statutory requirement. Nursery education is still not a statutory provision in English schools, though maintained nurseries are identified as providing a community hub, supporting a number of children from disadvantaged backgrounds, and those more likely to under-achieve academically (Solvason, et al, 2021). Solvason, et al (2021) state that, in maintained nursery settings, one in seven children are entitled to Pupil Premium funding, supporting the most disadvantaged pupils, whereas in private nurseries, this is reduced to one in twenty. Maintained Nursery Schools (MNS) also have a higher proportion of children with SEND than private providers (Solvason, et al, 2020). Paull and Popov (2019: 31) state that ‘15% of children in MNS have SEND compared with 11% for nursery classes, 9% for voluntary providers, 4% in private providers and 2% for childminders’.

Maintained nursery schools have a history of providing positive outdoor learning experiences. Maintained nursery schools are viewed by local authorities as being centres of excellence in providing outdoor learning (Paull and Popov, 2019). Paull and Popov (2019) suggest that, as well as providing Early Years education to the children in their care, they also are frequently considered to be leaders in local best practice in

making use of outdoor resources and supporting children with SEND. Solvason, et al (2021) agree, commenting that maintained nursery school practitioners highlight their ongoing commitment to: enriching outdoor environments, which supports children's communication and social skills.

4.2.5 Examples of international outdoor learning

There is a rich history of outdoor learning to draw on in both England and internationally. Many examples of outdoor learning have been established around the world, Neill (2001) suggests that a country's geography, history and culture will all have bearing on the implementation of outdoor learning and how this is developed. Approaches in England have both drawn on inspiration from international sources (or inspired international practice themselves), as well as developing approaches independently.

4.2.51 Outdoor learning in Denmark

As outlined in section 4.2.3, one of the more prevalent and recognised ways that schools have started to develop their use of outdoor learning more recently in England is through Forest School, which was first introduced to England following a teaching visit to Denmark. Forest School is an example of an internationally recognised initiative which encourages independence and creativity whilst exploring an outdoor environment (Knight, 2016). Becker, et al (2017) suggest that the Forest School programme, in both Denmark and England is supportive of children's social and academic development and progress (for further information, see section 4.2.3).

Forest School in Denmark developed in the 1950s when teacher Ella Flatau included daily hikes in the local woods as part of her class' curriculum. The approach was

successful and led to parents in Copenhagen commuting their children to more rural schools to take advantage of the approach, mindful of the fresher air outside of the city (a similar approach to that of Open Air Schools developing in England in the early twentieth century). It continued to grow throughout the 1970s and 1980s to become a firm fixture in the Danish educational approach, later spreading internationally (Earth Force Education, n.d).

However, Denmark has a wider connection to outdoor learning than Forest School. Although outdoor learning (Udeskole) is not listed as a curriculum requirement in Denmark, a school reform of 2014, directed that children were to be active for at least 45 minutes per day, and schools were required to engage with their local community – aspects which, although outdoor learning was not directly mentioned, are achievable through udeskole (Passy, et al, 2019). Similar to England and New Zealand (see section 4.2.54), no official approach to outdoor learning is promoted by the Government and the decisions whether to and how to engage still lie with the individual schools and teachers (Passy, et al, 2019).

Outdoor learning is still widespread across the country with 28% of schools partaking in outdoor learning once or twice per class per week (Rotaru, 2014). This learning focuses on curriculum subjects (science, language and communication and maths), ensuring that there is a link to required curriculum learning.

4.2.52 Outdoor learning in Norway

In Norway, children attending kindergartens between birth and 6 years, are offered the choice where to spend their time, similar to that seen in Early Years provision in England. Frequently, the outdoor areas are chosen, with children spending between 3 and 5 hours per day outside, regardless of weather (Aasen, et al, 2009). This aligns

to the Norwegian tradition of friluftsliv, the idea of connecting to and being ‘free with nature’ (Pickering, 2017: 142). Although this is a lifelong connection to nature, in terms of education, it aims to bring children’s exposure to outdoor environments into everyday life via experiential learning (Leather, 2018).

Rea and Waite (2009) and Knight (2013) note that the provisions made in Scandinavian countries vary from English outdoor provision in that, in England, learning is very much tied to curriculum and therefore governmental requirements, whereas in Scandinavia, learning is more related to life-long learning and skills.

4.2.53 Outdoor learning in Zimbabwe

In Zimbabwe the Schools and Colleges Permaculture Programme (SCOPE) aims to develop children’s understanding of their local environment (Maposah-Kandemiri, Higgins and McLaughlin, 2009). Started in the mid-1990s, SCOPE grew from a pilot scheme of two participating schools, to 126 participant schools, 13 colleges of initial teacher education, and six agricultural colleges by 2008 (Mukute, 2009) and, today, over 200 schools in rural and urban Zimbabwe (SCOPE n.d.).

Similar to the Growing Schools programme in England (see section 4.3), SCOPE focuses on developing environmentally aware pupils through a programme of organic farming and sustainable agriculture, promoting an awareness of ‘field to fork’. Children are taught about the theoretical aspects of farming and agriculture through English, maths and science (SCOPE n.d.), and put their knowledge into practice in the school garden, an approach that is also seen in England through the use of cross-curricular learning to support outdoor learning in an academic subjects-driven climate.

4.2.54 Outdoor learning in New Zealand

In New Zealand, outdoor learning is listed as one of the seven key areas of learning (Remington and Legge, 2017), with the aim of its inclusion being to develop pupils' personal and social skills, as well as a positive attitude towards their environment. The country's early childhood curriculum, Te Whāriki, established in 1996 and updated in 2017, also supports outdoor experiences. Blaiklock (2010) suggests that Te Whāriki encourages learning through peer and adult collaboration, observation and individual exploration, focusing around four principles and five strands. Each setting interprets and considers these principles and strands in order to 'weave a curriculum Whāriki that is specifically designed for their children' (New Zealand Ministry of Education n.d.), suggesting that there is no standardised approach. However, the Ministry of Education (2017) does acknowledge that, as part of the Exploration strand, children should be provided with access to natural and outdoor environments.

Similar to the English National Curriculum, children in primary education are also required to understand the importance of place (Beames, et al, 2012) and how people interact with it, considering both physical and human landscapes (New Zealand Ministry of Education n.d.). However, also as per England, outdoor provision in New Zealand is not standardised and so, there is a discrepancy of experience across the country (Cosgriff, 2016 and Remington and Legge, 2017). Some providers focus on nature education and others on adventure activities, such as abseiling and kayaking - although all children will experience outdoor learning, this will be very different between schools. Cosgriff (2016) suggests that outdoor learning is dominated by sports and fitness, focusing on adventure and social skills and that, in order to promote environmental awareness, more attention needs to be directed towards place-based

studies, allowing pupils to know and care more about their own locality and its environment. In addition to this, as provision is not standardised, the introduction of assessment using levels in maths and English has led to a greater focus on these subjects, and a narrowing of the curriculum, which has impacted on outdoor learning provision (Cosgriff, 2016), a situation reminiscent of England. Remington and Legge (2017) suggest that this could be addressed through further use of cross-curricular learning, thereby retaining focus on maths and English, but allowing this to be taught through other opportunities too.

4.3 Recognised outdoor learning programmes currently being used in England

When considering the provision of outdoor learning for children in England, it is important to remember that there is no recommended approach being supported or promoted by Governmental policy. As stated in the chapter on policy analysis (see Chapter 3), the current National Curriculum (2013) does promote outdoor learning, but this (similar to international provision discussed in sections 4.2.5 to 4.2.54) is not standardised across the country. Therefore, consideration of the number of environmental organisations and initiatives supporting children's engagement with the outdoors in England should be acknowledged in order to appreciate how outdoor learning is embedded within the curriculum. It should also be acknowledged, however, that the current organisations promoting outdoor learning in England (with the exception of Countryside Classroom) are run with elements of buying into a service, or accreditation, and so may have bias or monetary aims when advising schools. Of the environmental organisations and initiatives currently in operation, Forest School, in particular is well researched (Knight, 2016; Becker, et al, 2017), with studies highlighting the benefit and drawbacks of this approach (see section 4.2.3). However,

as MacQuarrie (2018) points out, many studies into the approach do not consider subsequent learning or retention of knowledge or skills once a Forest School sequence of sessions has been completed, and so its full impact is not evidenced.

Other initiatives and organisations are less well known and researched, for example, BBC's Breathing Places, which ran from 2005 to 2010 and claims to have engaged 'hundreds of thousands of schoolchildren and adults' who 'transformed countless areas of and into places for nature' (BBC n.d.). No research was conducted on the success of this approach and it is unclear how effective it was. Other organisations, such as the Growing Schools Initiative, now known as Countryside Classroom (focused on children understanding the link between their food and the land) and the Eco-Schools project (aiming to encourage schools to develop environmentally aware practice through child-led approaches) are still running and showing successful initiatives on their websites, however, again, there is no academic research into the impact of these.

The Green Future: Our 25 Year Plan to Improve the Environment document (DEFRA, 2018) established the Nature Friendly Schools Programme, which aimed to support schools in developing school grounds to facilitate outdoor learning. The programme, initially set to run for four years and support over 100,000 children, had funding guaranteed until 2022, by which time, it had supported 184 schools and 46,000 children (Nature Friendly Schools n.d.). Though no research has been conducted on the Nature Friendly Schools programme, individual schools noted their own successes, commenting on positive experiences for children's well-being and mental health. One school commented on the support for children with SEND who benefited from the practical nature of the activities, whilst others mentioned the support of the

programme for what they refer to as ‘vulnerable children’s’ well-being, suggesting, for example, that the programme supports ‘self-esteem, confidence and engagement with their peers and learning’ (Nature Friendly Schools n.d.).

As Harris (2017) states, many outdoor educators have only gained experience of the Forest School approach, as a co-ordinated national (and international) programme, with other opportunities being more ad-hoc and school-specific. Due to this, there may be a bias (by school staff and researchers) towards Forest School, because of the familiarity of the approach.

In order to consider the use of outdoor learning, and to widen the scope outside of that of the use of Forest School, a series of search parameters were used. This helped to ensure that a full range of approaches were considered and different research, aligning to the research questions could be gathered. This is considered in the next section.

4.4 Overview of research to date

Outdoor learning is suggested by some researchers as being a key factor in supporting well-being, impacting on positive experiences for children,

> *‘outdoor education experiences can facilitate positive development of self-esteem, peer to peer socialisation as well as teacher–student relationships and a positive attitude towards school’* (Stavrianos, 2016: 416).

The impact on mental health has also been noted, with Grigg and Lewis (2016) and Waite (2017) stating that outdoor learning can combat a number of challenges facing primary schools including supporting pupils in developing positive mental health.

In addition, some studies suggest that it is often those who are considered the 'hardest to reach' in class, those who struggle with a more formal approach to lessons, who are impacted more by outdoor learning, achieving more (academically and/or socially) in the informal learning environment of the outdoors (Knight, 2016; Constable, 2017).

Although there is a growing body of research into outdoor learning as a whole, there is a lack of attention from researchers to date into the use of outdoor learning for children with SEND. Although there is no clear and apparent reason for this, Passy (2014) suggests that there is little research into outdoor learning that takes place on school sites. Rather, there is more consideration of outdoor learning in locations away from schools that includes residential field trips. Martin, et al (2015) note that outdoor learning has been limited in its use for children with significant disabilities. If children with SEND are more likely, therefore, to experience outdoor learning on, or close to, the school site, it is possible that this may have impacted on the amount of research that considers children with SEND in outdoor learning.

Dennis, et al (2014: 36) acknowledged that there was a need for further research into outdoor learning for all children, considering its influence on 'positive learning behavioural, health and developmental outcomes.'

Outdoor classrooms and opportunities have been highlighted as a valuable resource (Quibell, et al, 2017 – see below for further details of this study) and acknowledged as such through Government policy (including the National Curriculum) and national schemes (see policy information in Chapter 3).

For example, in their research, Becker, et al, (2017) considered thirteen studies into outdoor learning (selected according to search criteria from a field of 193 studies) from different countries, identifying how curriculum-based outdoor learning programmes impacted on social skills, academic progress and physical activity. The authors noted that this was a small sample, but acknowledged that this was because 'outdoor education research is quite a young field' (Becker, et al, 2017: 14). The studies used a variety of approaches including interviews and questionnaires and collated data from participants including children, teachers and parents. All found that the use of outdoor learning provided positive results according to the research parameter, whether that focus was on academic, physical or social development. Studies commented on self-esteem and social pride, as well as academic progress. The thirteen studies chosen for analysis were detailed according to (with regards to research participants) pupil age, gender, sample size and type of school, but none of the research discussed SEND as a consideration or commented on the impact of the outdoor learning programme for children with SEND. There is no explanation for why SEND, as a learning characteristic, was excluded from this research.

However, outdoor learning is not simply regarded as an approach which is beneficial to children's life experiences and engagement with learning. It has also been cited as a positive opportunity with regards to academic benefits. The potential of the outdoors in supporting children's academic progress, has been commented on through research by Thorburn and Allison (2015: 104),

> *'the potential for contextualising knowledge when learning outdoors, through, for example, making connections between the environmental and the personal and social, as well as with more generic literacy, numeracy and health and well-being aspirations, was frequently reported.'*

Quibell, et al's (2017) research, considered the effectiveness of an outdoor learning programme for 233 children aged 8-11 across 9 schools in England. The wilderness programme was aimed to improve children's outcomes in English and maths. Their research included a baseline assessment for children before the intervention was started. Classes were divided into two groups, one to receive the wilderness programme and one to maintain in-classroom lessons. The groups were considerate of the ratio of male and female pupils, with evenly mixed groups being established. The study also considered the percentage of children eligible for Free School Meals across the study. However, the research does not comment on the progress or achievements of any children with SEND, or indicate that any children with SEND were included, or deliberately excluded from the study. The research did indicate that children who participated in the wilderness programme, showed an increased attainment in core curriculum areas, compared with their baseline assessment.

4.4.1 Drawbacks to outdoor learning

When considering how outdoor learning can be embedded in primary education, barriers and drawbacks to the approach in general must be considered to put provision in context and to support understanding of different approaches.

Some examples of drawbacks to outdoor learning for children with SEND have been raised through studies.

When considering the experiences of outdoor learning for children with SEND, it should be remembered that some children may have concerns and anxieties about investigating the area outside of their classroom, due to SEND and mental health issues (James, 2018; Li, et al, 2018). The unknown and unpredictable nature of the outdoors can cause some children to feel anxious about the outdoor environment,

rather than seeing it as an engaging place to learn (Mathison, et al, 2007; Harris, 2017). Other children may feel more attachment to their classroom and its structure and not wish to explore a more open area (Mathison, et al, 2007; Harris, 2017). However, very little research has been conducted into the benefits of outdoor learning for these children or, indeed, how outdoor learning can be developed to support these children if it is currently failing to do so, and it is this gap in knowledge, that can support practice, that this study is intended to address.

This lack of evidence is particularly notable when considering children educated in special schools. This was identified as early as 1997 when Farnham and Mutrie (1997: 31) commented on 'very little research on its (outdoor learning's) outcome for children with special needs.' In their study, nineteen secondary school-aged pupils (aged 13 to 17) attending a special school were asked via a questionnaire about their thoughts on outdoor activities. This was conducted on days when the children were taking part in adventure activities, such as gorge walking and mountain biking. The research aimed to consider the impact of the activities on pupils' social cohesion as well as their own self-perception of their performance. Whilst the group did show progress in using social skills, it should be noted that, 'the results of the present study are similar to studies carried out with a variety of non-special needs groups' (Farnham and Mutrie,1997: 36).

It would be interesting to further consider this comparison, but as Farnham and Mutrie (1997) stated, there was, at the time, a need for further study into outdoor learning for children with SEND. However, this lack of research for children with SEND was still a concern twenty years on when similar issues were raised by Garcia-Carrión, et al in 2018. In their study, they note that, whilst inclusion and the achievement of children with SEND in mainstream education (in general) is being considered in studies,

children educated in special schools are underrepresented in research. Whilst not considering outdoor learning itself, their research into the use of interactive environments to support children educated in a special school highlighted that children's behaviour and social skills improved as they worked together in a setting that encouraged peer collaboration and was outside of their usual class space.

Further examples into outdoor learning were still underrepresenting children with SEND in mainstream education in the late 2010s. For example, Quibell, et al (2017) and Sivarajah, et al (2018) considered the impact of green spaces on academic achievement. These studies focused on socio-economic status, race and ethnicity, gender and student: teacher ratio, but neither study considered the impact of SEND on progress, or the impact of green spaces on the achievement of children with SEND within their discussions.

Sivarajah, et al's (2018) research, considered the academic achievement in 387 elementary schools in Toronto, comparing attainment in reading, writing and maths to the percentage of tree cover on the school site. Results showed that those with a higher percentage of tree cover (in this study, tree cover referred to the percentage of school land covered by tree canopy) on site supported the initial hypothesis that 'tree cover has a positive effect on children's academic performance' (Sivarajah, et al, 2018: 7).

The study did acknowledge that socio-economic factors, as well as tree cover, were integral to the end result. The researchers also highlighted the link between their study and Attention Restoration Theory, suggesting that more positive results are seen in areas with vegetation. Despite the discussion of the link with Attention Restoration Theory (see section 5.3 for further information on Attention Restoration Theory) and

how this supports children's concentration, and the acknowledged link between green space and lowered symptoms shown in children with Attention Deficit Disorder (ADD), no further discussion of SEND or results for children with ADD was included in the study.

4.4.11 Barriers to outdoor learning

Recent studies into outdoor learning in primary schools is largely focused on the impact that it has on children's well-being and progress.

The research obtained from using the key search descriptors listed acknowledges that, in general, outdoor experiences for children (such as visits to local parks with family, playing outside with friends) have diminished over time (noted through studies in the United Kingdom, Australia, Europe and North America) and that this has been evident since the start of the twenty-first century due to increased indoor entertainment (including interactive digital devices and social media), loss of community play-spaces and safety considerations (Malone and Tranter, 2003; Louv, 2005; Waller, 2007; O'Brien, 2009; Elliott, 2015; Grigg and Lewis, 2016; Harris, 2017; Lambert et al, 2019). Indeed, it is suggested that the school grounds are some of the few outdoor spaces that children are still able to access (Rickinson, et al, 2004).

Despite this promotion of schools as the provider of outdoor experiences, at the beginning of the twenty-first century, it was acknowledged that outdoor learning in school was also diminished. This decline was attributed to a number of factors, including, 'health and safety concerns; inadequate time, resources and support; teachers' lack of confidence; and changing education priorities' (Moffett, 2009: 277; also, Nundy, et al, 2008). Following the publication of the Learning Outside the Classroom manifesto in 2006 outdoor learning has been under the spotlight to a

greater extent, with the aim of addressing the decline in provision, however, some of the barriers still exist.

Beames, et al (2012) suggest that modern society teaches children to avoid nature through promoting more attractive indoor opportunities, such as computers, and through instilling a fear of the outdoors. Indeed, Grigg and Lewis (2016) suggest that the average amount of time a child spends outside today is one hour, compared to their grandparents' generation, who would average three hours outside every day; a situation referred to as 'Nature Deficit Disorder' by Louv (2005). It is suggested that this might relate to concerns about children's safety, as well as an increasing range of indoor activities (Elliott, 2015; Marchant, et al, 2019, Parent et al, 2020). Indeed, Lambert et al (2019) suggest that children's outdoor play time is limited due to parental concerns about increased traffic and the threat of crime. Whilst Louv himself cannot identify a medical condition through his work, as his work is not based on empirical data collection. Although the use of the word 'disorder' can be contentious, it is an interesting comment on the lived experiences of modern childhood, supported by wider studies (Elliott, 2015; Grigg and Lewis, 2016; Marchant, et al, 2019; Lambert et al, 2019; Parent et al, 2020) to suggest that children spend less time outside than their parents and grandparents.

Because of this, researchers have argued the case for schools to provide outdoor experiences for children (Beames, et al, 2012; Grigg and Lewis, 2015). To make use of this environment, Warden (2015: 9) suggests that, in school, 'adults need to harness the special nature of the outside' and develop more outdoor learning opportunities.

Whilst research notes the benefits that outdoor learning brings – most texts reported on positive consequences of outdoor opportunities (see sections 4.4.2 to 4.4.22), others identified barriers. Whilst Edwards-Jones, et al (2018: 50) comment that evidence suggests that 'barriers to outdoor learning were local and specific,' suggesting that there are no widespread and general issues, some commonalities are identified through other studies. The ease of access to green spaces was highlighted as a concern (Ernst, 2013; Becker, et al, 2017; Jose, et al, 2017), as well as lack of teacher engagement and confidence (Waite, 2017; Grigg and Lewis, 2016). Concerns about inclement weather (Maynard and Waters, 2007; Elliott, 2015), health and safety and management of risk (Knight, 2016; Harris, 2017; Jose, et al, 2017; Glackin, 2018) have also been raised. These are discussed in the following sections.

4.4.11a Access barriers

One consideration for any outdoor learning activity is location. Whilst this can be seen as a barrier, if the school feels they do not have a suitable site for outdoor activities, Waite (2007: 339) explains that 'more remote locations are not necessary to create more memorable outdoor experiences.' Indeed, as has been commented in studies such as Moffett (2009) and Grigg and Lewis (2016: 20), local sites, including the school grounds, are suitable areas for outdoor learning, 'within walking distance of every school there are resources, landmarks and other features that can potentially inspire children.' Dolan (2016: 51) agrees, suggesting that, 'taking children outside does not have to involve transport and additional cost.'

Despite this, concerns have been raised over costs and travel to an appropriate location, which some studies suggest can limit the provision and the way outdoor learning can be embedded into the curriculum (Quibell, et al, 2017). Becker, et al

(2017) agree, suggesting that barriers to outdoor learning include the transportation cost and time.

However, when considering the outdoor experiences of children with SEND, particularly those with elements of attachment disorder or ASD, it has been suggested that it may be a positive choice to use a familiar environment (James, 2018). As children with conditions such as ASD can feel anxious in unfamiliar situations, the use of a known space can work to support these children (James, 2018). School grounds or a local environment can alleviate some feelings of anxiety of the unknown or unfamiliar. Moffett (2000) and Rickinson, et al (2004) suggest that the use of the school grounds can help develop a sense of ownership for the children, helping to improve behaviour outdoors. The use of a familiar outside location can also be beneficial in managing transitions between sessions, using a designated, known place to start and end activities and support a practised routine (Waite, 2015). Martin, et al (2015) too, consider the benefit of activities with a sustained routine approach, listing outdoor learning as an example.

It should be remembered, too, however, that not all sites, whatever their distance from the school site, will be appropriate locations for outdoor learning. Locations should be chosen carefully as they add to the learning experience. A poorly chosen site may have the effect of disengaging children or alienating them from peers and activities if the access is poor (Grigg and Lewis, 2016). James (2018) queries the suitability of some sites, recommending that locations are checked in advance, particularly for children who may have physical mobility needs so that outdoor experiences for

children with SEND can be considered. According to Constable (2017: 28), the ideal site for outdoor learning is fairly unobtainable for most schools as this would require,

> *'a large wooded area, tucked away at the end of a secluded school site. There would be a variety of trees, wild flowers and bushes, a hedge complete with nesting birds and maybe a pond with plant and wildlife.'*

However, this very much allies with the idea of outdoor learning as a Forest School, nature-based activity. Whilst this described environment would provide an excellent base for, for example, habitat studies, it should be remembered that, whilst this study has focused on natural environments, outdoor learning can consider interaction with all elements of the environment, including the built up local landscape and tarmacked areas of the playground.

4.4.11b Teacher engagement

With so much emphasis put on learning inside the classroom, focusing on academic achievement and reliant on traditional desk-based learning (Beames, et al, 2012, Harris and Bilton, 2019), it is often outside of the teacher's comfort zone to plan lessons and activities that take place in different settings. This makes it challenging for teachers to fully embed outdoor learning in the curriculum, and to adapt learning for the different needs of children with SEND. Knight (2011) and Constable (2017) state that the main barrier to outdoor learning is often the teacher, who is reluctant to dedicate curriculum time to outdoor activities and who may not wish to be outside themselves. This concern was echoed by Glackin (2018: 66), who commented on teachers 'feeling uncomfortable about teaching outside and were concerned about managing student learning.' Barlow and Whitehouse (2019: 99) agree, suggesting that 'teacher confidence in teaching outdoors is certainly one key reason why it is more

challenging' and they go on to suggest that this may be linked to a lack of outdoor experience for the teachers themselves. Indeed, teachers may have a lack of outdoor experience, that impacts on their confidence in leading outdoor learning (Grigg and Lewis, 2016; Barlow and Whitehouse, 2019).

The enthusiasm and engagement of the teacher cannot be underestimated in the success of outdoor learning sessions. Robertson (2014) acknowledges this, suggesting that teachers lacking confidence in teaching outside should start by teaching a subject they are confident in outdoors, before moving to other areas of the curriculum. As Grigg and Lewis (2016: 30) note, 'children pick up on adults who are inattentive or lukewarm in their approach, which is likely to diminish the quality of the learning experience.' Constable (2017) agrees, suggesting that not all teachers will enjoy being outdoors, however, lessons outside should still be delivered with as much enthusiasm as those inside.

The use of a familiar environment, such as the school grounds, can also support teacher confidence in developing learning outdoors (Rickinson, et al, 2004) as staff will be able to plan ahead and consider different scenarios. Nundy, et al (2008) and Moffett (2009) agree, suggesting that it is possible to develop teacher confidence in outdoor learning through support and training, going on to comment that confidence in their own abilities will support teacher performance.

Maynard and Waters (2007) suggest that access to outdoor spaces is not sufficient to support progress, equally important is how this space is managed and used by the adults. Becker, et al (2017) too, comment on the teacher's approach, suggesting that

opportunities are linked to the teacher's passion, the more enthusiastic the teacher, the more likely they are to develop engaging activities in outdoor learning.

4.4.11c Pupil behaviour

OFSTED (2008) and Waite (2015: 119), suggest that behavioural concerns impact on teachers' enthusiasm for outdoor learning, suggesting that 'difficulties experienced inside the classroom with behaviour management will be magnified in the open spaces outside it.' However, OFSTED's (2008) report also recognised that outdoor learning can help support behaviour management and engage children, contrary to teacher concerns. Maposah-Kandemiri, et al (2009) and Dennis, et al (2014: 42) agree, suggesting that, when spending time in outdoor settings, children are 'more relaxed, focused, engaged, creative, nurturing and happy compared to children in indoor classrooms…', a proposal underpinned by Attention Restoration Theory. Chawla, et al (2014) too, comment that children with noted poor behaviour benefit from time spent outside of the classroom, possibly as children are not constrained by walls and noise limitations outside and confrontations with peers are more easily avoided in a larger, open space (also: Maynard and Waters, 2007; Dennis, et al, 2014; Li, et al, 2018). Bilton (2014) suggests that the outdoor environment provides a sense of freedom that is not replicable indoors. James (2018) agrees, suggesting that, for example, for children with ASD, the outdoor environment is not constraining, allowing them the freedom to move, run, spin, as they wish. Moreno, et al (2018) state that a number of studies have linked improved behaviour with time spent in natural environments.

Ogier (2019: 148), also acknowledges behaviour as an issue, noting that children have less outdoor learning as they get older. This is noted, partly as a result of teachers' concerns about 'losing control outside of the classroom.' These concerns may be magnified if children's SEND impacts on unpredictable, or erratic behaviours, which teachers feel ill-equipped or unable to handle outside of the classroom (Martin, et al, 2015).

4.4.11d Weather concerns

The weather can affect how well outdoor learning is embedded into the curriculum. Maynard and Waters' (2007) research into the use of outdoor space by Early Years teachers raised the concerns of parents about outdoor learning in particular weathers. They note that schools were concerned about complaints stemming from children being outside in poor weather ('parents do not want their children outside if it is raining' (Maynard and Waters, 2007: 260)), and that provision and storage for wet-weather equipment and clothing is also listed as a problem (lack of storage space, likelihood of vandalism). Indeed, in their research, Maynard and Waters (2007) found that the participant teachers only took children outside during dry weather.

Poor weather is often used as a reason to cancel outdoor learning, with teachers reluctant to take their class outside in inclement conditions (Gould, 2012, Waite, 2017). However, Robertson (2014) suggests that the variation of all types of weather is important to fully appreciate the outdoor environment and that the best approach to take is to ensure that all participants (both children and adults) are dressed appropriately. Indeed, Gould (2012: 5) states that the 'changing and variable weather should be seen as an opportunity, not a barrier' and Beames, et al (2012) suggest

that, rather than a hindrance, the changing weather can help develop independence, if children are asked what equipment they need to be outdoors at different times and in different conditions. This is supported by Robertson (2014) who states that the annually repeated pattern of weather and seasons can be reassuring to children who may otherwise have unpredictable lives. Experiencing outdoor learning in a range of weather conditions can help children connect and engage with their environment (Knight, 2011). Robertson (2014) goes on to suggest that the contact with an outdoor environment in general, helps children to develop an affinity with nature that helps them empathise more closely with the natural world, an idea previously also suggested by Orr (1994) and Louv (2005). Dolan (2016) agrees, suggesting that outdoor learning is key to supporting children in developing an understanding of and interest in sustainability. It is recognised that outdoor learning should take place in all weather conditions (Waite, 2017, James, 2018).

However, it should be acknowledged that, in certain situations, weather can be an insurmountable barrier, for example, a woodland during high winds is not a safe location to carry out outdoor learning and so sessions may need to be rescheduled (Bilton, 2010; Robertson, 2014; James, 2018).

4.4.11e Health and safety concerns

One of the more commonly cited barriers to outdoor learning taking place is teacher reluctance due to health and safety concerns. Louv (2005) and O'Brien (2009) highlight that children are more likely to have reduced time in nature, partly due to parental concerns over their safety, and that entertainment inside (such as television and computer/console games) is more likely to dominate free time because of this. At

schools, too, health and safety issues dominate many activities, particularly more practical ones, where the risk of cuts and bruises (as a minimum) may be higher than desk-based learning. OFSTED (2008: 20) recognised that health and safety, as well as 'fears of litigation in the event of an accident or injury' were preventing engagement with outdoor learning. Gould (2012) agrees, suggesting that parents need to have clear information about outdoor lessons (including how this can support progress and what achievements their children have) in order to alleviate anxiety about their children spending time outside.

The counter-argument to the risk presented by outdoor learning is that the opportunities provided by experiences in natural environments support children's development, understanding of risk and independence. Maynard and Waters (2007: 257) state that the more environmentally managed school playground offers limited experiences, and that children should also be exposed to outdoor learning where children's confidence and independence is linked to their 'physical risk-taking in the outdoor environment.' If children are not exposed to, for example, stinging nettles, and taught how to deal with these, how will they manage in their future when they are faced with more serious risks (Harris, 2017 and Beames, et al, 2012)? Knight (2011: 19), too, suggests that exposure to outdoor environments enables children to 'gain respect and appreciation for the affordances various environments offer.' Harris (2017) and Barlow and Whitehouse (2019) agree, suggesting that the more children are involved in outdoor learning and exposed to these environments, the more they are aware of risks and how to stay safe. This seems likely to be particularly relevant for many children with SEND, who may have difficulty in aligning theoretical risks and

environments to their real world – by providing real-life experience in a safe space, children will be able to relate the theoretical to the practical in a clearer way.

4.4.2 The benefits and advantages of outdoor learning

Despite the negative aspects outlined in the previous sections, the benefits and advantages of outdoor learning that are also evidenced through research that presents a compelling argument that outweigh these drawbacks. Indeed, Charles (2009) suggested that a lack of exposure to outdoor environments and learning were linked to health problems including obesity and Attention Deficit Hyperactive Disorder (ADHD); lower academic achievement, linked to lower problem-solving and creative capabilities and concerns over well-being, including lower self-esteem and self-discipline. These benefits are discussed below.

4.4.21 Outdoor learning and well-being

For the purpose of this study, well-being is referred to in a broad sense. As defined by Barton et al (2016: 4) it is a 'positive physical, social and mental state; it is not just the absence of pain, discomfort and incapacity. It requires that basic needs are met, that individuals have a sense of purpose, that they feel able to achieve important personal goals and participate in society.' Studies have shown that natural outdoor environments 'produce positive physiological and psychological responses in humans, including reduced stress and a general feeling of well-being' (White and Stoecklin, 1998: 2). This idea supports that of Attention Restoration Theory (Kaplan and Kaplan, 1989), the proposal that natural environments provide a restorative environment for many people. Attention Restoration Theory proposes that busy and/or urban environments can be an overwhelming sensory experience, which can lead to 'mental fatigue …and decreases the ability to concentrate' (Sivarajah, et al, 2018: 9). The use

of a different environment, particularly an outdoor, natural environment, can provide an opportunity for automatic attention to be restored and recovered by providing foci, which are effortless to perceive, such as vegetation and fresh air (see section 5.3 for further information). From this perspective Attention Restoration Theory argues that natural environments can aid concentration and relaxation and act as a counter-balance to busy, sensory-overwhelming man-made environments that many (including children in an indoor classroom) spend the majority of their time in (Sivarajah, et al, 2018). The positive influences of natural environments are evidenced in the numerous health benefits that learning outdoors can bring.

Zandvliet (2012); Beyer, et al (2015); Harris (2017); Pickering (2017); Li, et al (2018), Bingley (2013); Joye and Dewitte (2018) and Parent et al (2020) for example, focus on the positive impacts that outdoor learning can have on creativity, self-esteem, energy, engagement, social skills and attainment, whilst also acknowledging that outdoor learning supports decreased anxiety, tension and depression. ‘Experiences outside not only improve academic performance, but also physical activity levels, social interactions and emotional well-being’ (Merewether, 2015: 99). Li, et al (2018: 77) agree, stating that their research, interviewing parents of twenty-two children with ASD to investigate whether exposure to nature resulted in benefits to the children, shows that the children ‘smiled and laughed more when they were in nature.’ However, this research, based in China, was related to home-life and did not consider the impact of any school experiences.

When considering research into outdoor learning for children with SEND, studies (albeit limited in number) highlight that ‘Even students struggling in school have been shown to become more engaged when environmental education programmes are

introduced in the curriculum' (Zandvliet, 2012: 127), thus highlighting that children with SEND can benefit from contact with nature (Stavrianos, 2016). Barlow and Whitehouse (2019) too, note the positive impact on underachieving boys, suggesting that they are more engaged during outdoor learning sessions. Marchant, et al (2019: 2) agree, suggesting that the 'positive impact of immersion in nature on well-being, creativity, brain function and mood, highlight(s) the potential of the outdoors in engaging children with learning.'

Becker, et al (2017) however, disagreed, acknowledging that outdoor learning supported development in social relationships and teamwork but overall, suggesting that the positive findings of other researchers was limited, commenting that their research suggested outdoor learning had no significant impact on mental health. They did concede though, that this may be due to a lack of research in this area, thus highlighting the need for further research.

4.4.22 Outdoor learning and academic progress

Despite concerns raised about the impact of outdoor learning on academic achievement, research has evidenced the positive impact on children's progress.

OFSTED (2008) had acknowledged concerns into the impact of outdoor learning on academic achievement. It stated that, as part of a report into outdoor learning, a survey revealed that teachers, governors and parents had 'expressed concern that time spent outside the classroom might reduce academic attainment' (OFSTED, 2008: 21). Apprehension about how the children will learn without the support of books and technology has been raised, for example, Constable (2017) suggests that poor planning to align outdoor and indoor curriculum objectives and lessons is the main reason for inadequate or abandoned outdoor learning sessions. Harris and Bilton

(2019: 70), too, suggest that there is less ‘compelling evidence about the academic benefits of outdoor learning’, suggesting that teachers may find it difficult to argue the case for providing outdoor experiences. This helps to highlight the emphasis placed by schools on academic success, and the expectation that they are to provide justification for all work undertaken by children. It also raises reservations about the curriculum time that outdoor learning takes away from the more traditional approaches to the teaching of the core subjects, on which the school will be assessed against national expectations.

However, the concerns over academic achievement have been counteracted. Zandvliet (2012: 127), for example, in his study concerning students’ perceptions of the learning environment, highlights that ‘students’ perception of empowerment during these programs may also result in positive behaviours and higher academic achievement.’ Whilst not commenting on children with SEND per se, Zandvliet’s (2012: 127) research did consider the impact of the environment on ‘students struggling in school.’ He considers that studying the learning environment can support students in reflecting on their own understanding of place. When considering the opinions of the 514 participants (children in Grades 9 and 10 – Canadian school system), children considered idealised environments and their actual learning environments (indoor or outdoor), rating their actual environment as less positive than their ideal environment. Jose, Patrick and Moseley (2017: 269), too, acknowledge that pupils learn as much or more from outdoor science lessons and that outdoor experiences, ‘have been shown to improve student learning in a variety of subjects.’ Their study, of seventy 15-18 year olds, included 27% of participants from an economically disadvantaged background, however, no comment was made about the inclusion of any students with SEND. The

impact of the field trips being considered was measured by a comparison of work produced before and after outdoor learning took place.

Beames, Higgins and Nicol (2012: 52), stress the impact of the outdoors as being a 'powerful stimuli' which engages and intrigues learners. Waite (2007) agrees, commenting that outdoor spaces are effective learning environments; an idea supported by Quibell, et al (2017: 575) who state that 'the outdoor environment has unique characteristics and is richly resourced in materials that can be used as tools for learning. It is multi-sensory, enabling learning to take place through engagement of the senses.' Scott, et al (2012) agree, reporting that, in their study on the use of fieldwork to enhance writing, the use of fieldwork was demonstrated to be significant in developing the children's progress and performance in writing. Whilst Scott et al's (2012) participant class did include two children with relatively severe learning difficulties who completed the tasks, their work was not included in the research analysis. Worryingly, no reason is provided for this exclusion of data which suggests a certain ableism in the research design. Indeed, Branco et al (2019: 815) suggests that, 'although disabled people are one of the largest social minorities…they have received much less societal and academic attention than other disadvantaged groups'.

Rickinson, et al (2004), too, acknowledge that outdoor learning can improve higher order learning. Far from being a hindrance to academic achievement, the use of outdoor learning was proven by researchers to improve progress and performance (OFSTED, 2008; Tallis, et al, 2018). Becker, et al (2017) reported that, in research with an intervention group of year five pupils experiencing outdoor learning, 98% of parents commented that their children progressed further in maths, science and writing than they would have done without the outdoor experiences. However, there were no

numbers given for how many pupils had taken part in this intervention group so results may not be significant. It should also be noted that these pupils' abilities were not recorded, there is no evidence as to how the children were selected for the group or whether any had SEND. Moffett (2009) and Dolan (2016) highlight the importance of outdoor learning for future application of skills, noting that if children only learn in the classroom, they will not have the understanding to put their learning into a real-world context. Furthermore, Moffett (2009: 279) suggests that learning can be situational, whereby 'children will have problems applying their knowledge outside school unless they have experience of engaging with real-world problems.'

However, it is noted that, for it to be successful, outdoor learning should ideally be tied in to the learning that is taking place as part of the school curriculum, rather than an incidental, one off activity. As the statutory requirements of the EYFS (DfE, 2021b) identify a need for children to have daily access to an outdoor environment as part of their school provision, the question is raised as to whether children's transition into Key Stages 1 and 2 presents possibilities for outdoor learning such as that stipulated in the EYFS. It has been argued that, in order for outdoor learning to be effective, links to the curriculum need to be embedded. Indeed, the integration of learning in practical, real-world scenarios, combined with the theoretical and desk-based learning taking place in the classroom was found by researchers to be the most effective approach for developing progress and academic achievement (OFSTED, 2008; O'Brien, 2009). Beames, et al (2012: 20) suggest that, 'outdoor learning must be a benefit rather than a distraction or simply 'fun'.' From this perspective, outdoor leaning activities need to have a purpose, tied in to children's learning and progress, in order to cement their place in the timetable. Becker, et al (2017) reference examples of two year-long

studies of gardening projects. These were found to support children's development in curriculum learning, partly due to the real-world learning of English, maths and science, which were put into a real-life context. However, as Barlow and Whitehouse (2019) note, outdoor experiences are often tied to adventure skills in Key Stage 2, and science in Key Stage 1, rather than being linked to subjects across the curriculum.

4.4.3 Research into outdoor learning and children with SEND

Despite using a range of search terms (see Appendix B), very little research that considers the benefits of outdoor learning for children with SEND has been found. Indeed, as early as 2004, Rickinson, et al's review into research from the 1990s concluded that 'the number of studies that address the experience of particular groups or students with specific needs is negligible' (Rickinson, et al, 2004: 5). Today, still, research focus is based around either outdoor learning in mainstream settings for children without SEND or around education for children with SEND in general. There is still limited research into outdoor learning for children with SEND.

In their research into the use of fieldwork to support children's development in writing, Scott, et al (2012: 549) acknowledge that, in the year 5 class they worked with, there were two children with 'relatively severe learning difficulties' who took part in the activities and completed the writing tasks, but whose work is not considered within the research. No explanation is given for their exclusion. Similarly, Passy's (2014) research into the uptake of the Royal Horticultural Society's 2009 Campaign for School Gardening, reported that initial findings suggested that special schools had adopted the scheme, with many achieving the highest award from the Society, however, no further discussion of special education and the impact of gardening on special schools

is included. Passy does consider the benefits of gardening in general for children with SEND, noting that children who may struggle in the classroom (with both behaviour and social interaction) benefited from the 'space that was calm, where pupils could find some respite from the hurly-burly of the classroom' (Passy, 2014: 29), aligning the use of the garden with Attention Restoration Theory (see section 5.3 for more information).

Turtle et al (2015: 4) discussed the benefits of Forest School for children 'across the learning spectrum' but without any direct discussion of children with SEND. Indeed, some (for example, Elberheri et al, 2018) suggested that instead of using the outdoors as an engaging environment to learn in, children with SEND should instead be seated away from windows so as to avoid the distraction of the outside.

Simmons, et al's (2015) study into well-being asked a group of teachers and children from 18 schools how to improve their school. The study asked children to consider, through drawing and discussion with the researchers, 'what an ideal well-being school might look like.' Whilst there was no direction towards areas of focus, the environment was identified as one of four main themes (relationships, pedagogy and pupil voice being the other three) that children felt impacted on well-being. Responses gathered proposed from pupils in years 5 and 6 included requests to be able to undertake outdoor learning, as well as having an alternative learning space rather than a classroom. Pupils in years 1 and 2, too, included drawings of outdoor spaces as being important to well-being and having fun at school. However, whilst it is interesting to acknowledge the ideal school as seen from a child's perspective, there was no further

discussion of the impact that these idealised changes would have, or discussion of pupils with SEND in the study.

Tallis, et al's (2018: 2) research, as previously discussed considered whether green space (at varying distances from the school) impacted on children's academic attainment. The study, which looked into 495 schools, 'considered all public, private, magnet and charter schools, excluding special education and alternative schools.' No explanation or further discussion is given for the exclusion of special schools. The research considered socio-economic status, race and ethnicity, gender and student: teacher ratio alongside the impact of green spaces on academic achievement, however, the impact on children with SEND, or the consideration of SEND as a factor affecting achievement, is not discussed.

As discussed in section 4.2.54, outdoor learning in New Zealand has been impacted by the introduction of levelled assessment in maths and English, which has led to a narrowing of the curriculum (Cosgriff, 2016). As the educational focus in England has similarly emphasised core subjects and measurable academic achievement, policy-makers have considered and adapted the curriculum in order to raise standards (Harris and Bilton, 2019). This could then impact on research priorities. In order to be considered relevant and current, more research is based around measurable, academic areas. As children with SEND's achievements may be less academically measurable than their peers, this may therefore be an overlooked area of research. The Engagement Model (Standards and Testing Agency, 2020) has been implemented from 2021 (replacing P Scales 1-4) as an assessment tool to support assessment of pupils who are working below the level of the National Curriculum. As

this is a statutory requirement, assessing the academic achievements of children not working at age related expectations, it may subsequently impact on research considering children with SEND and their academic progress. However, as this has recently been implemented, any impact remains to be seen.

Some research studies mention the effect or impact of outdoor learning for children with SEND, but this is largely an aside from the main focus of the study.

Parkinson and Johnson (2006), for example, considered the education of children with epilepsy on a whole-school basis, detailing all aspects of education for children with the condition. Their one acknowledgement of outdoor learning was linked towards physical education and adventure activities, suggesting that children with epilepsy needed to be considered in the planning of outdoor learning as 'often, exclusion rather than inclusion seems the easiest, cheapest and safest answer' (Parkinson and Johnson, 2006: 47). They do make suggestions for support for children with epilepsy, including using a buddy system with peers. However, no reference is made to fieldwork in their discussion, instead advice addresses support in outdoor PE and swimming lessons.

Other studies make reference to SEND when discussing outdoor learning, but do not fully develop this aspect of their study. For example, Chawla, et al (2014), considered the impact of outdoor experiences (play, lessons and a gardening project) on children's stress and resilience. Whilst their findings did include a comment from a parent suggesting that their dyslexic child was enjoying their time outside and meeting challenges set, no discussion followed, and there was no further mention of SEND or support for children with SEND.

Quibell, et al (2017) highlight the gap in attainment between children with SEND and those without. However, when considering what impact outdoor learning may have on children's achievement, they focus specifically on core subjects (English, maths and science) in their research and look at the attainment of similar groups of children (following a baseline test), making no reference to the inclusion of children with SEND.

Harris' (2017) research considered how learning is implemented through Forest School. The research briefly mentions the development of confidence in children who 'struggle in the classroom' whilst using outdoor space during Forest School sessions in the outdoor classroom (Harris, 2017: 279). However, again, no further discussion of SEND is included, and it is not discussed how many of the participating 72 children were identified as having SEND.

Moreno, et al (2018) proposed, in their research, to consider the influences of the images of nature, as opposed to actually experiencing the outdoor environment. The aim was to investigate whether an app showing images of natural environments supported reduced stress and provide a calming influence. In their study, over 2300 pupils acted as participants, statistically, this must include children with SEND, though no reference is made to this. The research does make reference to use of the app by children with 'greater initial challenges in academic performance and processes, such as attention' (Moreno, et al, 2018: 15) but does not clarify that this is related to children with SEND specifically. These children identified as having greater initial challenges were found to use the app more frequently than other children, suggesting that, if we take this to be linked to children with SEND, they choose to use the images of nature provided to help ease stress and tension. As purported by Attention Restoration Theory, this link to a more natural environment could support refocused attention, in

this study's case, to refocus on work completed inside the classroom, an idea further supported by Kuo (2013) and Li (2018: 297), who suggests that, for children with ADHD, nature is 'good for their mental and physical development.'

However, there has been some limited research into outdoor learning for children with SEND and this will be discussed below.

4.4.31 Outdoor learning for children with SEND

Hussein's (2013) research considered how special schools use outdoor space to support children with severe needs. The study considered how children in two special schools in England made use of their outdoor areas. Whilst the ages of the children were not included in the study, one school provided provision for children aged 2-11 who are diagnosed with profound learning difficulties and disabilities, most of whom have speech, language and communication difficulties. The second school provided education for pupils between 2 and 19 years, who were diagnosed with complex learning disabilities and additional communication needs. The children did not follow a school timetable and each had personalised timetables whereby they could access the outdoor area when they wished (though always accompanied by an adult carer). The use of sensory gardens was investigated, focusing on which areas of the garden were chosen by participants (children with SEND, accompanied by support workers). Whilst the study does consider how the garden was used by the children, it largely focused around practicalities of access, and did not consider the impact of time spent in the garden, or discuss how children with SEND in mainstream schools could also be supported. In contrast to the current study, it failed to address how being in the outdoor space was experienced by the children in relation to well-being or engagement. The study comments on the numbers of children accessing the outdoor

area and what those participants chose to do, but does not consider this number against the numbers of children in the school, so overall interaction with the outdoor area cannot be commented upon.

Li et al (2018) identify that few studies have looked at the impact of the natural environment for children with ASD. They acknowledge that supporting children with the condition has moved forwards recently, with the focus largely being adaptations to the indoor environment. Although some studies of informal, outdoor play have been undertaken, these do not focus on outdoor learning or use of the outdoor environment to develop skills and understanding. It is recognised, however, that exposure to nature can reduce symptoms commonly seen in children with ASD. Although one design feature mentioned is the benefits of natural light for children with ASD, this does not translate into research into learning in an outdoor environment. In their research into the benefits and barriers of exposure to nature for children with ASD, they suggest that the practical and cooperative nature of outdoor learning can be supportive in developing social and communication skills in pupils who traditionally struggle with these. ‘In everyday settings, children who play in green space show milder symptoms than those who play mostly in indoor and built outdoor settings’ (Li, et al, 2018: 72). However, in the research conducted, it should be noted that no children were spoken to or observed, and that all evidence gathered was through parental perspectives via interviews. Although it is important to gain the opinions of those who have an interest in the well-being of children, it is also key for the children themselves to be participants (see section 6.3.2 Participants: Children for further discussion).

Research recognises that outdoor experiences can support social interaction and the development of group skills (Cooley, et al, 2015; Collado and Staats, 2016; Nazir and Pedretii, 2016; Becker, et al, 2017), yet Webster and Blatchford (2015) noted that children with SEND statements (now Education, Health Care Plans) typically spend over a quarter of their time with teaching assistants, away from their class, teacher and peers, and were less likely than their peers to have any social interaction in class. Martin, et al (2015: 248) too, note that 'outdoor time…has rarely been used as a teaching setting for children with significant developmental disabilities.' If outdoor learning helps to develop the opportunity to build group work and interactive skills, and, as has been shown by Li, et al (2018), supports social interaction for children with ASD, it is important for children with SEND to have the opportunity to experience outdoor learning with group work activities.

Research into outdoor learning is being conducted, but is not considering the impact for children with SEND. Garcia-Carrión, et al (2018: 2) comment that the research being carried out is 'focused on mainstream schools' and that students with SEND 'tend to be underrepresented in the literature.' Collado and Staats (2016: 3) note that 'little attention has been paid to the influence of the physical environment on ADHD,0 and Li, et al (2018: 71) also acknowledge the lack of research into this area, 'few studies have explored how the physical environment affects the health and behavioural outcomes of children with ASD.'

4.5 Discussion and conclusion

The overall lack of literature on the key areas of outdoor learning has been identified in this chapter. As Becker et al (2017:17) notes, 'The number of identified studies on

regular compulsory school and curriculum based outdoor education programmes is relatively low.' The lack of research into outdoor learning for children with SEND is even more pronounced and the literature review has helped to highlight that this is an area of limited study that could be further developed especially for children with SEND and additional needs and particularly those educated in special schools, which are notably absent from research studies.

Becker, et al (2017: 14) identify the need for further research into outdoor learning, suggesting that, in this 'young field of research,' currently, much of the research is focused on adventure activities and residential trips. Many studies may acknowledge and comment on the positives (and drawbacks) in terms of whole class outdoor learning in mainstream schools, but very few studies focus on the experiences of those with SEND, both the consideration of learning and support for special schools, and the experiences of those with SEND in a mainstream setting. It is not a suggestion by researchers that it is challenging to include children with SEND and their experiences, but rather that the research conducted to date has largely simply not included these children. This exclusion is marginalising the experiences of children with SEND within outdoor learning. Areas of research claim to focus on children's experiences but a significant percentage of them are invisible within this area of study (791,850 children with SEND in state funded primary or special education – equating to 14.2% of children in a state funded primary (DfE, 2019)). This is an area that could be looked at in much more depth than has been achieved to date. Whilst there is no clear reasoning behind the limited research that has conducted to date for children with SEND in outdoor learning, there has been an acknowledgement of the exclusion of children's voices in general in research (Clough and Nutbrown, 2002; Scott and Morrison, 2007; Lansdown, 2009; Couch, et al, 2014; Stafford, 2017). The United Nations Convention on the Rights of the Child, (1989) stated, in Article 12, that every child has the right to

an opinion and to be able to express this freely. Lansdown (2009) acknowledges that this should incorporate expressing opinions in a number of ways, including non-verbal communication through, for example, play, body language or drawings. The inclusion of children's voices may be more challenging to achieve with children with SEND, due to communication and cognition conditions. Stafford (2017: 615) notes the challenges in gathering the voice of pupils with SEND, noting that, 'maximising the diverse ways in which children can express and narrate their experiences is critical when undertaking research with children with disabilities.' She suggests that children with SEND can communicate their voice through a number of different ways and that this should be considered by researchers (Stafford, 2017) (please see the glossary for a definition of Child/Pupil voice). Indeed, having spoken to staff members at the participating schools, it was agreed that children would not be interviewed or spoken to directly as part of this research (see section 6.3.2). Instead, in this research, pupil voice has been gathered through observing a typical, everyday lesson (i.e. one that does not include any unusual off-site elements or activities that are different to those usually seen as part of outdoor learning at the school. Please see the glossary for a full definition), allowing the children's everyday experiences to highlight their interests and achievements.

The following chapter focuses on the Underpinning Theoretical Frameworks used within the research. Attention Restoration Theory and Social Constructivism are considered in the context of outdoor learning for children with SEND.

Chapter 5 Underpinning Theoretical Frameworks

5.0 Introduction to theoretical frameworks

In consideration of the research questions based around the experiences of outdoor learning for children with SEND, it is important to focus on the links between outdoor learning and underpinning theoretical frameworks to allow the research to sit amongst connected and related studies (Wellington, et al, 2005). This will support the analysis and interpretation of the observation and interview data collected and allow for it to be understood through the lens of the chosen theoretical approaches.

Whilst Ecological Systems Theory and Activity Theory were initially considered as useful lenses through which to interpret the data, these were ultimately rejected in favour of Attention Restoration Theory with a Social Constructivist Approach, which was felt to be more aligned with the aims of the research. However Ecological Systems Theory and Activity Theory are discussed below as they both have aspects which were helpful in framing the current study and informing my approach to data analysis.

5.1 The considered theoretical approaches: Ecological Systems Theory and Activity Theory

Ecological Systems Theory was proposed as it considers children's development, explaining how the environment surrounding a child can impact upon their progress (Burns, et al, 2015). However, this approach was not selected as the environment considered as part of Ecological Systems Theory is multifaceted and includes social environmental impact, as well as naturalistic. On reflection it was felt that the consideration of the wider scope of 'environment' from this theoretical perspective

would detract from the aim of the research, which was to consider the impact of the outdoor environment in itself.

Activity Theory was also considered as it analyses the relationship between the subject (in this case, the child with SEND) and the object (in this case, the outdoor learning or activity). It considers the intended outcome (the Learning Objective of the activity) alongside any incidental learning and consequences (Hasan and Kazlauskas, 2014 and Gedera and Williams, 2016). Whilst this would have been an appropriate and relevant approach to use in some respects, ultimately, activity theory was not chosen as the selected theoretical approach as Attention Restoration Theory identified the environment itself as a key consideration, which aligned more closely to the aims of the research.

5.2 Social Constructivism

Social Constructivist viewpoints, those which identify that learning is a social construct, enabling children to learn through their interaction both with their peers and the environment itself (Vygotsky, 1962; Jose, et al, 2017 and Tiilikainen, et al, 2019), have been applied through research into outdoor learning (Knight, 2016 and Harris, 2017). Quibell, et al (2017); Becker, et al (2017) and Jose, et al (2017) agree, suggesting that the outdoor learning provides opportunities for cooperative learning, helping to develop both academic attainment and peer-to-peer relationships, both of which were considered during data collection (see section 6.5). This can impact on school experiences, notably for children with SEND, who may have conditions affecting academic achievement, as well as social relationships, for example, children diagnosed with ASD may experience difficulties making and maintaining social

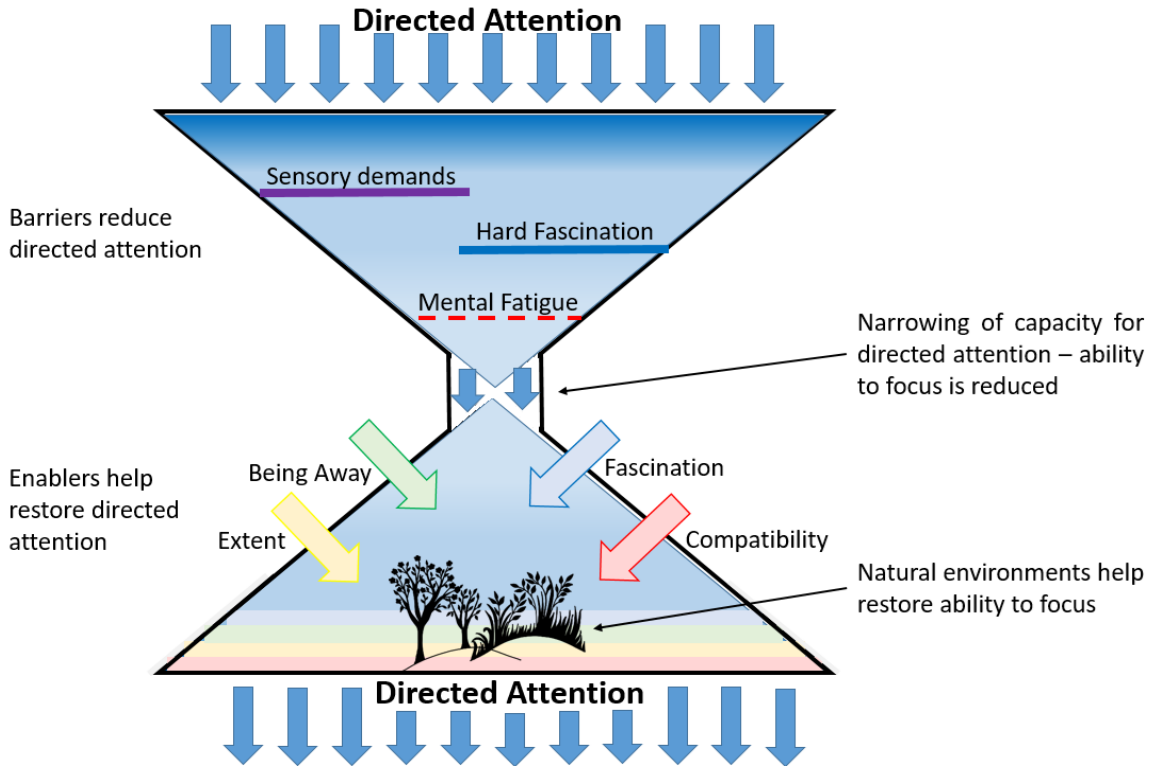
relationships (Wing, 2005). Whilst this may offer limited opportunities for children with SEND impacting on social development, or oral communication, Zandvliet (2012: 127) notes that outdoor learning can result in 'lower achieving students share(ing) more often and show(ing) greater leadership characteristics as compared with traditional learning environments.' Outdoor learning has also been identified as an approach that can support development of social and collaborative skills Zandvliet (2012).

The links to Social Constructivism, seeing education as a formal social experience whereby children are able to work with peers and socialise with those outside of their home (Cremin and Arthur, 2014 and Couper, 2015) also support Illeris' (2016) consideration of Vygotsky's Zone of Proximal Development (ZPD) during learning outdoors (Vygotsky, 1998). The ZPD was defined by Vygotsky as supporting children's progress, suggesting that 'aided by imitation, the child can always do more in the intellectual sphere than he is capable of doing independently…applying the word 'imitation' to all kinds of activity carried out… not independently, but with adults or another child' (Vygotsky, 1998: 201-202). Illeris (2016) focused on the impact of the ZPD, not necessarily on outdoor learning per se, but on the use of informal approaches used, the social aspects of learning being a key consideration. He suggests that, 'the environment, in connection with learning, is quite overwhelmingly social and societal in nature' (Illeris, 2016: 24). Kim (2014) and Lloyd, et al (2018) go on to suggest that the use of the ZPD allows people to develop more complex ways of thinking, responding to peers rather than just the environment that they are in. Vygotsky's theory suggested that it was this collaborative approach to learning that allowed higher order learning (Kim, 2014).

As a former class-teacher, my own aims were for my children to learn from both me and each other, small groups focused on tasks working and learning together, developing both academic and social skills. I saw potential in my students and was supportive and promoting of their abilities through a range of opportunities. This is supported by Lloyd, et al (2018) who suggest that teachers adopting a Social Constructivist viewpoint encourage questioning, independence and opinion-making, acting as guides to the children's learning. It is interesting to observe how this can be implemented by other teachers in other schools, and what teachers' thoughts of developing outdoor learning as one possible opportunity are.

5.3 Attention Restoration Theory

Figure 1: A pictorial representation of Attention Restoration Theory (interpreted for this study from Kaplan and Kaplan's (1989) definition)



The links between Social Constructivist theories and elements of Attention Restoration Theory can be focused on opportunities to develop knowledge and understanding through a more informal stance (Richter, et al, 2011).

Attention Restoration Theory proposes that there are two types of attention- automatic and directed. Directed attention, as the one which requires more mental effort, needs to be replenished regularly. This can be achieved through exercising automatic attention (Moreno, et al, 2018). Busy, urban environments can be an overwhelming sensory experience for many people, particularly those with hypersensitivity (often associated with ASD, for example), requiring high levels of directed attention and the use of focused effort to aid concentration (Kaplan and Kaplan, 1989; Tallis, et al,

2018). Sivarajah, et al (2018: 9) suggest that that this can lead to demanding thoughts and ‘mental fatigue (which) increases irritation, distraction and stress and decreases the ability to concentrate.’ Attention Restoration Theory posits that the use of a different environment, particularly natural landscapes, provide an ideal opportunity for automatic attention and ‘restores and redirects one’s attention to the current task at hand’ (Sivarajah, et al, 2018: 9; also, Kaplan and Kaplan, 1989). Attention Restoration is recovered through time spent in environments that provide ‘fascination,’ ‘being away’ (from usual spaces), ‘extent’ (connectedness with the new environment) and ‘compatibility’ (the participant showing an inherent interest in the new environment) (Kaplan and Kaplan, 1989). By moving to a more restorative, natural environment, away from a participant’s usual spaces and into those places which offer ‘soft fascination’, through effortless gentle scenes and experiences, such as trees, breeze and the sound of water, the capacity for attention can recover (Kaplan and Kaplan, 1989; Bingley, 2013; Chawla, et al, 2014 and Moreno, et al, 2018). The involuntary, automatic response people have to natural environments is able to support replenishment of concentration, ‘involving a recovery from depleted cognitive resources’ (Joye and Dewitte, 2018:1; also Tallis, et al, 2018). This natural environment allows children with SEND the opportunity to focus on a task away from distractions, enabling them to learn independently, as well as with, and alongside peers. Whilst Kaplan and Kaplan (1989) promote the soft fascinations of waterfalls, campfires and caves, Joye and Dewitte (2018) suggest that most studies utilising Attention Restoration Theory will instead make use of environments with an abundance of vegetation, such as parks and gardens.

Williams, et al (2018) suggest that direct attention, needed for concentration and the ability to ignore distractions, is finite and limited. It requires effort and focus and, once exhausted, attention can wander. This can be particularly impactful in the classroom,

where children typically spend most of their school day. Directed attention is defined as ‘the effortful process to focus or concentrate on objects or events, while at the same time blocking out distracting stimulation’ (Joye and Dewitte, 2018: 2). This can be particularly impactful for those with hypersensitivity or hyposensitivity (often linked to ASD), who can be overwhelmed by sensory experiences (Ashwin, et al, 2014). The purpose of Attention Restoration Theory is to reset the levels of attention (and therefore, the ability to focus and concentrate) by providing foci which are effortless and allowing the participant to experience a different environment. This will allow the participant to shift their attention and reengage, ‘pleasant, coherent and unthreatening environments will place little demand on attention networks, enabling restoration of attention control’ (Williams, et al, 2018: 39). It should be noted that, critiques of Attention Restoration Theory suggest that research to date has not tested those who are not fatigued by directed attention before removing them to a more natural environment for restorative experiences (Joye and Dewitte, 2018), though there is no study that suggests time spent in natural environments is not relaxing for the senses. However, Joye and Dewitte (2018: 6) do acknowledge that, despite this, nature is integral to different aspects of life and does ‘seemingly bring(ing) out the best of them.’ Whilst it is acknowledged that many schools have tarmacked outside areas and may not have access to more natural green spaces, the outdoor environment will always provide some natural aspects, such as breeze and natural lighting. Kaplan and Kaplan (1989) identify elements such as natural light and gentle winds as key aspects in providing soft focus and helping to restore attention.

Joye and Dewitt (2018: 2) explain that ‘ART states that nature’s soft fascinating characteristics can lead to a recovery of directed attention, and this effect is driven by the capacity of fascinating environments to trigger bottom-up involuntary attention.’ Moran (2019) agrees, suggesting that whilst entities other than natural environments

can offer effortless fascination, preoccupations such as television or computer games offer hard fascination. Moreno, et al (2018) detail hard fascination as that which is loud or chaotic – fascinating, but an assault on the senses. This, whilst being distractive, does not allow for restoration and reflection. Kaplan and Kaplan (1989: 182) suggest that 'there are, no doubt, many kinds of environments that can be restorative,' however, they do identify that more natural environments provided powerful results when considering Attention Restoration. The soft fascination of natural environments 'does not completely occupy the mind, instead leaving 'headspace' for emergence of unrelated thoughts' (Moran, 2019: 36), and allowing for relaxation of the mind (Moreno, et al, 2018).

This can be particularly true for people with SEND, with conditions such as ASD (the most prevalent diagnosis for the children in this study), ADHD and VI, affecting the individual's ability to manage sensory information. In their research into sensory perception in people with ASD, Ashwin, et al (2014: 2) state that people with ASD can have a 'lower perceptual threshold - i.e., tactile hypersensitivity' or higher sensory threshold - hyposensitivity, leaving those affected potentially feeling overwhelmed by sensory experiences. The effect of gestalt perception, 'perception of the whole scene as a single entity with all the details perceived (not processed!) simultaneously,' can be overwhelming (Bogdashina, 2003: 48). Knight (2011) supports this view, and suggests that children with ASD can benefit from outdoor environments, as the reduced visual and auditory assault on the senses found in natural environments can be calming to this hypersensitivity and gestalt perception.

Bingley (2013) suggests that the approaches promoted by Attention Restoration Theory can also be beneficial for those who need a more supportive environment, as time spent in a natural space can generate feelings of comfort, 'creating a feeling of safety where we can relax.' This idea is supported by James (2018: 124), who

acknowledges that ‘public spaces, primarily designed for neurotypical (a term used to describe people without ASD, it is also used in broader terms, to describe those without mental illness or learning disability (James, 2018)) people, can be quite hostile for environments for someone with a sensory processing disorder (such as ASD).’ Whilst these can be overstimulating for children with ASD, he suggests that natural environments used during Forest School sessions provide a more relaxed sensory experience (James, 2018). The use of natural spaces is considered in this study and the reactions of the child participants, as well as the work produced in this natural environment is considered.

Whilst the ideas behind Attention Restoration Theory do not specifically focus on education, from the pupils’ point of view, learning in the outdoors can still sit effectively within the theoretical framework. As Moreno, et al (2018: 8) acknowledge, ‘research on ART and children is rarer (than research into Attention Restoration Theory in other contexts), but also generally supports the positive influences of natural/green spaces vs. urban or barren environments on children’s cognitive performance.’ This is particularly true when considering the independent and child-led nature of programmes such as Forest School, amongst others, allowing children to explore their environment as individuals and finding their own preferred environment. This supports Kaplan and Kaplan’s (1989: 196) view, that natural environments, ‘permit people to move about and explore with comfort and confidence.’ This is related in the method of data collection, which aimed to be as unobtrusive as possible in the outdoor learning sessions, as a non-participating observer, to avoid affecting the independent and everyday approaches seen by the children in outdoor learning.

The relaxed atmosphere promoted by Attention Restoration Theory allows children the freedom of experience to learn independently and with peers, away from adult-constructed activities, giving them the opportunity to develop their own interests and demonstrate their own understanding. It allows for potential cognitive benefits (Waite, 2017 and Joye and Dewitt, 2018), such as for those who are more reluctant speakers in class, providing them with the opportunity to express themselves (Haynes, 2013), as well as supporting children's positive mental health and well-being (Nazir and Pedretti, 2014). It is interesting to consider the reactions of children with SEND in natural environments, to consider the experiences of outdoor learning for them and whether this is different for special and mainstream schools. It is therefore key to both observe children during outdoor learning times, to observe natural behaviours, as well as talking with staff, to consider reasoning behind activity choices, to focus on both viewpoints and to ensure that all voices and opinions can be represented. The learning opportunities that can be provided through outdoor learning, and supported through the approaches of Attention Restoration Theory could develop new learning, in a real-world, practical context, as well as allowing for children with SEND to demonstrate their own interests, seen through engagement with tasks, or through development of ideas in free-time. It can also support progression and reflection on prior learning, allowing children with SEND the opportunity to demonstrate recall of information.

The following chapter considers the methodology used throughout the research, which was designed to be inclusive of the experiences of children with SEND, underpinned by the chosen theoretical framework – Attention Restoration Theory and Social Constructivism.

Chapter 6. Methodology

6.0 Introduction

This study uses a case study approach to consider the pedagogic use of outdoor learning within two primary schools in the West Midlands. It critically evaluates the ways in which two case study settings; one mainstream and one special education primary schools embed and adapt curriculum for children with SEND in order to analyse the provision and opportunities for direct and indirect learning for children when engaging in outdoor learning.

This chapter outlines the chosen methodology and underpinning theoretical framework. It also considers the methods used to collect data, the reasons behind these choices and the impact that these approaches will have on the research. Further, it discusses any considerations that need to be made when using the chosen methods. The participants: school, staff and children, will also be considered, looking at the contextual data for each as well as the ethical considerations that were made and implemented when working with the different participants. The methodology was designed to be inclusive of children with SEND, with the aim of addressing the absence of this group of pupils from much previous research into outdoor learning.

6.1 Paradigms

6.1.1 Interpretivism

Carr (1995) suggested that educational research should be both educational and scientific, utilising a mix of paradigms. This stance takes educational research away from the more quantitative approaches that were favoured by those funding research in the later twentieth century, as well as media preferences which focused on ‘stories

in which numbers could be included' (Wyse, et al, 2017: 42). Clough and Nutbrown (2002), too, argue for mixed methods, suggesting that the polarisation of qualitative or quantitative research does not allow for a broad spectrum of investigation in educational research.

However, McPhail and Lourie (2017: 295) suggest that it is interpretivism that is the appropriate approach for education research, 'there is a preference for forms of interpretivism that favour constructivist, rather than realist ontologies and epistemologies in the social sciences.' Horreveld, et al (2016: 53) agree, suggesting that a positivist approach has limitations and 'can only take a researcher so far' and that in order to discover more about the individual and their experiences, one must move away from a quantitative study.

The ideals behind interpretivism, according to Clough and Nutbrown (2002), are that research is small-scale, non-statistical and focuses on the individual. This links effectively with the research undertaken in this as the focus is, as per interpretivist approaches, on what the participants say and do and making sense of this (Wyse, et al, 2017). It is also appropriate, therefore, that this research is undertaken by a practitioner-researcher. Cohen and Manion (2018) stress the importance of the teacher undertaking research due to their knowledge of both the setting, and the participant children, however, this can also lead to some challenges, such as power imbalance – can children in the researcher's class decline being a participant (Cohen and Manion, 2018)? For the practitioner-researcher and the inside-outside researcher (as in this study), an understanding of the specific context of education is beneficial, to consider the experiences of children with SEND in outdoor learning from multiple approaches. The familiarity of a researcher, who has knowledge of the participating

schools (insider), coupled with, at the same time, being unfamiliar (outsider) with the child and staff participants, creates a hybridity that allows for both familiarity and impartiality.

As Walliman and Buckler (2008: 162) suggest, the interpretivist approach is ‘particularly relevant when studying anything to do with human society’ as it enables the researcher to focus on the predictive and reactive experiences and behaviour that are displayed as part of human life. Robson (2002) agrees, suggesting that the interpretivist approach centres on the main subject matter of social research: people. Research involving people as participants has to consider their actions and approaches to life; these cannot be attributed or researched through natural science (frequently quantitative) methods as participants will attribute ideas, values and understanding to their own situations. In the case of researching with children with SEND, their understanding and ideas about their experiences may be very different to how others see the world. As James (2018: 64) suggests, children with ASD, ‘not only experience a difference in the way that their senses process their physical surroundings but often connect with the physical world in preference to the social world.’ Therefore, it is appropriate to consider an interpretivist approach when conducting this research so that the experience of the individual and how they see the world can be considered.

As suggested by Wyse, et al (2017), interpretivist research will focus on those meanings that people construct around their lives and, researchers have to make sense of this as part of their interpretation of the data. With consideration of this study, the participant children are identified as having a range of SEND (including ASD,

Global Delay, Dyslexia, Speech and Language Difficulties, and Visual Impairment) therefore, their understanding and view of the world, their school and the learning they are undertaking will be experienced from different perspectives. It is important to consider this when undertaking observations and analysing data. The task is to 'construct interpretive accounts which grasp the intelligibility and coherence of social action by revealing the meaning it has to those who perform it' (Carr, 1995: 78). Research into the participants' actions must be considered with consideration of these values and has been in this study.

Studies using qualitative methodology tend to be grounded in small-scale research (Clough and Nutbrown, 2002; Scott and Morrison, 2007) and issues with validity and reliability may therefore present – would the same results be seen if the research were conducted in another school? With other children? At another time? It is likely that different experiences and observations would be made if this study was conducted at other schools, as the individual approach to outdoor learning is specific to the individual children being observed. However, the findings from this study are still relevant in considering the experiences of these specific participants. Whilst the validity of small-scale studies can be improved through hypothesising results and responses and sharing results with participants to record reactions to findings (Cohen, et al, 2018), Wilson (2009) acknowledges that some do see small-scale research with a 'so what' mentality. However, Wilson (2009) also goes on to state that we need to be aware that certainty is rare in educational research and that there will always be an element of doubt, regardless of the methodological approach taken. This is true, too, of this study where participants are individuals, children with SEND who have different experiences and understanding of the world and of the outdoor learning they partake

in (regardless of the fact they are part of a whole class lesson completing similar activities). Therefore, their responses will be individual, and cannot provide representation of a wider viewpoint. A further counter-argument promotes the idea that those conducting the small-scale qualitative research are the teachers themselves, and that these practitioner researchers are those best placed to investigate education and curriculum queries (Wyse, et al, 2017).

6.1.2 Positivism

Despite an interpretivist approach enabling researchers to understand the reasoning and experiences of the participants, Wyse, et al (2017) highlight that there are concerns about the validity and success of an interpretivist approach (including access to funding). They note that positivism has a wider acknowledgement of legitimacy as it has more successful research outcomes in providing more accurate data (Horreveld et al, 2016 and Wyse, et al, 2017).

Positivism focuses upon knowledge being based on observation and reason considering how different observations and facts relate to each other to produce objective knowledge and quantitative data (Robson, 2002; Couper, 2015). Couper (2015), Green (2017) and McPhail and Lourie (2017) agree, suggesting that knowledge is based on observation and reason, leading to more reliable data.

However, there are concerns about the use of positivism in social and educational research as the approach cannot consider the subjective nature of society and the quantitative data that it produces is restrictive in explaining 'why'. As Robson (2002: 23) suggests, 'People are not just natural elements but social persons, acting individuals with their own wishes, perceptions and interests.'

6.1.3 An interpretive study

As has been discussed above, the interpretivist approach highlights the experience of the individual. However, even though, in this study, the views of the individual are sought through an interpretivist approach the overall aim of the research is to understand more about the experience of the group that the individual represents. Experiences of outdoor learning would be difficult to quantify, particularly for children with SEND where more subtle evidence (such as the use of verbal or non-verbal communication, or engagement with an activity) may be seen. Research methods to observe these experiences have been used, and this study aims to consider these, rather than outcomes that could be measured or show attainment. The connection with this study lies in the focus on social experience, considering the research from an individual, personal basis, rather than a scientific one that subscribes to formula and data that is measurable. This is reflected in the choice of theoretical frameworks which focus on interpreting the data through socio-cultural, environmental and relational lenses. The positivist approach, whilst allowing for measurable, accurate and formulaic data representation, would not consider the nuances that are demonstrated by the individual children and their experiences in outdoor experiences. It should be remembered, too, that the children concerned often display communication difficulties and 'differences in self-expression and understanding others' (James, 2018: 83) which align to no set formula.

6.2 A qualitative approach

When considering which methodology is appropriate for studies of outdoor learning of primary aged children, it should be considered that the aim of the research is to

understand the experiences of the participants and to see 'the world through the eyes of those being studied,' grounded in their experience (Scott and Morrison, 2007: 182).

Therefore, this research adopts a qualitative approach with links made to Social Constructivism and Attention Restoration Theory, as outlined in sections 5.2 and 5.3.

Piaget suggests that learning is influenced by experiencing new situations and environments (Pritchard, 2018), commenting that, 'Experiencing of objects plays, naturally, a very important role in the establishment of dynamic structures' (Piaget, 1961: 277). It makes sense, therefore, to offer wider opportunities to children, including those outside of their usual classroom setting, so that they may continue to develop new experiences and learning opportunities, 'consideration of intersubjective experiences is vitally important' (Waite, 2017: 10). Considering the area of research through these theoretical frameworks has highlighted the importance of considering the benefits of outdoor learning from a range of perspectives.

6.3 Ethical considerations

The project was approved by the Birmingham City University HELS ethics committee before any data collection was begun. Permission to work with the participating schools was granted by the schools' headteachers. Both were sent the Participant Information forms (see Appendix C to H) for information and written permission was obtained.

The use of photographs of the school sites (ensuring any identifying features such as school logos or individual children or staff were not included) was approved by the

Health, Education and Life Sciences Faculty Academic Ethics Committee at Birmingham City University.

6.3.1 Participants: staff

In line with the ethical considerations, adhering to the British Educational Research Association (2018) requirements, and approved by the Health, Education and Life Sciences Faculty Academic Ethics Committee at Birmingham City University, all participation was voluntary, and all participants were informed that they could withdraw from the research at any time. None chose to do so. Staff at both schools were fully informed of the purpose behind the research (via a participant information form) and any staff who wished to volunteer were invited to take part through an interview. All participants were assured that their comments would be held and referred to anonymously (and all have been informed that they can access transcripts of their interview on request). All were presented with a participant information sheet and a consent form, and, with the exception of Ms Adams, all signed all elements of the consent form. Ms Adams agreed to all but the digital recording of the interview. Consequently, Ms Adams's interview was written up in note form (see Appendix I, participant A).

These transcripts/detailed notes are made available in the appendices to ensure transparency of data used (see Appendix I). These refer to participants (schools, members of staff and children) anonymously to protect confidentiality. Walliman and Buckler (2008) acknowledge that participants are more likely to be open and honest if their answers are recorded anonymously.

6.3.2 Participants: children

The observations were documented from notes of first-hand observations. Although the use of videoed recordings was considered, a decision was made about their use in conjunction with the participating schools. It was felt that parental permission would not be granted by the parents of participating children (amongst other concerns about the use of video, discussed in the methodology section) and so this consideration was not looked at further.

As per the consent provided by the staff participants, permission was also gained for observations of the children whilst they took part in outdoor learning. Again, in line with ethical considerations, adhering to the British Educational Research Association (2018) requirements, and approved by the Health, Education and Life Sciences Faculty Academic Ethics Committee at Birmingham City University, parents and carers with parental rights (hitherto referred to as 'parents') were contacted by letter (in which the participant information form was shared). They were informed that all participation was voluntary, and all participants were informed that they could withdraw their child from the research at any time. None chose to do so. Parents at both schools were fully informed of the purpose behind the research and those who were happy for their child to be included in the research provided a written consent form (retained by the schools on their request. The proforma is included in Appendix H). All participants were assured that notes about their child's learning sessions would be held and referred to anonymously (and all have been informed that they can access notes of the learning session on request). The children of those parents who chose not to return the consent form were not included in the research.

As the children's experiences and opinions are equally valid, they, too were able to choose to participate or not in the observations. Webster and Blatchford's (2015: 329) work suggests that they discussed provision for children with SEND with Special Educational Needs and Disabilities Co-Ordinators (SENDCOs), teachers, teaching assistants and parents which 'enabled us to describe the perceptions and expectations that different stakeholders had of the structures, delivery and effectiveness of provision.' However, they do not discuss discussing ideas with the children, suggesting they do not consider the experiences of the children they are researching and their first-hand experiences as stakeholders' experiences. Walliman and Buckler (2008); Brodie (2013) and Merewether (2015: 99) state that children's opinions and permissions are important, with Merewether suggesting that the United Nations Convention on the Rights of the Child (1989) acknowledges that children are 'active citizens with rights to participate in matters affecting them, including research.'

To ensure children were aware of the research, my presence in school was discussed with the children in advance. It was explained to them that I was there to observe their outdoor learning to see what happened but that they would not be assessed in any way. In the case of the mainstream school, children (in discussion with school staff) were able to give consent if they wished to participate, using the consent form (see Appendix G). In the special school, this was more challenging. Again, my presence was discussed but as many of the children were not able to give written or oral consent, their consent was assessed by school staff who knew the children and observed them for any discomfort to my presence. None was detected. As Brodie (2013) notes, when observing children with SEND, focus should be on their likes and dislikes, as well as their achievements and areas for development.

As with the interviews, all notes taken first-hand at the observations were anonymised. They are included in Appendix K. Any participants or parents of participants have been informed that they are able to view notes (and photographs of the school site that have been included) if they so wish.

When researching in education, the key aim will always be to ensure the safety and well-being of the participants who, in this research case, will include children. It is key to include the voices of children and to hear their ideas about their own place and their own experiences. The research proposal and observations were undertaken with children with SEND, who, due to these needs and conditions may be more vulnerable. Horreveld, et al (2016: 221) suggest that although children's voices are the 'most valuable sources of the perspectives of children,' some researchers are reluctant to research with children due to the difficulty of gaining ethical permission. As identified through working with Fields School, this can be particularly challenging when researching with children with SEND. This highlights then, that children with SEND represent a population who may not always have their voices heard (Clough and Nutbrown, 2002; Scott and Morrison, 2007; Couch, et al, 2014) so to include them in studies which are focused on their experiences is key.

It is important, however, especially when working with people who may be unable to express their intentions or meanings clearly, to ensure that we consider what they are trying to communicate (Clough and Nutbrown, 2002), so that their opinion is understood. French, et al, (2019: 151) note that 'children's perspectives on, and ability to understand, social situations may be different from adults' however, they can be just as valuable and perceptive.'

Robson (2002) and Kettle (2014) agree, suggesting that it is important to ensure that the opinions and experiences of the more vulnerable children are recognised, that whilst it is important to gain parental consent for working with children, it is also important that we still acknowledge the children's experiences themselves. 'Over-focusing on the needs of parents may mean that children's interests are lost sight of, their views given insufficient weight, and there is a risk that they may come to harm as a consequence' (Kettle, 2014: 187).

The findings from the research will be made available to all participants as a written document. It is anticipated that the impact, at least for the participating schools, will be to encourage discussion in schools and provide evidence to show outdoor learning can be developed to support the academic work and social skills of children with SEND.

6.3.3 Insider research

As the schools used are both known to me (through work with staff, rather than the children), there are issues of insider research to consider. Whilst this does allow for the researcher to have a good understanding of the specific school environment and situations being discussed, allowing for the researcher to have 'tacit knowledge' of the school and situation (Horreveld, et al, 2016: 36), participants may also have expected the researcher to understand and sympathise with their point of view, referring to shared experiences and history, and consequently, there is a danger of the research losing impartiality (Kettle, 2014; Bell, 2003). The semi-structured interview was chosen

as a method of data collection as this would support impartiality, the questions and structure allowed a maintenance of distance needed for objectivity (Ward, 2014). The unobtrusive nature of the observations too, allowed for impartiality as no interruptions were made to the learning as part of the observation, and teachers leading learning were reassured that no comments would be made about the activities or teaching. Taking prior understanding of the situation into account, it is also key to avoid intrusive or judgemental practice as an inside researcher (Horreveld, et al, 2016).

Insider research can allow for a deeper understanding of the environment being researched. Being familiar with the school allowed for a greater awareness of the environment being spoken about, as well as the school structure itself. This supported the understanding of any issues that were discussed, as well as the policies and practice affecting the day-to-day experiences of participants (Bell, 2003). As Kelly (2014: 255) states, the researcher's knowledge of a setting, including 'recognition of situational factors affecting pedagogy and familiarity with wider influences,' will impact on the research. He suggests that unfamiliarity with a setting will limit the researcher's ability 'to share understandings with other participants' (Kelly, 2014: 255), rather than being an opportunity for unbiased opinion, suggesting that there may be a limit to the effectiveness of outsider research in some situations.

6.4 A case study approach

This study utilises a case study approach to consider the outdoor learning provision for children with SEND at two primary schools in a locality in the West Midlands – one mainstream and one special school. Each case study includes the backgrounds of the schools and contextual data. To be rigorous, a case study needs to consider how data is gathered, analysed, interpreted and reported (Robson, 2002). The aim of the case

study is to tell a story of the whole, using ‘an integration of inferences and interpretations of events’ (Simons, 2009: 5).

Yin (2003a: 4) proposes that a case study approach is appropriate when the focus of study is ‘not readily distinguishable from its context.’ In this case, the context of the schools’ outdoor learning, different classes, taught by different teachers, with individual children and their experiences being intrinsic to the study, means that a case study approach is relevant and appropriate.

The case studies include multiple data collection methods, providing varied sources of information and evidence to support the ‘richness of context’ (Yin, 2003a: 4). The collection of varied sources also supports the case study approach, ensuring that a range of potentially useful and informative data is collated (Robson, 2002). The use of two case studies allows the research focus to be complementary, with each school setting providing a different context – special and mainstream education with different methods of providing outdoor learning (Robson, 2002).

Focused, semi-structured interviews were conducted with selected staff to allow participants to engage in an open-ended, conversational discussion based around key questions relating to their beliefs/practices in relation to outdoor learning. As Yin (2003b: 89) argues, interviews are ‘one of the most important sources of case study information’ as they allow participants to answer questions as they understand them and to highlight any aspects that are particularly important to them (Cohen, et al, 2018).

Non-participatory observations of outdoor learning were also undertaken to allow the researcher to see what participants actually do in a given situation and to observe different 'types of behaviours during certain periods of time' (Yin, 2003b: 92). The observations were non-participatory by the observer, to avoid affecting the independent actions of the children. Fawcett and Watson (2016) acknowledge that observations allow researchers to note differing communication methods, verbal, non-verbal and through gestures. The use of observations allows those, who may not usually be heard, to be 'given a voice' by careful noting, by the observer, of non-verbal communication (Simons, 2009: 55).

The Research Participants

6.4.1 The participating schools

The two participating schools were chosen for their close geographical location (to each other – meaning they fall under the same Local Authority), as well as their similarity in both including outdoor learning in their timetables, and having accessibility to similar outdoor spaces. They are both schools which use outdoor learning on a regular basis, both have natural outdoor space on their own site, and are in close proximity to local public parks (which are used by the school). They were also selected as examples of a mainstream and a special school, due to their similarity in geographical location and catchment area, both being in the same Midlands city. Whilst the special school (Fields School) naturally draws pupils from a wider catchment area, due to its specialised entry requirements, this is still within the suburban area that is similar to that of the mainstream school (River Primary). For contextual comparison, please see Table 2.

It is a limitation of the research that only two schools are being used, and within this, a limited number of classes. It would be interesting and beneficial to the research to widen the participant numbers, considering the experiences of more staff and pupils in more schools. It would be interesting, too, to consider the experiences of more classes within the participating schools. However, with this small-scale research, a mainstream and a special school have been chosen to provide examples of contrasting experiences of outdoor learning, and, within these, classes were identified by school leaders as being suitable for outside researchers observing lessons.

Harris (2017) states that, following a survey of engagement in the natural environment, it was concluded that children in urban areas and those from a lower socio-economic class were more disconnected from nature than their peers. Therefore, it is interesting to research into the use of outdoor learning in the schools' highly urban area, which, in 2015 was the 17th most deprived of 326 English Local Authorities, and which has above national average figures for free school meals, (20.5% compared with the national average of 14.5%), suggesting that this deprivation also extends to children of primary school age within the area (City of Wolverhampton Council, 2018).

Table 2: Contextual details about the participating schools.

Contextual Information	River Primary	Fields School
Location	Edge of mid-sized city 5 miles from city centre	Centre of mid-sized city 1 mile from city centre
OFSTED grading	Good (2017)	Outstanding (2014)
Provision	Mainstream, 3-11	Special Needs, 3-7
Numbers on roll	466 (53 with SEND)	52
Outdoor Provision	Playground Nature area	Playground (with equipment) Nature area

Both schools are located in the same mid-sized city (population around 250,000, according to Census data from 2011) in the West Midlands, with Fields School being closer to the city centre. River Primary caters for children aged 3- 11, whereas Fields School mainly has children from 3-7 on roll. Both have received positive OFSTED reports (River Primary – good, 2017; Fields School– outstanding, 2014).

Outdoor learning is an integral part of the timetable for both schools with all classes being timetabled for at least one session outdoors per week, although this is often increased on an ad-hoc basis (this is less developed for Fields School due to the children's need for structure). Both schools have dedicated members of staff identified as outdoor learning leaders and both schools have on-site open areas used for outdoor sessions and Forest School, as well as close access to a local park (a park is within 5 minutes walk for both schools) allowing for more freedom in the timetable (as outdoor sessions do not rely on visits away from the school site).

Whilst neither school has a specific outdoor learning policy, both do mention the use of outdoor learning in other policies and plans. River Primary's SEND Information Report (2021) states that risk assessments and staff expertise is in place to ensure that pupils with SEND are able to partake in all outdoor activities. Fields School's Teaching and Learning Policy (2021) states that the school will provide, 'An interactive curriculum, both indoors and outdoors, providing pupils with a wide range of learning experiences and opportunities to extend and consolidate knowledge, understanding and skills and to achieve and progress in all areas,' recognising the importance of the use of outdoor learning at the school.

6.4.11 River Primary – the mainstream school

River Primary has some structured equipment (Figs. 2, 3, 4) for children to use, but this is limited compared to Fields School. River Primary, however, has a larger open playing field area, used for sports activities and whole class outdoor learning. This backs onto a housing estate and a quiet side road.

Fig. 2

The structured equipment in River Primary, and a view of the field, used for sports activities.

Fig. 3

Fig. 4

River Primary has left the edges of the playing field to develop as its Forest School and outdoor learning area. This area includes a fire pit/seating area for whole group sessions, some young trees as well as longer grasses and a less ‘managed’ landscape, allowing it to develop as a wilderness area. This allows children to experience a more natural environment, one which is not a mown lawn (Figs. 6, 7). It has a prevalence of wildlife which the children can investigate and observe, as well as the opportunities for outdoor cooking at the fire pit (Fig. 5).

Fig. 5

The fire pit/seated area and wooded/wilderness area at River Primary.

6.4.12 Fields School– the special school

Fields School has a developed play area with multiple pieces of equipment (Figs. 8, 9). As well as swings, climbing frames, slides, bouncers and a trampoline, there is also a bicycle track which is used on a supervised basis. Soft play equipment is also brought out at break and lunchtimes for the children to use (Fig. 10).

The area is designed to both provide children with opportunities for free play but also encourage social interaction. The swing, for example, is a large seating area, suitable for 3 or 4 children to be in at the same time (but which can also be used by just one child). Children are also encouraged to be independent through the free choice afforded to them at play, should they want to play alongside, but not with, others, then this is possible as the equipment can be accessed and used by individuals as well as groups.

Fig. 8

Examples of the equipment used in free-play and at play and lunch times at Fields School.

Children are able to select which equipment they use and how they use it. Equipment is designed so that they can play independently or with others.

Fig. 9

Fig. 10

Fields School's forested area has been developed by staff to provide for a range of different activities and also includes a pond area (Fig. 14). There are two access points – across a grassed area, and via a tarmacked path, which has been built to support access for those with limited mobility, or who use wheelchairs or walkers. Staff make use of all equipment and resources available, stating that nothing is ever thrown away from the school or classrooms, without first deciding if it can be used in the outside area (Figs. 11, 13, 15). When a tree was brought down by high winds, for example, it was cut up to provide logs for the seating area (Fig.12).

The different zones allow children to experience different environments, from the canopy, which creates a natural shower when it rains, to the outdoor kitchen and fairy garden which aim to encourage imagination. The seating area is beneficial for

introductions to activities and group work, where all children can sit together and either work with or alongside their peers.

Fig. 11

There are a range of distinct areas in Fields School's forested area including an outdoor kitchen, fairy garden, awning area and pond.

Children are supervised around the pond but are free to explore the other areas independently.

Fig. 12

Both schools also have access to nearby public parks (within a five minute walk), which are used at times for Forest School elements that cannot take place on school grounds due to lack of facilities, such as trees suitable for tree-climbing or environments, such

as searching for evidence of larger wildlife than can be found on school grounds (neither school used these areas during my observations). However, most outdoor sessions take place on the school site.

6.4.2 The participants: children

Table 3: Contextual details about the participating classes

School	Numbers on roll (total)	% with SEND in school (total)	Number of participants (total)	Number of participants per class
River Primary	466	11.4% (53 children)	4	Class 1 (5-6 years) – 2 (30 total) Class 2 (5-6 years) – 2 (30 total)
Fields School	52	100% (52 children)	10	Class 1 (5-7 years) – 4 (10 total) Class 2 (5-7 years) – 3 (10 total) Class 3 (5-7 years) – 3 (8 total)

As seen in Table 3:

In River Primary (the mainstream school), 4 children from two year 1 (aged 5-6 years) classes (2 children in class 1 and 2 children in class 2) were observed during their outdoor learning across a period of one month. The participant children in these classes have diagnoses of:

- Class 1 - Ali – SpLD; Bryan – SP&L and motor control
- Class 2 – Cerys – VI; David – Global Delay and SpLD

See Table 6 for further contextual data

In Fields School (the special school – educating pupils aged 3-7 years), 10 children from three classes (4 children in class 1, 3 children in class 2 and 3 children in class 3 – all participant children aged between 5 and 7 years) were observed during outdoor learning. All participating children in these classes have a diagnosis of ASD. Further information about these observations is found in section 7.1, where children are referred to using pseudonyms.

The classes involved in the study were suggested by the schools as ones that were undertaking outdoor learning at the time, and (particularly in the case of the special school) those who would not be distracted or upset by my presence. All children who were identified as having SEND were considered for inclusion in the observations and parents were contacted for permission to observe outdoor learning (see section 6.3.2). No children were discounted on the basis of gender, ethnicity, SEND condition or academic ability. All those who returned a permission slip granting permission were included in the study.

The children included in the study present with a range of different SEND conditions. At River Primary, this included children with Visual Impairment, speech and language difficulties, global delay, difficulties with fine and gross motor control and specific learning difficulties. In a discussion with the class teacher, further information was gathered about the children to ascertain individual characteristics and academic ability. This provided further supportive evidence to consider when analysing the observation data.

At Fields School, due to the nature of the Special School, all children had a diagnosis of ASD. Academic ability was also discussed with the class teachers and identified as being lower in some children.

6.4.21 Participants: children - contextual data

Children at River Primary are either driven to school in family cars or walk with an adult. The children at Fields School are mostly brought to school in minibuses or taxis catering to individual needs (due to the nature of the entry requirements of the school, the catchment area is much larger than at River Primary, meaning some children live much further away, and some are unable to walk), although some do walk as well. Staff at Fields School noted that some children have very little time in the outdoors due to the way they are brought to school (an issue that was discussed further during interviews – see section 6.5.1 to 6.5.11).

River Primary's percentage of pupils with SEND is roughly equal to the national average (14.6%, DfE, 2018). These cover a range of differing needs, but include children with Autistic Spectrum Disorder (ASD), Specific Learning Difficulties (SpLD), Visual Impairments (VI). In the classes I observed, half of the children with SEND (Class 1: 50% Class 2: 50%) were children with SpLD (in this case, dyslexia). Other children observed were diagnosed with VI and global delay, Speech and Language Difficulties (SP&L) and motor control difficulties.

Fields School admits children with severe learning difficulties. This largely caters for children with ASD, although some have associated or accompanying additional needs, for example, one class has a larger percentage of pupils with mobility difficulties, who use walking aids and wheelchairs and, whilst these were discussed during staff interviews, the class did not feature in the observations. Whilst it is important to include

children's voices as much as possible, the overriding consideration of this research is that of the children's welfare. The school noted that the children in the classes with the larger percentage of children with mobility difficulties were more likely to be caused distress by meeting strangers, due to their social ability. As there was too little time for sustained and prolonged engagement within the setting allowing a sense of familiarity between the researcher and children it was not considered appropriate in this short-term study for these children to be included, so as to avoid causing unnecessary stress. The class was situated in a different section of the school to those classes participating in the study and the researcher did not visit their classroom.

6.4.3 Undertaking the observations

Three observations took place at each school. The observations and the number of these was discussed with each school. Numbers were agreed as this was considered to be manageable for the school timetables, non-distractive or routine forming for the children in the participating classes, and also allowing a deep consideration and observation of participant actions and responses to the outdoor learning sessions.

In River Primary, two Year 1 (aged 5-6 years) classes were observed (two observations of one class, one observation of a second class). As different children took part in different activities each week, this allowed me to see children in a range of different situations.

In Fields School, three different classes (aged 5-7 years) were observed (one observation per class). All children in these classes have a diagnosis of ASD. These

classes are not structured by age and children are assessed on ability and communication in order to be placed in the appropriate class. It was felt that one visit to each class would not be as distracting to the children, or create a routine which may then be missed by children who need a recognisable structure to the day. Therefore, I spent longer with each class in a single visit (usually a three hour visit at Fields School, compared with the 1 hour 45 minutes visits in River Primary) but did not make a repeat visit to the same group of children.

Observations took place in the summer term, 2018. All observations were of outdoor learning that had been planned by the usual teacher (in River Primary– the outdoor learning lead, in Fields School, the class teachers). Both schools used additional members of staff to support outdoor learning. In River Primary there were four members of staff to support the classes of 30 (one class teacher, one outdoor learning teacher and two learning support assistants), in Fields School, 4 members of staff supported the classes of 7 to 10 children (one class teacher, three learning support – please see Table 4 for further information about staff composition in the schools).

Observations in River Primary were all afternoon sessions, in Fields School two observations were of morning sessions, and one was an afternoon – these were discussed with the school to fit in with their timetables and to cause the least disruption to both the children and the school day. The weather for all observations was warm and dry, although both schools assured me that outdoor learning take place whatever the weather. Knight (2016) acknowledges that dressing for the weather is an important skill in itself and that Forest School activities will be planned for a variety of weather conditions.

For further information about the observations, see section 7.1 to 7.1.6.

6.4.31 The participants: members of staff

Table 4: Composition of pupil-facing school staff

Role	River Primary	Fields School
Class teachers	28	7
Learning support*	11	22
Senior Leadership Team	3	5
Additional Pupil-Facing role	0	6
Total	44	38

* to include Learning Support Assistants, Learning Mentors, Higher Level Teaching Assistants and Teaching Assistants

The numbers do not include staff without a pupil-facing role, such as business managers, office staff, catering and cleaning staff and the site manager.

In total, six members of staff from the two schools were interviewed (three from each school), identifying their opinions and beliefs about outdoor learning in general and in the context of their school. The number of participants per school was agreed with senior leadership in each school – this was felt to be an appropriate number as it allowed for participants with a range of roles to be interviewed, as well as being a manageable workload for members of staff. The participants included senior leadership and class teachers, all of whom were involved in delivering outdoor learning. Those that were interviewed had volunteered, following information about the research being shared with staff in both schools (please see ethical considerations, section 6.3 for further details).

6.5 Data collection

In order to fully consider the experiences of outdoor learning on children with SEND, a range of data collection methods needed to be employed. When considering which methods were appropriate for studies of outdoor learning for primary aged children, and particularly those with SEND, the main aim of the research was to understand the experiences of those the learning is planned for (in this case, the children that the outdoor opportunities are planned for) and to see these experiences from their perspective (Scott and Morrison, 2007).

Therefore, the data collection methods planned included semi-structured one-to-one interviews with participant schools' members of staff who work with children in outdoor learning and observations of the children themselves as they engage in outdoor opportunities. Further data collection was considered, such as, for example, use of group interviews with children about their perception of outdoor experiences, but ultimately this was discarded due to the needs and considerations for the children. As the children being observed and considered in the research all have SEND and some have other, additional conditions (such as anxiety), it was felt both by the schools and myself, that a more intrusive questioning of experiences, or asking the children to recall or think about outdoor experiences out of context (whilst they were not participating in an outdoor learning session) may be confusing or cause anxiety. Whilst it may have been possible to speak with the child participants at River Primary, as Fields School advised against interviews with the children at the special school, it was felt that to interview children at one school but not the other may skew data and provide an unbalanced findings. Though not being interviewed, children's experiences were recorded through observations, Christensen and James (2000) suggest that children with SEND can communicate and share their voice in different ways – verbal, non-

verbal and through physical actions. Through familiarity with the child participants, their opinions and understanding of the learning can be recognised - this was gained during the observations through the presence of experienced and familiar adults, known to the children. As is discussed in the ethical considerations section (section 6.3), the needs and welfare of the participants (both children and staff) are prioritised above all in this research.

6.5.1 Semi-structured Interviews

A semi-structured one-to-one interview approach was chosen as the data collection method when considering the views and opinions of the staff. Individual interviews were chosen, rather than focus group discussions, to allow for each participant to be able to confidentially discuss their own thoughts and feelings about the use of outdoor learning within their school. A series of five questions was planned, focusing on the opinions of participants concerning outdoor learning, their understanding and experiences of it (see Table 5). The questions were designed to be open-ended in order to elicit participants' beliefs without any leading statements. Two questions (numbers 3 and 4) were designed to feature a follow-up question to direct participants towards consideration of children with SEND, if they had not been mentioned in the main answer to the question. Questions directly relating to the provision of outdoor learning for children with SEND were not included as the questions were designed to not lead any participants and to observe which children were automatically considered by participants. It was felt that it would be interesting to observe whether participants considered outdoor learning for children with SEND without prompting through question context. Therefore, questions directly asking about outdoor learning for children with SEND were not planned as leading questions, but would have been

asked as a follow up, had participants not discussed these children. These follow up questions were not needed as all participants discussed outdoor learning for children with SEND as part of their answers.

The questions were as follows:

Table 5: The questions and the reason why they were asked

Question No.	Question	Reasoning behind question
1	What is outdoor learning?	Defining how participants view outdoor learning and what they consider it is.
2	What's happening with regards to outdoor learning, locally (in schools participating) and on a wider basis?	How outdoor learning is developing – do all schools use the same format? Are there similarities amongst participants?
3	Are there any barriers to outdoor learning in this school? On a wider basis? (if so…) What are they?	What do participants see as barriers? Do they view facilities, financing as issues? *Follow up question around children with SEND if these are not mentioned in any context by the participant.
4	What are the positives and negatives of outdoor learning?	What do participants see as the gains brought about by outdoor learning? Do ideas suggested align to Attention Restoration Theory? *Follow up question on the impact on children if this is not mentioned in any context by the participant.
5	What would you like to see, with regards to outdoor learning, in the future?	Where do participants view the field of outdoor learning moving to in the future? The scope of this was left to the interpretation of the participant and included both school and national approaches in the answers given.

This approach facilitated comparative analysis between the interviewees and allowed participants to answer questions posed as they understood them as well as highlighting key aspects that are important to them (Cohen, et al, 2018). Kelly (2014) suggests that semi-structured interviews also support the introduction of any new issues being raised that fall outside of initial expectations as interviewees choose to elaborate on some questions or seek clarification on others.

As interviews will always show what people perceive the situation to be, they may not reflect accurately what is actually happening; this is beneficial to the aim of comparing the different viewpoints amongst staff. It is also interesting to discover the understanding of staff working with children in outdoor learning; although some have had more experience and training than others, all are delivering outdoor learning. It is interesting to see how their backgrounds can impact on their perception of learning, their perception of any benefits or drawbacks to using the outdoors, and their wider understanding of outdoor learning.

Half hour interviews were scheduled per participant, but there was no time limit communicated to the participants, this was with an aim of allowing participants to feel at ease and talk freely without the need to concern themselves with clock-watching. Most interviews lasted for around 25 minutes.

Transcripts of the interviews are made available (in Appendix I) to ensure transparency of data used, participants were also advised that they are able to access these on request. The transcripts refer to participants anonymously (A, B and C in River Primary

and D, E and F in Fields School) to protect confidentiality. Within the discussion and findings, these participants are referred to as:

- Participant A – Ms Adams
- Participant B – Ms Begum
- Participant C – Ms Clarke
- Participant D – Ms Dwight
- Participant E – Ms Evans
- Participant F – Mr Fisher

6.5.11 Analysis of the interviews

When considering the analysis of the information gathered, following transcription of the digital recording, interview answers were read through to gain an overall awareness of what had been said. Austin (2016: 96) highlights that it is important to not 'cherry pick' key phrases or quotes from an interview as this will not be representative of the participant's full involvement or answer and leaves the researcher 'open to accusations of researcher bias.' Instead, it is important to read through the data in a 'more rigorous and detached process of analysis' (Austin, 2016: 96; also, Clough and Nutbrown, 2002). Therefore, the data was analysed for key words or phrases, including those associated with the underlying theoretical framework, such as 'attention,' 'distraction' and 'focus,' to identify repeated words or phrases or central themes that were brought out in the interview (Clough and Nutbrown, 2002 and Cohen, et al, 2018). The interviews were compared to determine if there was any correlation or commonality between participants, identifying similar phrases, themes as well as differences and identifying any given reasons behind these viewpoints.

Freebody (2011) commented on the importance of using direct speech spoken by the participant in the interview, when analysing and reporting findings. He notes that, the use of paraphrasing comments can suggest that ‘‘this speaker thinks this’, for-all-time and in-all-spaces, independently of the local contingencies of the event then and there’ (Freebody, 2011: 139). Therefore, when analysing findings from interviews, participants’ thoughts are used verbatim to ensure that their voices are not silenced or generalised.

6.5.2 The observations

As interviews will always show what people perceive the situation to be, they may not have reflected accurately what was actually happening in outdoor learning in the school. Therefore, observations of outdoor learning sessions were also used. The use of observations allows for the researcher to see what participants actually do in a given situation, as opposed to what they may say they do (for example during an interview) – evidence can be collected and collated to show the actual experiences of participants. Observing, in this case, children in an outdoor locality, allowed me to see how participants (the children) actually responded to their own situation, both via their actions and vocalisations (similar to the interviews, any statements by the children were written and reported verbatim), regardless of what had been said by staff participants about outdoor learning and the children’s experiences of it. Malaguzzi was an early pioneer of observation documentation, highlighting that all actions should be noted as children’s understanding and knowledge may be represented in many different ways (Brodie, 2013).

Smith (2011: 109) too, suggested that observing from different perspectives is important ‘I had a teacher in art school who turned everything he looked at upside

down...It was as if he could see it better that way...Often we forget about the physicality of observing, literally changing our viewpoint or perspective.' Observations allow for the researcher to see how outdoor opportunities are being used by the children – regardless of the intention of the activity planned by the teacher. This allows for an interesting comparison with the interview answers (given by staff leading and planning the outdoor sessions).

Observations can provide a lot of useful information but, unless videoing, this may require immediate action to record key events, comments and actions observed. This immediacy of action of recording also needs to be considered alongside the wider understanding that the observer needs to consider – can the observer understand what has happened, can they relate it to any prior understanding, can they spot any repeated patterns or behaviour and link this to understanding? If being a truly independent observer, the researcher cannot interfere to clarify any situation in the moment, and they cannot replay it. Lloyd, et al (2018: 54) comment that, in order to observe and note the 'raw images and actions' of child participants, the children need to be given space to act as naturally as they usually would. The purpose of the observation needs to be clear so that any decisions as to what to record or note down can be made quickly (Bell, 2003). Brodie (2013) suggests that it is challenging to be an unobtrusive observer and that children will probably want to know more about what you are doing, or engage you in their activities. It is key, therefore, to have additional staff to support the unobtrusive nature of the observation, as well as the ability to write up notes as quickly and precisely as possible, without concern for neatness.

There are some highlighted concerns about the use of observations. For example, Elliott (2015) considered carrying out observations as part of her research into Forest Schools but found this difficult, due to time constraints and the desire to remain objective throughout the study. Bell (2003) also comments on subjectivity, suggesting that it can be difficult to maintain objectivity if those being observed are known to the researcher – it may be that they project their own understanding onto the situations they are observing. The issues of Insider Research are discussed in ethical considerations (section 6.3.3).

As mentioned in section 6.3.2, the use of video was considered when conducting the observations. The initial consideration was that this would naturally allow for repeated viewings of the observed outdoor learning, aiding observation of key events. However, there were also issues concerning the use of video. This included the limited viewpoints, dependent on the number of cameras used and where they were pointed. As large outdoor areas were being used, with obstacles and objects, such as trees and long grassy areas, videos would not capture all of the information as some was out of sight and range. This limited viewpoint, in conjunction with staff concerns about gaining parental permission (both from the participant children and those also in the class but not being observed) meant that the use of videos was not pursued.

Scott and Morrison (2007) also note issues concerning time constraints, suggesting that organising numerous observations can be problematic. These issues are compounded if participants are aware they are being observed and, knowingly or not, change their behaviour, suggesting that some observations and actions can appear anomalous when results are viewed as a whole. However, Wilson (2009) counteracts

the problem of organisation and suggests that, the more observations that are conducted the greater the validity will be as this will minimise atypical results.

6.5.21 Observation categories

Observations were recorded as narrative text and identified and noted how children with SEND responded to different activities (Brodie, 2013). The narrative approach focuses on detail of the observation that is taking place and allows the observer to record what a child does, says (preferably verbatim), as well as anything that happens, such as who the child naturally associates with, which activities they engage with (Brodie, 2013). Sancisi and Edgington (2015) note the importance of being factual in observations, to ensure that the recorded information is what actually happened or was said, rather than the observer's interpretation of events. It is helpful, however, to have key focus areas and so text was produced that focused on how the participant children being observed responded to key areas that address both academic and social skills:

- Taking an initial interest in the activity
- Being involved in the activity (and whether any skills/knowledge are demonstrated)
- Communicating with others (adults or peers)
- Taking on responsibility/leadership roles

These were based on Brodie's (2013: 34) categorisations for observations to form learning stories, detailing progress that children make in different areas. Her categorisations were:

- taking an interest
- being involved
- persisting with difficulty or uncertainty
- communicating with others
- taking responsibility

The categories also support Drummond's (n.d) ideals of observation when observing children:

- Initiative
- Engagement
- Intentionality
- Representation
- Benefaction
- Reflection

And take some inspiration from some of Sancisi and Edgington's (2015: 13) key areas for observation:

- interests/motivation (including schema)
- dispositions (how they approach learning. How they are demonstrating the EYFS characteristics of effective learning)
- feelings – how they feel about themselves and about being in the setting
- preferred learning style
- relationships and social interaction
- knowledge and understanding; skills
- access to areas of learning and development – are they accessing all areas over time

- progress

These categories were considered both as individual approaches and also as a combined approach, identifying commonalities across the three. They were chosen to enable observations to consider a broad overview of the learning session itself, whilst also retaining relevance of activities within a session. Common areas of consideration were noted for relevance to children in Key Stages 1 and 2 (rather than the Early Years Foundation Phase focus of Brodie's (2013) work) and for outdoor learning, also considering alignment to Attention Restoration Theory and the engagement and focus that this suggests outdoor learning supports. Aspects of Attention Restoration Theory align to the observation categories – pupils' connectedness to ('Extent') and their inherent interest in ('Compatibility') the outdoor learning space will influence their engagement with the activity and willingness to undertake leadership roles – the more comfortable they feel in the area will impact on their confidence and ability to relax and focus on the learning (Kaplan and Kaplan, 1989).

When the final categories were identified, they were incorporated into an observation sheet (see Appendix J) The chosen categories were used to both support observations in terms of management of information, and to categorise any key incidents I witnessed, identifying different types of behaviour that the children demonstrated. The categories were also used to analyse results, identifying moments from observations and comments made in interviews to discuss the experiences of the children when using the outdoor areas (both in structured and unstructured sessions).

6.6 The pilot study

A pilot study was undertaken which trialled interviewing three members of staff at River Primary. This aimed to identify any difficulties, or confusion caused by the questions, and to ensure that information gathered from the questions was relevant (Robson, 2002). The pilot research highlighted that, in River Primary at least, when considering the attitude of staff towards outdoor learning, whilst not all were equally enthusiastic, all saw the value in it.

The questions asked in the pilot study proved to support the generation of relevant and useful content, and so were retained for the main study. As questions were retained, the interviews conducted with the staff participants at River Primary were used in the main study.

The pilot study highlighted that outdoor learning brought about benefits for a range of children. Participants, without being asked about specific groups of children, still highlighted the benefits of outdoor learning for groups of children, such as those with SEND and discussed how outdoor learning was implemented in schools for a range of learners.

Areas were brought to light as new aspects of interest, ones which had not previously been considered and these proved beneficial as the research was refined and developed through considerations in literature reviews, and as part of the later observations of outdoor learning.

One area that had not been considered was the impact of an alternative setting for children with ASD. Whilst I was aware of the need for a recognised structure to support these children, it had not occurred to me that the unpredictable nature of the outdoors

itself may be an issue. It had been considered that preparing children by using visual timetables and advance notice, as well as social stories and pre-visits would be adequate in reducing the worry of lack of structure. However, information from participants highlighted the fact that the outdoor environment itself can be surprising, unstructured, and could cause distress. This led to a further consideration in the research of known spaces when undertaking outdoor learning, and the role of the familiar in supporting children with attachment needs. One participant did provide an example of a pupil with ASD who loved gardening and being outside ('We had an Autistic pupil who loved gardening but there was nothing like that at secondary.') so it is not impossible, or unheard of in this school, that children with ASD can enjoy outdoor learning. The soft fascination of the outdoors, allowing children to be away from the noise and harsh lighting of the indoor classroom, and the known location of the outdoor learning (on the school site with little impact from those outside of the class involved), linking to extent within Attention Restoration Theory, would also be supportive for children who favour familiarity. This was a consideration, particularly when researching outdoor provision at Fields School where all of the participating children had a diagnosis of ASD and this impacted upon the structure of visits. Visits were scheduled for times when outdoor learning was usually timetabled so as not to cause disruption to the school day and each class was only visited once to avoid creating a routine which would then not continue.

Observations were not carried out as part of the pilot as this would have been disruptive to the children if further observations had to be repeated at a later date. I did not want to establish a routine with a class and then disrupt this as this would not be supportive for children who benefit from a structured timetable. However, the

hypothetical approaches to observations and how these would be undertaken was discussed with staff in school to consider the realistic possibility of working with the classes and observing the children in an outdoor setting. As Couper (2015) notes, the view from the inside, particularly when working with marginalised groups or those whose views may not otherwise be heard, is very different to the perceived situation that outside views hold. It was therefore helpful to investigate how the children saw and used the outdoor spaces and activities that they were exposed to.

6.7 Conclusion

To conclude, this chapter has discussed the consideration of differing paradigms, and the arguments put forward by proponents of both positivism and interpretivism. Despite the suggestions that positivism is able to produce more trustworthy, successful research, it is fitting, for reasons considered in the chapter, to align this research to interpretivism. As a study of people and their experiences, particularly children with SEND who may not fit into societal norms in terms of their experiences or understanding of the world around them, this allows the research to focus on the experiences and understanding of the individual, without attempting to align the observations to a set of prescribed rules and conditions, as would have been the case of a positivist study.

It is appropriate for this research to also link within a Social Constructivist framework, with a consideration made to Attention Restoration Theory, identifying both social and peer experiences and learning, alongside the recognition of the impact of a natural, outdoor environment.

The following chapter will report on the findings from the observations and interviews.

Chapter 7 Findings

7.0 Introduction

This is a qualitative interpretation study using Attention Restoration Theory and Social Constructivism to consider the experiences of small groups of children with a variety of SEND when undertaking outdoor learning. The study sites included a mainstream primary school (known in this study as River Primary) and a special needs school for children aged 3-7 (known in this study as Fields School). Three observations of outdoor learning took place at each setting. Three members of staff at each school were also interviewed.

This short chapter will report on the factual findings of the six observations (three per school) carried out at River Primary and Fields School, so that the following chapter can analyse the data obtained. It sets the scene for interpretation of the findings by describing the data collection sites.

The children and schools will be identified via pseudonyms to preserve anonymity. See Table 6 for contextual details of child participants and Table 7 for contextual details of staff participants.

Table 6: Participants: children

School	Class	Child reference				
River Primary	Class 1 - a year 1 class (5-6 years)	Name	Ali	Bryan		
		SEND	SpLD	SP&L, motor control		
River Primary	Class 2 - a year 1 class (5-6 years)	Name	Cerys	David		
		SEND	VI, (also, little independence)	Global Delay, SpLD		
Fields School	Class 1 (5-7 years)	Name	Jasmine	Kieran	Louis	Mohammed
		SEND	ASD	ASD	ASD	ASD
Fields School	Class 2 (5-7 years)	Name	Nadiyah	Owen	Paul	
		SEND	ASD	ASD	ASD	
Fields School	Class 3 (5-7 years)	Name	Qasim	Regan	Sarah	
		SEND	ASD	ASD	ASD	

NB at Fields School, classes are not grouped by age but by ability. The children in classes 1, 2 and 3 were of mixed age (between 5 and 7 years old) but similar ability (to each other).

Staff members who were interviewed will also be identified via pseudonyms.

Table 7: Participants: staff

School	Staff Reference			
River Primary	Name	Ms Adams	Ms Begum	Ms Clarke
	Position	Class teacher	Class teacher	Forest School Leader
	Time at school	6 years	10 years	4 years
Fields School	Name	Ms Dwight	Ms Evans	Mr Fisher
	Position	Class teacher / Forest School lead	Class teacher	Outdoor Learning Learning Support
	Time at School	4 years	6 years	1 year

7.1 Observations

A range of different activities, with different levels of teacher input, were observed at both schools. These included:

- structured, teacher-led sessions - cooking on an open fire and leaf printing at River Primary
- teacher guided sessions with an introduction, leading to independent work by the children - pine cone people, wooden medallions and nature scavenger hunt at River Primary and Little Red Riding Hood activities and mud painting at Fields School
- free choice sessions (no teacher input past explanation of going outside to use the equipment) - free choice in the woodland and outdoor area and unstructured time on the equipment at Fields School.

The observations will first be described, in terms of structure and activities, then identified themes will be discussed across the six observations.

Three observations took place at each school. Observations 1-3 are from River Primary and observations 4-6 are from Fields School. All observations were carried out in summer 2018.

7.1.1 Observation 1- River Primary (cooking with Class 1)

Table 8: Overview of Observation 1

School	Class	Timing	Staff Numbers	Children observed (Diagnosis and age)	No. of Children in class	Weather	Activity
River Primary	1	1.15pm – 3.00pm	4: 1 class teacher, 1 Forest School leader, 2 TAs	2: Ali (SpLD, 5 years old), Bryan (Sp&L, motor control, 6 years old)	30	Warm and dry	Cooking on open fire

The session started at 1.15pm (see Table 8 for contextual details of the session). At this point, the class was met in their classroom by the Forest School leader who explained the task for the day, and asked for volunteers to carry some items to the field. A number of children offered to carry equipment, including those being observed.

The fire pit area (and the log seats) at River Primary set up for the cooking lesson.

The class was led from the classroom to the fire pit site on the school field (Figs. 16 and 17). The fire pit was set up prior to the class arriving by the Forest School leader. Once they had arrived, the

class was gathered on the log seating area to discuss cooking, and the health and safety requirements.

Following this, children each took a turn to cook their food. Each turn took around ten to fifteen minutes, from children being asked to, individually, recall health and safety requirements, to having a cooked marshmallow (two or three children were cooking at any one time). See Table 9 for child participants' actions and conversations during the session.

The session ended with a whole class discussion and question and answer session about the cooking process and the marshmallows. The children were then taken back into the classroom, with volunteers, again, being asked to carry pieces of equipment. The session ended by 3.00pm.

Table 9: Overview of children's actions during Observation 1

Ali, Bryan (all participant children participating in this activity)	Listening to safety talk (and subsequently following instructions given) Remembered the 'Fire Respect Position' without being reminded All children took part in cooking their marshmallows.
Ali, Bryan	Required additional support (reminding of how to cook the marshmallow) Took an interest in the insects on the field and spoke to staff about them
Ali	Tried to jump the queue to start cooking – showing enthusiasm for the task Answered questions about fire safety in front of the class Moved away from the insects on the logs, talked to Bryan and the class teacher about them
Bryan	Shared opinion about cooking, stating that he didn't enjoy it because it was too sticky Talked to Ali and the class teacher about the insects

7.1.2 Observation 2 – River Primary (carousel activities with Class 2)

Table 10: Overview of Observation 2

School	Class	Timing	Staff Numbers	Children observed (diagnosis and age)	No. of Children in class	Weather	Activity
River Primary	2	1.15pm – 3.00pm	4: 1 class teacher, 1 Forest School leader, 2 TAs	2: Cerys (VI, 5 years old), David (Global Delay, SpLD, 6 years old)	30	Warm and dry	Hide and seek warm up game followed by a carousel of activities: • Pine cone people • Nature Scavenger Hunt • Wooden medallions (not observed)

The session started at 1.15pm. As per Observation 1 with Class 1, for Observation 2, Class 2 was met in their classroom by the Forest School leader who explained the task for the day and asked for volunteers to carry some items to the field (see Table 10 for contextual details of the session). A number of children offered to carry equipment, including those being observed. The repeated introduction to the start of the learning session showed that a schedule was established for outdoor learning and that the children were aware of the routines and expectations.

Once the class had arrived at the log seating area (the same space that was used for cooking during Observation 1), they were reminded of the rules for being outside, including what to do when they heard the teacher shout out ‘where are you?’ Children could explain that they had to stop what they were doing and call back, ‘I’m here’ (this was used as a recall action, to allow the teachers to know where children are and to stop the activity and gather them together). This was not used during Observation 1,

as the class remained together, in the log seating area for the cooking activity and therefore did not need to be recalled to a central meeting point.

As a warm up activity, children took part in a hide and seek game. I was informed by the Forest School lead that this was also a test of their use of the recall signs, as well as settling them into working outside). See Table 11 for child participants' actions and conversations during the session.

The game of hide and seek lasted for ten minutes and the children demonstrated good knowledge of the recall actions by following instructions immediately.

Once the class had been recalled to the log seating area, the carousel of activities were explained. The class was split into groups of ten (each group supported by at least one member of staff) to complete the three activities. All of the activities lasted for 20-25 minutes, before the groups swapped to a different activity. During this observation, the pine cone people task and the nature scavenger hunt were observed (this allowed for all children to be observed in at least one activity. The wooden medallions activity was observed as part of Observation 3, with a different group of children).

Some of the Pine Cone People

In the pine cone people task, children created characters from pine cones, sticks, clay and other found materials on the field (such as stones and grass) (Figs. 18 and 19).

During the Nature Scavenger Hunt, children were given a sheet of flora and fauna to look for whilst on a walk of the field. The groups of ten were guided by the Forest School leader who directed the route but largely allowed the children to explore the area themselves.

Once all children had completed all three activities, they regrouped (each member of staff brought their group back to a central location) to discuss their experiences before returning to the classroom for 3.00pm. As in Observation 1, volunteers were asked to carry equipment back into school. Many children offered to help.

Table 11: Overview of children's actions during Observation 2

Making pine cone people	Cerys, David	Listening to instructions on how to make pine cone people
	Cerys	Worked independently on task. Didn't ask for help but said they needed it when asked directly Volunteered an answer when the group was asked how they might change their pine cone person next time (she would add arms) Talked to peers to find out what they were making
	David	Talking through the steps to making the pine cone person, including advising peers Offering to help others find sticks to use, sharing information about the best places to find sticks Finding twigs to spell out letters, identifying letters in their own name
Nature Scavenger Hunt	Cerys, David (all children involved in this activity)	All carried clipboards and sheets to identify found objects Answering questions posed by the class teacher
	Cerys	Remembered information from the start of the task about the difficulty of finding certain things – shared information with peers Sharing information with peers about what they were looking for and the environment they were in ('some of the grass is really slippy, like ice') Trying to keep the group together as they walked around the field, 'keep up girls!'

7.1.3 Observation 3 – River Primary (carousel activities with Class 1)

Table 12: Overview of Observation 3

School	Class	Timing	Staff Numbers	Children observed (diagnosis and age)	No. of Children in class	Weather	Activity
River Primary	1	1.15pm – 3.00pm	4 (+1): 1 class teacher, 1 Forest School leader, 2 TAs (+1 college aged volunteer on work experience)	Ali (SpLD, 5 years old), Bryan (Sp&L, motor control, 6 years old)	30	Warm and dry	Carousel of activities: • Pine cone people • Wooden medallions • Leaf printing

The session started at 1.15pm. As per the previous observations at River Primary, the Forest School leader met the class in their classroom and explained the task for the day (see Table 12 for contextual details of the session). Children volunteered to help carry some of the equipment needed to the field.

The session started at the log seating area where the class was reminded of the rules for being outside. As per Observation 2 (carried out with class 2), the children in class 1 played a game of hide and seek game. This lasted for ten minutes and the children in this class also demonstrated good knowledge of the recall

The palm drill and wood used for the wooden medallions

actions discussed in Observation 2 as they were able to follow instructions without prompting. See Table 13 for child participants' actions and conversations during the session.

Observation 3, as per Observation 2, also consisted of a carousel of activities, with two activities (pine cone people and wooden medallions) being the same as those observed in Observation 2.

The class was split into groups of ten to complete the three activities. All of the activities lasted for 20-25 minutes, before the groups swapped to a different activity.

Leaf printing at River Primary

The wooden medallions activity involved children drilling a hole in a piece of wood with a palm drill (Fig. 20). Once this was completed, they decorated the wood by drawing pictures of owls (as directed following a recent class topic) before threading string through the hole so the medallion could be worn.

To complete the leaf printing activity, children were asked to place leaves between two sheets of fabric. The leaves were then hit with a mallet so that its imprint appeared on

the material (Figs. 21 and 22). The children sat around the edge of the material, taking it in turns to use the mallet.

The pine cone people activity was as described in Observation 2.

After completing all tasks, the class gathered at the log seating area to discuss their activities. They returned to the classroom by 3.00pm.

Table 13: Overview of children's actions during Observation 3

Making wooden medallions	Ali	Following instructions Using palm drill to drill hole in medallion, needed encouragement but determined Talking to peers and giving advice about using the palm drill, 'this is how I do it. I press down really hard'
	Bryan	Collecting materials with peers
Leaf printing	Ali	Not focused on activity as not all children could take part at the same time Complaining about equality of turns, 'she's had 3 goes!' Showing peers his work, 'look, that's mine!'
	Bryan	Listening to instructions, waiting patiently for their turn. Reminded other about the correct sitting position for safety. Needed reminding how to use the mallet but was focused on the task Sharing advice with peers about how to use the mallet, 'hit it a little bit harder' Sharing their opinion about the work, 'I think that's really good'
Making pine cone people	Ali	Set up a race between the pine cone people, established rules and a route. Decided who was racing and who won. Peers joined in the game Discussing ideas with peers
	Bryan	Expressed an opinion on making the pine cone people, 'I liked the modelling. I liked decorating it'

7.1.4 Observation 4 – Fields School (free use of outdoor area)

Table 14: Overview of Observation 4

School	Class	Timing	Staff Numbers	Children observed (diagnosis and age)	No. of Children in class	Weather	Activity
Fields School	1	9.00am – 12.00pm Outside from 10-11.30	5: 1 class teacher 4 TAs	4 – Jasmine (ASD, 6 years old), Kieran(ASD, 7 years old), Louis (ASD, 5 years old), Mohammed (ASD, 6 years old)	9	Warm and dry	Free use of outdoor area (time also spent with children indoors to allow them to be comfortable with my presence)

As children at Fields School have a variety of SEND, and some children have anxiety over new situations, the observation for class 1 started in their classroom, a known, predictable space where they felt comfortable. I spent an hour with them in this room before the class went outside to the playground. During this hour, I was able to observe the four children, Jasmine, Kieran, Louis and Mohammed taking part in their literacy lesson. The children spent this time away from peers (although this was not a class requirement), looking at books and working with the teachers in class, sometimes communicating using the Picture Exchange Communication System (PECS) whereby a card of

Examples of a PECS communication book (Pyramid Educational Consultants, n.d)

an image or action is passed to the teacher as a communication (Mitchell, 2014) (Fig. 23).

The children were able to sit in a circle (on chairs) for a class assembly although they did not engage with each other during this time. One child (not an observed pupil) was asked to count their peers by touching them on the head – all of the children were accepting of this contact. Jasmine spoke aloud at the end of the assembly, stating (to no one person or group in particular), '*assembly has finished.*'

Jasmine looked up when her name was called, but otherwise did not respond.

The structured play equipment at Fields School

After assembly, the class was told that they would have free choice time outside. Whilst the structured equipment was available for use (Figs. 24 and 25), and the soft play obstacles (large foam blocks and stair pieces) were already put out, some children chose to explore the natural environment (grassed areas and vegetation) instead. Herrington and Brussoni (2015) suggest that a natural play space will include natural elements as sources of play, whilst man-made elements can be included, these will be utilised in ways decided by the children, rather than being prescriptive. Indeed, there was no requirement for any activity in particular, though children were reminded that

they needed to respond to an adult if they were called. As the classroom has a door that leads straight onto the playground, moving between the class and outside space was managed quickly, with no disruption (see Table 14 for contextual details of the session).

The children explored the equipment independently, working alongside peers and by themselves. See Table 15 for child participants' actions and conversations during the session.

Children were all able to respond to the teacher's call to return to the classroom in a calm manner, and returned inside by 11.30am.

Table 15: Overview of children's actions during Observation 4

Free use of outdoor area	Jasmine, Kieran, Louis, Mohammed (all children participating in this activity)	All children showed an initial interest in the equipment, using it in different ways and were able to share with each other Jasmine and Louis were walking with the class teacher but also showed independent engagement with equipment
	Jasmine, Kieran	Used the trampoline together Singing
	Jasmine	Encouraged by class teacher to communicate with peers to stop them taking their hat. When the hat was removed whilst she was on the trampoline, she spotted it and shouted out, 'my hat!'
	Kieran	Watched the football game through the fence (at the school next door) Walking around the playground independently
	Louis	Using the climbing frame Fell over, did not show any distress

7.1.5 Observation 5 – Fields School (Little Red Riding Hood activity)

Table 16: Overview of Observation 5

School	Class	Timing	Staff Numbers	Children observed (diagnosis and age)	No. of Children in class	Weather	Activity
Fields School	2	9.00am – 12.00pm Outside from 10 – 11,30	4: 1 class teacher, 3 TAs	2 Nadiyah (ASD, 5 years old), Owen (ASD, 5 years old), Paul (ASD, 6 years old)	8	Warm and dry	Little Red Riding Hood – story, discussion and searching for cakes (laminated pictures) in woodland (time also spent with children indoors to encourage familiarity)

The spots used for storytelling and the hide and seek area at Fields School

The second observation (Observation 5) at Fields School also started with a period of time spent indoors, to allow the children to become used to my presence. During this indoor time, children had snack time and a musical assembly.

The children communicated mostly using PECS, to ask for different snacks as well as communicating other items that they wanted. The only verbal communication seen inside was during the assembly, when Paul and Nadiyah said '*good morning*' when prompted. Whilst Owen did not verbally communicate, he did complete a 'high five' with the

teacher instead. Children were also able to engage with a musical activity, clapping alongside a song (Nadiyah completed this independently, Owen and Paul were supported by teachers).

Following the assembly, children were informed that the literacy task for the day would take place outside (see Table 16 for contextual details of the session). After a reminder that they needed to respond when their names were called, the class was taken outside. Initially, when arriving outside, children were asked to find a spot to sit on (Fig. 26) to sit and listen to the Little Red Riding Hood story. Afterwards, they were told of their main activity – to search for the cakes that Little Red Riding Hood had left around the wooded area (Fig. 27). These laminated pictures of cakes were hidden in different areas, requiring children to search both on the ground and in the foliage. Once all of the laminated cakes had been found, the children were asked to reconvene at the storytelling area to count how many cakes they had found (see Table 17 for child participants' actions and conversations during the session).

To end the outdoor time, the children played a game of hide and seek in the wooded area. The children responded to the teacher's announcement of the end of the game and were all able to return to the classroom calmly, returning inside by 11.30am.

Table 17: Overview of children's actions during Observation 5

Little Red Riding Hood Activities	Nadiyah, Owen, Paul (all children participating in this activity)	All children listened to and followed instructions All stood on a spot to start the activity when instructed to All children sat and listened to the story All children counted the cakes they had collected (with support) All children played hide and seek with peers and interacted with each other during this activity Communicating with peers during the hide and seek game
	Nadiyah, Paul	Looking for cakes, picking them off trees independently
	Nadiyah	Laughing at choosing a spot
	Owen	Collected cakes with support Smiling at peers during hide and seek game. Encouraged others to play, 'Let's play hide and seek!' 'I found you!'

7.1.6 Observation 6 – Fields School (mud painting and use of wooded area)

Table 18: Overview of Observation 6

School	Class	Timing	Staff Numbers	Children observed (diagnosis and age)	No. of Children in class	Weather	Activity
Fields School	3	1.00pm – 3.00pm	5: 1 class teacher, 4 TAs	3 Qasim (ASD, 7 years old), Regan (ASD, 7 years old), Sarah (ASD, 6 years old)	9	Warm and dry	Mud painting Free use of woodland and outdoor area

The final observation (Observation 6) at Fields School began at 1.00pm in the classroom. Children were informed of their activity for the afternoon and were reminded of the safety requirements of responding when their name was called. The class was led through the school in a calm manner and taken to the storytelling area (as used with class 2 in Observation 5) to start their activities (see Table 18 for contextual details of the session).

Mud painting at Fields School

The initial activity, to help remind children of the outdoor rules and to allow them to settle into their outdoor environment, was a racing game. The children all had to choose a spot to sit on before running the circular track around the wooded area.

Once this was completed (by around 1.30pm), children were led to the fenced off woodland area. This area is separated from the other wooded area due to the presence of the pond.

The class sat at the log circle seating area (Fig. 29) to start the mud painting activity (Fig. 28). Before painting with it, children were shown how to create the mud, modelled by the teacher. This section lasted for around 30 minutes (see Table 19 for child participants' actions and conversations during the session).

Following the mud painting activity, children were allowed free choice time (around 30 minutes) in the forested area.

The class were called back to the log seating area to talk about what they had been doing and to recall what they had learnt during the outdoor learning session.

Following the whole class discussion, children had around 15 minutes of free choice time on the structured equipment. The class returned to their classroom by 3.00pm.

Table 19: Overview of children's actions during Observation 6

Mud painting	Qasim, Regan, Sarah (all children participating in this activity)	All stood on a spot to start the activity when instructed to All children listened to and followed instructions to mix the mud All children felt the soil before adding the water All children used sticks to paint with the mud on the paper
	Qasim, Regan,	Mixed the mud with sticks, took turns with their peers
	Qasim	Communicated experience of mixing the mud, 'the mud is on my hands!'
	Sarah	Didn't want to mix the mud, orally communicated, 'no thank you' Was prepared to feel it once it was mixed
Free use of woodland area	Qasim, Regan, Sarah	All children showed an initial interest in the equipment and areas of the woodland, using them in different ways
	Qasim, Regan	Interacting in outdoor mud kitchen area
	Qasim	When class returned to the log area, arranged seating so all peers could sit down, 'Do you want to sit down? There's plenty of room for you'
	Regan	Using the balance beams independently
	Sarah	Using the binoculars and discussing what they could see with the class teacher Using the binoculars, answering question from class teacher about what they could see, 'I can't see any birds' Recalled information - referred to a pine cone as an acorn, then corrected themselves

The following chapter will analyse and discuss the findings in relation to the literature review and initial research questions posed.

Chapter 8 Discussion

8.0 Introduction

In this discussion chapter I will analyse the findings from the six observations and six interviews conducted at River Primary and Fields School.

I shall also consider the initial research questions asked, addressing the evidence from the literature review, relevant policies and the findings from the observations and interviews, integrated with underpinning theory from Attention Restoration Theory and Social Constructivism.

8.1 Observation themes

Having analysed the observation forms for recurring themes, five main themes were identified.

The five main themes were:

- Children responding to instructions and following teacher questions
- Children engaging in the activity with and without support
- Children communicating with peers and offering help and advice
- Children recalling prior learning and planning for future learning
- Children showing an interest in the outdoor environment

The findings in each of these areas are presented below and will be discussed in the following chapter.

8.1.1 Children responding to instructions and following teacher questions

Children responding to their teacher's instructions for the outdoor learning session and answering questions posed to individuals or the whole class was evident in all six observations. Attention Restoration Theory proposes that being in a natural environment can support attention and focus (Meidenbauer, et al, 2019) which, in this case has been demonstrated by the children's engagement in the teacher-led sections of the outdoor learning.

In both schools, children were advised of requirements for being outside at the start of the outdoor learning session. In the majority of observations, this occurred inside the classroom. For example, at River Primary, children were met in their classroom by the Forest School leader for every session, who explained the task and reminded children of the recall procedures (explained in the observation descriptions in chapter 7).

At Fields School, too, children were informed of their outdoor activities whilst inside the classroom. In Observation 4, for example, the class was told, whilst inside their classroom, that they would have free choice time outside. The structured equipment was available for use, and the soft play obstacles (large foam blocks and stair pieces) were already put out. Whilst this was available for use, some children chose to explore the natural environment in the area instead, looking at the grassed areas and vegetation. There was no requirement for any activity in particular, though children were reminded that they needed to respond to an adult if they were called. This allowed children to find the activity that they preferred, giving them the opportunity to enjoy the outdoor environment, away from the desk-based learning in the classroom. As the classroom has a door that leads straight onto the playground, moving between

the class and outside space was managed quickly, with no disruption. Kelly, et al (2022: 76) note that developing independence of choice is evident in outdoor learning, suggesting that it enables 'children to experience more freedom to initiate their own learning experiences.'

Ms Dwight agreed, stating that independence was a positive element of outdoor learning,

> *'One positive is independence. The children need to develop that so it's a good opportunity for them.'*

For the majority of observations, instructions specific to each activity were also introduced by the teacher whilst outside (the exception being the free choice activity for Observation 4, when children were not provided with additional information about using the equipment or the outdoor area in general).

As well as introducing the activity, at River Primary, these talks were accompanied with whole class questioning. A number of the participant children were able to offer opinions and answers, showing their engagement with the session (considered further in section 7.1.72).

For example, in Observation 1, the children had to listen to the safety talk about cooking on an open fire at the start of the outdoor learning session. All demonstrated engagement through answering questions, with Bryan offering (without adult prompting) answers to questions posed to the whole class.

When creating the pine cone people, all of the children listened to instructions and watched the modelling demonstration by the teacher before starting the task themselves. During this task, Ali was able to demonstrate his understanding by answering questions posed by the class teacher, he engaged with the task, making

use of the natural elements around him to create his pine cone character and, later, using the distance between trees as a race course, showing that an outdoor environment supported his focus and attention to the activity.

Ms Clarke noted that this was evidenced in outdoor learning generally,

> *'I've seen what skills they can develop I've seen them work as a team.'*

In Observation 3, whilst making the wooden medallions, the children listened to the instructions and responded. Bryan, again, asked questions to clarify his understanding of the task.

At Fields School, during Observation 5, when arriving outside, children were asked to find a spot to sit on. All children were able to follow this instruction quickly and were able to sit and listen to the Little Red Riding Hood story. This change of environments (from the usual classroom to the outdoor area) aligns to Attention Restoration Theory's 'being away' proposal (Kaplan and Kaplan, 1989). Bagot, et al (2015: 1) suggest that, 'Attention Restoration Theory links the perceived restorativeness of environments specifically to the restoration of attention resources…a positive relationship between time away from class and subsequent attention benefits.' This was evidenced during observations, for example, when inside, although they sat where instructed, Owen and Paul showed some reluctance, taking time to respond to requests.

In her interview, Ms Evans suggested that in outdoor sessions,

> '*It's different. You get to see the children do different things; they initiate hide and seek games with each other.*'

Also at Fields School, in Observation 6, the class started their mud painting activity sat at the log circle seating area. Before painting with it, children were shown how to create the mud, modelled by the teacher. The children showed an interest in this

aspect of soft fascination, feeling the soil before the water was added and watching their teacher mixing the soil and water, before mixing the soil and water themselves, demonstrating immersion in the natural environment (Kaplan and Kaplan, 1989), being physically involved in activities rather than passively observing. They were able to listen to instructions and all children were able to share and pass the equipment between themselves, demonstrating their understanding of mixing the mud as observed through the modelling.

The ends of sessions also highlighted children's ability to follow instructions and answer questions posed by the teacher.

In Observation 1, for example, the cooking session ended with a whole class discussion about the cooking process and the marshmallows. The whole class group was asked questions, Bryan expressed his opinions about the activity, stating that he didn't enjoy it, '*because it's sticky.*' This aligns to Meidenbauer, et al's (2019) suggestion that Attention Restoration is not dependent on the participant (in this case, the children, particularly Bryan) having an affinity or preference for the natural world, but that cognitive refreshment can be achieved regardless of the participant's idealised environment.

Ms Begum identified that not all children will feel an affinity for outdoor learning, suggesting that,

> *'if you're not into it then it's not so much fun for you,'*

She goes on, however, to comment,

> *'but all part of life is experiencing things that you're not overly interested in or excited by.'*

At Fields School, too, during Observation 6, children returned to the log seating area when asked, after free choice time in the woodland area. They were able to discuss what they had done and anything of interest that they saw.

During all observations at both schools, children were able to respond to the teacher's call to return to the classroom in a calm manner, and returned inside without incident.

Whilst children were able to show an understanding of the instructions that had been given, they were not always quick to follow these. This was usually when children had to wait for their turn.

When taking part in the Leaf Printing, for example, the children were informed of safety positions, as well as being shown how to hold and use the mallets correctly. Some of the children (including those not being observed) were not able to follow the instructions to wait for their turn. One of the participant children, Ali, expressed his impatience, complaining about having to wait for the mallet. Ali was able to comment on equality of turns and express dissatisfaction with what he perceived to be an unfair distribution, '*she's had 3 goes!*'

This was evident, too, in the cooking task, when Ali tried to jump ahead of the queue to start cooking. When he was asked to wait for his turn, he was able to return to his seat and wait alongside his peers.

8.1.2 Children engaging in the activity with and without support

In all observations, children also showed engagement with the activity. This included participating and discussing the activity with teachers, as well as establishing independent activities borne from the initial adult-initiated task. At times, children needed support with tasks, whereas others were tackled independently. Engagement

demonstrated in natural environments is a key proposal of Attention Restoration Theory, which posits that attention and engagement can be supported through the use of alternative environments to the norm and the soft fascination of natural elements (as used in a number of the observations) (Kaplan and Kaplan, 1989).

For some activities, children were able to show engagement in the learning, following the instructions given and complete tasks without support. For example, in Observation 1, when it was their turn to cook, children had to use the Fire Respect Position (knelt at an appropriate distance from the fire pit, with hands well away from the flames), and hold a skewer into the flames, to toast their marshmallow. When it was Bryan's turn to cook, he was able to remember the correct position, without being reminded. This was noted and praised by the class teacher. Bryan was also able to demonstrate skills in cooking his marshmallow. He remembered to turn it and removed it from the fire when he felt it was cooked enough. This was achieved without additional support. Children showed fascination with the open fire (Kaplan and Kaplan (1989) suggest that open fires are an example of an outdoor experience that can provide soft fascination), as well as with the cooking process itself.

Children were able to show their knowledge and understanding independently. When making the pine cone people, David, for example, was able to use the sticks he was using for his pine cones, to spell out letters in his name '*look, it's a D for David!*' Not only did this demonstrate his creative ability, moving away from the initial task, but also his fine motor control and letter formation, as well as an ability to create personal relevance in the activity (Kelly, et al, 2022).

The group who took part on the Nature Scavenger Hunt in Observation 2, also showed engagement in the task, completing this without additional support. They kept track of

the flora and fauna listed on their sheets independently, showing a fascination with their environment, as well as ensuring they looked in a variety of locations for the items. Felsten (2009: 160) suggested that soft fascination allowed for the effort of attention to relax, that as fascination did not require purposeful consideration, the 'capacity of directed attention' could be restored. The group were also able to listen to their teacher's advice to be mindful of the environment and were careful about replacing items (such as stones) where they found them, as well as considering their steps to avoid crushing plants.

Ms Clarke recognised that this was evident in outdoor learning, commenting that,

> *'I've seen their…awareness of nature and awareness of living things and caring for living things improve.'*

At Fields School, too, children showed engagement and independence in their tasks, completing some without additional support. For example, when given free choice of the outdoor area, in Observation 4, children were able to demonstrate engagement and independence whilst using the structured equipment. Jasmine, Kieran, Louis and Mohammed were able to demonstrate physical skills by using the trampoline and the climbing frame. The equipment was not discussed prior to the children using it, showing that they were able to remember how to use the apparatus from previous experience. Bagot, et al (2015) suggest that the ability of a school playground to provide Attention Restoration will rely on various physical aspects of the space, including the size of the area, its design and the equipment available. Notably, the playground used in Observation 4 at Fields School contains a variety of play equipment, with different physical and social opportunities (such as multiple-user swing), which children showed engagement in. It also allows for children to play alone,

or next to other children, therefore providing opportunities for all children's social engagement. Ms Evans, at Fields School, recognised that children had opportunities to develop social skills whilst learning outside, stating that, *'they initiate hide and seek games with each other.'*

In Observation 6, when completing the race around the wooded area, all children showed engagement and wanted to be first. The children, supervised by adults, were able to complete the race without additional guidance. Sarah was proud of her achievements, shouting, '*I'm winning.*' Regan also was pleased with his performance, '*I did it!*' Whereas Qasim struggled a little with the physicality of the game, '*I'm going to sit down. I'm a bit hot.'*

When completing the mud painting activity, too, the children showed independent engagement. The class was asked to try mixing the mud themselves. Qasim and Regan were able to do this without support. Kelly, at el, (2022: 76) suggest that, through outdoor learning, the teacher's role 'shifts to one of observer and facilitator which offers opportunities for the emergence of different relationships and group dynamics.' Children also commented verbally on the activity, Qasim stated, '*the mud is on my hands.*' Sarah did not want to join in with the mud mixing (although she was happy to look at it), communicating her thoughts when offered the chance to mix the mud in the bowl, '*no thank you.*' Following the mud painting, children were allowed free choice time in the forested area. Children were able to demonstrate engagement and independence, for example, Regan chose to use the balance beams independently.

Other children showed engagement in the activities across the observations but needed additional support or encouragement from teachers in order to successfully complete the tasks set.

For example, in Observation 1, some of the children needed additional support when cooking. Whilst still showing enthusiasm and fascination, Ali and Bryan were given additional adult support and guidance when cooking. This included being reminded of the Fire Respect Position, as well as how to hold the skewer and how to turn the marshmallow to ensure even cooking.

In Observation 3, after being shown how to use a palm drill to drill holes in a piece of wood to create the wooden medallion, Ali was able to complete this task under supervision and guidance, but with minimal adult intervention. He was able to remember the safety requirements and correct use of the palm drill, as well as showing perseverance when the task took longer than he had initially thought, demonstrating attention to the task.

At Fields School, during Observation 5, once the children had heard the story, they hunted for the cakes hidden around the wooded area (as explained in the Observation description). The task was performed independently by some children, although some needed support in finding the cakes initially (and all were accompanied by adults, even if they were not supported in the task by them). Nadiyah and Paul were able to look for the cakes and pick them off the trees before putting them in their baskets, whereas Owen needed support in collecting his cakes.

In some activities, children were also able to demonstrate creativity by extending the task, or designing new opportunities. For example, after creating his pine cone person, in Observation 3, Ali was able to demonstrate creativity and leadership by designing a race between him and his peers, racing their pine-cone people between the trees. Ali decided on the route, who was racing and who won. The children involved in the race (peers with and without SEND) followed the ideas without question, allowing Ali to further extend his responsibility for this additional, independent activity.

At Fields School, in the mud painting activity, in Observation 6, children also showed creativity. Once the mud was mixed, all children used it to make marks on large sheets of paper. The children were given sticks to paint with, though some did find other objects to trial too, with Qasim commenting, '____ (teacher's name) *I've got a feather!*'

Following on from the mud painting, when children were given free choice in the woodland area, Qasim and Regan used the mud kitchen to develop their work with the mud that had been created as a whole class. They demonstrated an interest in the whole group activity that had taken place, as well as progressing their own skills in using the mud. They also showed creativity by using the mud for a different purpose, in a different outdoor zone. However, they did not verbally communicate with each other during this time.

8.1.3 Children communicating with peers and offering help and advice

In all observations, children were seen to be communicating with peers. Although this was not always verbal communication, there was evidence that social interaction was occurring between peers. Indeed, Akoumianaki-Ioannidou, et al (2016) suggested that schools that utilise outdoor learning, aligning to Attention Restoration Theory and encouraging children to spend time outside of their classrooms, see a positive impact

on children's social, as well as academic, physical and psychological development. At times, this was incidental talk, either loosely or un-related to the task the children were completing. At other times, talk was used by the participant children to offer advice, help and praise to their peers. This relates to the Social Constructivist theory of Vygotsky (1978: 88), who notes the link between children's progress and the power of learning within a social context, suggesting that 'children are capable of doing much more in collective activity.' Khan, et al (2020) agree, suggesting that Vygotsky's theory of Social Constructivism highlights the advantages of interpersonal connection – that adult support, alongside peer collaborative working, can promote progress.

Children also talked about the activities, in Observation 1, for example, children talked to their friends whilst waiting for their turn to cook. Ali and Bryan in particular demonstrated a fascination with the fire, they discussed the smoke and what this smelt like.

This was evident, too, during the Nature Scavenger Hunt in Observation 2, when the children communicated with both their peers and the teacher throughout. Cerys, for example, discussed what she was looking for with her peers and the teacher.

Also, when designing his pine cone person, Ali reflected on his work, choosing sticks that fitted with his design, and saying: '*I can't use them sticks, they're too big.*' Ali's discussions with his peers extended to design ideas, contemplating putting pine cones on top of each other and adding more faces - '*mine's got two eyes on each side*' which was a variation on the more humanistic faces created by the majority of children.

Communication was also seen at Fields School, demonstrating the social development discussed by Akoumianaki-Ioannidou, et al (2016), although this was not always verbal. For example, as children explored the equipment alongside each other,

they were able to demonstrate social skills in waiting for their turn in using the equipment and allowing others to use it at the same time. For example, Jasmine used the large swing with a peer. In order to use this shared use of equipment, which required a level of co-ordination between peers, a form of communication was developed. Jasmine and Kieran (who had not spoken whilst inside) sang, independently, without encouragement from peers or teachers. Jasmine, who was wearing a hat, was encouraged by teachers to orally communicate with her peers when other children tried to take it. This resulted in the use of indistinct grumbling and mutterings of '*no*,' with more of a physical response being used (Jasmine turned away from the other child). Mereweather (2015: 104) acknowledges the opportunities that the outdoor environment offers for social interaction, as demonstrated by Jasmine and Kieran, observing that, 'the outdoors…offers places for socialising, pretending, observing and moving, and these are much valued by the children.'

Ms Evans at Fields School noted that communication was demonstrated by the children during outdoor learning, suggesting that it provides opportunities for, *'Communication, chances for the children to work with each other in other areas.'*

Also at Fields School, during a hide and seek game (Observation 5) Owen showed engagement, verbally communicating with the group, '*let's play hide and seek!*' as well as smiling during this game. He was also able to verbally interact with his peers, calling out when he found someone, '*I found you!*'

Ms Evans commented on this during her interview, '*you get to see the children do different things, they initiate hide and seek games with each other.*' Grigg and Lewis (2016: 23) acknowledge the role of outdoor learning in the development of social skills, suggesting that an outdoor environment allows children to develop social opportunities with those they may not usually associate with. They explain that children in such

situations ‘can demonstrate courage and gain confidence in handling new situations and interacting with people outside their friendship groups.’

As well as communicating about the activities being undertaken, children were able to communicate to offer advice and support to their peers. At the start of Observation 2, for example, the children completed a hide and seek game. During this, they shared ideas for hiding spaces. David in particular showed reflection on his hiding space, ‘*I thought trees were a good hiding place, but I was found.*’ Cerys was also supportive, telling her friend that she would help her find a place to hide the next time the game was played.

Support for peers was also shown by David during the pine cone people task. There, he took a leadership role and showed his understanding of his environment by talking to peers about where to find the twigs, ‘*shall I show you where I found the small sticks?*’

In her interview, Ms Adams noted that the outdoor environment was one where children with SEND could ‘take a lead in what they are doing.’

Cerys, too, showed support for peers. Li et al (2018) and Becker et al (2017), note that there is a link between work in outdoor environments and developing social skills. During the Nature Scavenger Hunt, in Observation 2, the group tended to stay together as they explored the field. Cerys, in particular, took a role of responsibility in trying to keep the group together, ‘*keep up girls!*’ She also shared opinions about the environment, showing her ability to compare environments and warning her peers to be careful on the grass, ‘*some of the grass is really slippy, like ice.*’

Whilst making the wooden medallions, Ali volunteered to help others when he noted that his peers were struggling. He was able to demonstrate to peers how to use the palm drill to drill a hole, '*this is how I do it. I press down really hard.*' Bryan also demonstrated his understanding of the instructions given, encouraging others to sit in the correct position and sharing advice, '*hit it a little bit harder.*''

After completing the Leaf Printing, both Ali and Bryan praised peers' work. Ali was able to demonstrate pride in his work by showing his leaf print to peers, '*Look, that's mine and that's* ___*'s*'. Bryan, too, shared opinions about the work produced, choosing to praise his peers for their leaf prints, '*I think that's really good*.'

This support for peers was also evident at Fields School. During the Mud Painting (Observation 6), Qasim demonstrated social skills by ensuring that his peers had a place to sit, *'Do you want to sit down? There's plenty of room for you.'*

As Ms Dwight noted in her interview, this is typical behaviour seen in outdoor sessions, commenting that,

> *'It gives opportunities for developing social skills, which is really useful for our children. It gives them the chance to develop teamwork. Some of our children struggle with this, so it's a good chance for them to work on it.'*

Not all communication between peers was relevant to the task, and there was evidence of incidental talk and social interactions too. The opportunity to express opinions is aligned to children's rights as detailed in The United Nations Convention on the Rights of the Child, (1989), which stated that every child has the right to an opinion and to be able to express this freely. Opinions can be expressed in various

ways, including non-verbal communication such as play, physical actions, body language or drawings (Christensen and James, 2000; Lansdown, 2009).

For example, in Observation 1, once the children had cooked their marshmallows, and were eating their food (the toasted marshmallow in between two digestive biscuits), the participant children were very communicative with each other and other members of the class. These discussions were with different peers, including those without SEND – there was no segregation or grouping of children by skill or ability when the class was grouped for cooking. They commented about their food, saying whether they enjoyed it or not and gave appropriate and relevant opinions and observances, Ali, '*Have you tried it* (the marshmallow) *yet?*' Bryan, '*No, it's still too hot.*'

Children were also joking about the marshmallow on their faces and how sticky this was, as well as making situational jokes. Ali put a Spider-Man hat on his peer's head, then stated, '*look, there's a spider on your head!*'

8.1.4 Children recalling prior learning and planning for future learning

In all observations, children were able to demonstrate evidence of recalling prior learning. At times, this related to general outdoor learning approaches (such as the children recalling the outside procedures used), whereas specific learning was also recalled for some outdoor learning session (such as the Fire Respect Position). During some observations, children were also able to show consideration for future learning, discussing how they may alter their work in future. Akpinar (2016) suggests that children who spent a day outside, compared to those who spent a day in a classroom, were able to demonstrate higher levels of happiness and energy, which would allow them to focus on the tasks at hand.

When recalling prior learning in general, all children observed over all of the outdoor learning sessions were able to demonstrate recollection of key health and safety requirements of being outside. For example, all children returned to the teacher when called (though all were reminded of this at the start of the outdoor learning session, some through a hide and seek game) and, during Observation 4, children were able to recall how each piece of outdoor equipment should be used.

When considering specific recall, Ali, at River Primary, was able to demonstrate understanding about more activity-specific information. In Observation 1, when cooking, he showed he remembered safety aspects, such as the Fire Respect Position.

At Fields School, children were also able to recall prior learning. During the Little Red Riding Hood session, once all of the laminated cakes had been found, the children were asked to reconvene at the storytelling area. There they had to count how many cakes they had found (children had found between five and ten each). Nadiyah and Paul were able recall number facts and complete this with minimal support. Owen, however, needed help with number skills and counting.

During Observation 6, Sarah was able to talk about her exploration of the wood, recalling names of found items. She referred to a pine cone, calling it an acorn, but then corrected herself.

Ms Dwight noted that the use of prior learning was also adapted to support class management outside, commenting that, *'we developed a PE game that they already knew so they know when to come back. We remind them of this every time they're out.'*

Some children were also able to show consideration for future learning. For example, during the pine cone people task, David was able to discuss how he may adapt his character if he made it again, telling the teacher that, '*I'd put some arms on too,*' showing his ability to reflect on his work. The consideration for future learning is linked to directed attention, as this is required for evaluation of ideas (Williams, et al, 2018). Attention Restoration Theory posits that this is a limited resource, which can be replenished through time spent in an environment that provides soft fascination (see section 5.3). Notably it was only at the end of the session, after time had been spent in the natural environment, that David was able to reflect on his work and consider future opportunities.

8.1.5 Children showing an interest in the outdoor environment

Attention Restoration Theory proposes that natural environments, in particular, provide fascinating opportunities that support cognitive regeneration (Kaplan and Kaplan, 1989). Although Meidenbauer, et al (2019) suggest, through their research, that children prefer urban environments, the children observed still showed an interest in their natural surroundings. Despite any inherent preferences they may have for different environments, they can still show engagement in outdoor learning. Indeed, Ms Adams at River Primary discussed the gardening club, which as 22 members, and suggested that *'the children are protective over the garden.'*

During some observations, children were able to demonstrate an interest in the environment around them, as well as the activity that they were partaking in. This was

evidenced both as an observation connected to the activity, as well as incidental observations. These incidental observations were unrelated to the activity, but still captured the children's attention. For example, whilst completing the Nature Scavenger Hunt, during Observation 2, children made observations of their environment related to the task. David answered questions posed by the Forest School lead about what they were looking for, and also pointed out additional items that they found interesting (leaves, plants, evidence of animals).

Children at Fields School also made observations related to their task. When painting with mud (Observation 6), for example, without being instructed to, children decided to look around their environment for other objects to paint with, finding appropriate objects to use, such as feathers. The free time during this observation also allowed the children to explore the environment they were in. Notably, Sarah used binoculars correctly to explore the forest area. When asked by the teacher, '*What can you see?*' her response was '*I can't see any birds,*' showing that she was able to understand the question, interpret the information, look around her environment and provide an appropriate response.

Children also made incidental observations about their environment. During the cooking session at River Primary (Observation 1), for example, children were able to talk to their friends whilst waiting for their turn to cook. During this time, some children discussed the environment around them. For example, Ali moved seats because he did not want to sit by some insects he spotted on the logs near him. Bryan, too, spotted the insects, but showed an interest in them rather than moving away. Ali and Bryan discussed the insects with the class teacher.

At Fields School, when using the free choice equipment (Observation 4), some children instead chose to spend time exploring the environment. For example, Kieran, after using the trampoline alongside his peers, spent some time alone, walking around the playground, before watching a football game being played at the primary school next door, through the fence. Jasmine, spent time walking around the playground, but this was alongside one of the teachers. Louis, too, spent time staying close to the teachers, but did explore the climbing frame. Bagot, et al (2015) suggest that Attention Restoration can be evidenced in environments without natural elements as the environment itself is changed and the hard fascination of screens and artificial lighting is removed. Whilst Observation 4 took place outside, some elements were focused on more man-made equipment. Despite this, children were still shown to be engaged in the activities, exploring both the natural and man-made elements of the playground and the outdoor environment.

8.2 The interviews

The interviews took place in autumn 2017 (River Primary) and summer 2018 (Fields School). As described in the Methodology, three members of staff at each school were interviewed. Please see Table 20 for contextual details of staff participants. All interviews took place on the school site in an office, away from other members of staff and children, to allow for privacy of discussion.

Most interviews were recorded via a digital voice recorder and transcribed (please see Appendix I). One participant (Ms Adams) did not want to be recorded and so, in line with the ethical considerations detailed, detailed notes were taken during this interview (see Appendix I, Participant A).

Half hour interviews were scheduled per participant, although most interviews lasted for around 25 minutes.

Table 20: Staff details for interviews at each participant school

School	Staff Reference		
River Primary	Ms Adams (Class Teacher)	Ms Begum (Class Teacher)	Ms Clarke (Accredited Forest School leader)
Fields School	Ms Dwight (Class Teacher and Accredited Forest School Leader)	Ms Evans (Class Teacher)	Mr Fisher (Outdoor Learning Support Assistant)

8.2.1 Initial findings from interviews

Having analysed the interview transcripts for recurring themes, six main themes were identified. Though these were largely identified from the interviews through an analysis of repetition of key words and phrases, they also naturally align to the underpinning theoretical framework of Attention Restoration Theory.

The six main themes were:

- Children's interest or engagement in being outside
- Staff engagement and enthusiasm for being outside
- How outdoor learning affects children with SEND
- The links between outdoor learning and the curriculum

- The impact of funding, location and weather on outdoor learning
- Children's experiences of the outdoors at home

The findings in each of these areas are presented below and will be discussed in the following chapter. All references to 'children' are discussions of children in the school as a whole, not necessarily the participant children observed in the six lesson observations.

8.2.11 Children's interest or engagement in being outside

All six participants stated that the children in their schools were engaged with the activities outside. The comments could be further separated, with participants discussing what the children enjoyed about outdoor learning. Some participants acknowledged that the children simply enjoyed being outside, enjoying the different environment and being out of the classroom. For example, Ms Begum at River Primary stated,

> '*They love being outside and they love learning, just being out in the fresh air...*'

Ms Clarke (also at River Primary) agreed, suggesting that the freedom of choice afforded during outdoor learning was important,

> '*They're just happy to be out there because we give them time to explore… they're doing things they want to do and they're doing learning activities together, so they're quite happy.*'

This was true, too for the children at the special school. Ms Dwight at Fields School made reference to the children's enjoyment of the outside activities, including visits to local parks where they climb trees (there are no suitable trees for climbing on the school site),

'*The children love it and can't wait to go out.*'

However, as well as the basic enjoyment of being outside, it was also noted that children were able to develop their skills and understanding of the subjects being taught, as well as their general understanding of the world around them. At River Primary, Ms Adams noted that the number of children who showed an interest in learning outside had increased, and that they were gaining an awareness of their environment. She went on to suggest that the more children were engaged in an activity, the bigger impact it had on them, stating that,

'*They're more likely to eat the food they've grown themselves…*'

This was supported by Ms Begum, also at River Primary, who commented on the children's experiences of using the outdoor classroom to develop their own experiences:

> *'We're doing an under the sea theme at the moment the children have been using the sand pit as the beach and yesterday they wanted to make a beach tent so of course any resource that they can get their hands on they lead their own learning. Last week they had a music festival so they made a tent and camping and campfire so again it allows the children to go from their*

own experiences and their own interests so it's not sort of you've got to do that and you've got to do this.'

This development of skills was noted at Fields School too. Ms Evans recognised that the children were able to initiate games with each other, developing their own experiences. She acknowledged that,

'*It's an opportunity for them to show development of their skills.*'

Some participants also commented on the effect of the outdoor environment on the children's attitude. Research has suggested that use of the outdoor environment can support children's well-being, helping to increase levels of energy, attention and decrease levels of disengagement and challenging behaviours (Chawla, et al, 2014; Becker, et al, 2017). At River Primary, for example, Ms Adams commented that whilst certain aspects of being outside can be distracting, such as traffic (near the school garden and the local woodland used), the children still want to be there. Ms Begum, too, noted the impact of the outside, on the children's development. When asked what the positives and negatives of outdoor learning are, she identified that positives particularly affected the boys at the school, commenting that,

'*It's very stereotypical to say boys, but the boys just want to be outside and doing, they just thrive outside.*'

Ms Clarke, also at River Primary, noted that the children seemed more relaxed outside, stating,

> '*Some children you see the weight come off their shoulders when they get down there, their posture's a lot better, they stand up, it's as if they're not weighted down, as if they can just relax.*'

She went on to link this to preparing for SATs tests and academic progress, suggesting that learning outside provided a break from the pressures of desk-based learning in an environment demanding focus on aspects of hard fascination, such as an interactive whiteboard. Harris (2021) agrees, suggesting that time spent outdoors can 'have a positive effect on health, wellbeing, creativity, attention capacity and one's ability to connect with others.'

Similarly, at Fields School, it was noted that the outdoor environment allowed teachers to gain the children's focus, Mr Fisher suggested that it was always possible to get the children's attention outside, that they engaged with the activities. This was also discussed by Ms Dwight, who agreed that the outdoor environment could support children's attention, but that this required a deliberate approach by the teachers. She identified that the children's additional needs did impact on their attention when outside and that this was compensated for by adapting a known PE game into a recall game to support their understanding through familiarity and structure.

Ms Evans agreed, suggesting that she wanted every child to be able to try every activity and that this could be challenging due to changing expectations of staff depending on the activity,

> '*On the playground at lunch – they can do whatever they want and then we're asking them to follow instructions* (in the same environment)*. The change in rules can be difficult for them to follow…we always start with the spot game to help them distinguish what the rules are.*'

However, it was noted by participants in both schools that not all children enjoyed outdoor learning, as found in a previous study by Li et al (2018), who noted that some children showed an indifference towards social activities outdoors. At River Primary, Ms Begum noted the value of the Early Years approach, allowing the children to choose where they worked. She recognised that not every child enjoyed being outside and the free-flow indoor-outdoor approach where children are able to choose to work indoors or outdoors supported this. However, she went on to discuss Forest School (which is taught throughout the school and into year 6), when all of the children take part, regardless of their attitude towards being outside.

> '*When we troop off to Forest School, if you're not into it then it's not so much fun for you, but all part of life is experiencing things that you're not overly interested in or excited by…there's never really that many children that don't want to go.*' Miss Begum

8.2.12 Staff engagement and enthusiasm for being outside

All participants discussed the attitude of the staff towards outdoor learning, their approach towards it and how this can affect the sessions.

Some participants commented on the benefits that being outside brought to the children. At River Primary, Ms Begum stated that everybody was able to see the benefit of the children experiencing outdoor learning.

Ms Begum went on to suggest that, although some staff are more reluctant to take their classes outside, they are still able to see the benefit that these sessions have,

'*I think maybe some staff are a bit dubious maybe… I think even when there are reluctant staff they can see the benefit of it so it's really pro getting out there and being outdoors.*'

Ms Dwight, too, commented on staff reluctance, suggesting that some did show more reluctance than others. However, she also acknowledged that this has changed over time, and with more equipment being included in the outdoor area at Fields School, more staff are more willing to take their classes out.

Both Ms Dwight and Ms Evans suggested that a lack of understanding impacted on their willingness to lead learning outside. Ms Evans commented that she had not received training for leading outside education whilst at university, but has since developed in confidence. This is supported by Harris (2021) who notes that a lack of teacher confidence, due to lack of knowledge and experience, can cause a barrier to leading outdoor learning. Both staff went on to suggest how other staff could be supported, with Ms Evans suggesting that it would be helpful to share ideas between colleagues. Ms Dwight agreed, commenting that the staff would,

'*Have more interest if they can suggest their own ideas and see them inputted to the area*.'

However, other participants did acknowledge that some staff enjoyed outdoor learning. At River Primary, Ms Adams recognised that about half of the school's staff enjoyed leading outdoor learning. At Fields School, too, Mr Fisher noted that staff seemed to enjoy the outdoor learning sessions, suggesting that they sounded enthusiastic.

8.2.13 Supporting children with SEND

The aim of the interviews was to elicit participants' beliefs and consider the experiences of children with SEND in relation to outdoor learning without any leading statements; for this reason, participants were not asked directly about children with SEND. Follow-up questions were designed to direct participants towards consideration of children with SEND, if they had not been mentioned in the main answer to the question. However, all participants commented on how pupils with specific needs responded to outdoor sessions so the follow up questions were not required.

For example, at River Primary, Ms Adams commented on a pupil with dyslexia, suggesting that activities in the outdoor environment, being non-literacy based, allowed him to access the learning on an even basis with his peers, suggesting that the pupil had seen the outdoor environment as one where he could take a lead in his own learning, an approach supported by Kelly, et al (2022; also Mereweather, 2015) who suggest that outdoor learning supports children's independence in developing their own learning experiences. She went on to discuss the impact of a low literacy based lesson with other pupils, suggesting that children who struggled with reading were willing to read, for example, plant labels when outside.

Ms Begum agreed, suggesting that children with SEND take advantage of the different learning that they experience outside,

> '*We see children who are very insular come out of their shells; children who are reluctant talkers, suddenly you can't stop them talking when they're in the forest*.'

This was a view shared by other participants too. The opportunities found in the outdoor learning activities are seen to impact on the confidence and approaches of

children with SEND. For example, Ms Clarke suggested that the children who struggled with desk-based learning were able to show progress when working outside as the activities were more hands-on and practical. Guardino, et al (2019) agree, suggesting that children with SEND are less distracted and more on-task when working in an outdoor environment.

As well as impacting the academic progress, participants commented on how outdoor learning affected the behaviour and social skills of the children with SEND in their schools.

At River Primary, Ms Adams identified that children with identified behavioural needs are able to focus more outside. She spoke particularly about a pupil with ASD whose special interest was gardening, which was provided for through the outdoor learning opportunities, throughout his time at the school.

Ms Begum, too, discussed outdoor learning in relation to children's social and communication skills,

> '*I think it does allow children with communication difficulties to thrive because I think they learn new ways of communicating and new vocabulary opens up to them, in perhaps the ways that the walls of a learning room wouldn't…*'

At Fields School, too, the influences on social skills were noted by participants. Ms Dwight recognised that outdoor learning provided opportunities for developing social skills, and teamwork. Kelly, et al (2022) support this, suggesting that outdoor learning offers opportunities for different group dynamics. Ms Dwight expanded on this, highlighting the use of the outdoors to help provide a calming, restorative environment for a pupil with specific behavioural issues,

'*He could break sticks, it helped him to calm. Being in the environment was calming and we used it as a reward*.'

Also at Fields School, one consideration was the practicality of supporting children with physical disabilities and mobility needs. Ms Evans discussed the outdoor area, which had recently been updated to provide a path to make wheelchair access easier.

However, it was also acknowledged by Ms Begum at River Primary that outdoor learning could also prove to be challenging for some children with SEND, particularly if they have needs which relate to a predictable environment or routine. She commented that,

'Every child is different, so a child who is quite happy for an environment to be unpredictable the way a forest would be or (enjoys being) to be outdoors, then again the children with SEND thrive in the same way that any child who adores the outdoors would. However a child that needs stability, needs those four walls needs that simple environment of a table, then obviously they're not going to enjoy it as much.'

Li et al (2018: 75) support this point, suggesting that some children with ASD are indifferent to the social opportunities of the outdoor environment as they are 'indifferent to other people or activities in the parks.'

8.2.14 Links to the curriculum

Most participants discussed the links between outdoor learning and the curriculum, with a number of comments relating to how the outdoor area has been used to support a range of subjects.

For example, Ms Begum highlighted the range of activities in use at River Primary, suggesting that her Early Years class had a wide variety of equipment and opportunities, including art, junk modelling and music. She also discussed the current focus on maths, using outdoor ball games to develop counting and adding skills.

Ms Clarke too, noted the use of the outdoor environment in supporting a range of learning across the school,

> *'We get the children's imagination fired up… it just sort of helps in literacy… because they talk about these things in their own stories. (in KS2), we look at the science curriculum… but we still do creative elements to that as well, like the year 4s have been learning about adaptations, we've looked at different nests and we've given them challenges to build nests and see how difficult it is to build a nest and evaluate it… I've done maths as well in the woods, we've done measuring trees and working out the ages of trees, so it's very cross-curricular.'*

This was true, too, for Fields School, where teachers will use the outdoor environment to support their curriculum learning. For example, Ms Dwight stated that the outdoor area is used to support maths, by counting the fish in the pond as well as habitat studies, looking at the local wildlife. This is supported by Green and Rayner (2020: 240) who acknowledge the transformative nature of the outdoor learning space, commenting that outdoor learning can 'transcend subject boundaries…making tangible links to numerous subject areas or disciplines.'

The approach of using the outdoors to teach a variety of subjects was also explained by Ms Evans,

'*Anything in class can be done outdoors – it's another classroom*.'

Other comments related to the use of the outdoors to provide additional elements of curriculum learning. For example, at Fields School, Physical Education (PE) conducted outdoors tied in with the physiotherapy that was being implemented for some children. Outdoor learning linked to the curriculum was also seen to support other skills, such as observation. At Fields School, Ms Evans noted that outdoor learning helped support the children's independence and developed their skills in observation, communication and teamwork.

This was referenced, too, at River Primary where Ms Clarke suggested that children did not view the activities outside as curriculum work. Instead, it was the reflection on their learning that helped to identify the skills and understating they had gained,

'*I don't think they see it as work, they are learning they've done the activity, later on it will all click… but it's so much fun they don't realise that they are learning.*'

However, participants did note that one negative aspect to outdoor learning was the impact that planning for sessions outside had on the curriculum overall. This is a concern noted too by Green and Raynor (2020), who suggest that the curriculum is overcrowded and moving lessons outdoors can be a challenge. Staff commented about the added planning input that use of the outdoor environment brings. At River Primary, both Ms Adams and Ms Clarke referenced the amount of work needed to set up an outdoors project. Ms Clarke commented that,

'*There's so much in the curriculum that you've got to fit in that sometimes staff are thinking we could be doing reading or writing but I think they've*

found through the years, they've found they can address it through the outdoor learning. But sometimes there is a worry with staff that they have got other things they've got to get done and they've got targets.'

8.2.15 The impact of funding, location and weather on outdoor learning

The impact of three key elements was raised by all participants. The need for funding, difficulty in finding a suitable location and inclement weather were identified both as a barrier and an impactful element of leading outdoor learning.

With regards to funding, participants at both schools identified that this affected the types of activity that could be provided.

At River Primary, Ms Adams identified that budgets are very limited. She recognised that there is enough funding for smaller items, but that anything larger, such as a shed, would require additional fundraising. She did identify that schemes were running around the country, to support children with learning about food at local chain restaurants, but again, funding would be an issue with regards to transport.
Ms Begum, too, identified funding as a concern, suggesting that Government funding was prioritised for desk-based learning and tests rather than on expanding the outdoor learning opportunities across a school. Harris (2021) too, notes that equipment constraints can impact on the type of outdoor learning that can be provided.

At Fields School, too, funding was identified as a concern. Mr Fisher and Ms Dwight identified it as the most challenging aspect of outdoor learning, but recognised that the school was adapting by reusing and repurposing indoor equipment.

The location of the school and its access to outside provision, too, was raised as an issue.

Ms Begum at River Primary suggested that they were lucky as their outdoor area was directly linked to the classroom, allowing the children free-flow access between the two areas. She also recognised the value in having easy access to the school field, as well as a local wood, comparing this with other schools who have more challenging access to a green open space.

Ms Clarke expanded on the use of the local woodland, recognising that the school had to choose the sites they used carefully, for safety reasons, as the woodland was also accessible to the public.

She went on to discuss the possibility of conducting outdoor learning in any area,

> '*If you're passionate about it you can do it on your school grounds, you can include outdoor learning wherever you are, so it just depends on your own passion and your own enthusiasm for it*.'

Location was raised, too, at Fields School. There, it was suggested by Mr Fisher that location can prevent certain activities. He commented that it is challenging to conduct some activities, such as looking for sticks, where there are no trees, and that the environment in itself, in this way, can cause a barrier to outdoor learning.

The issue of weather as impacting on outdoor learning was only raised by participants based at Fields School. There, the discussion based around the effect of the weather on the children's ability to go outside, as dressing for the weather is challenging for the children.

Mr Fisher suggested that the children are more reluctant to go outside in inclement weather. He also commented on the length of time it takes to prepare children for outdoor learning if it is raining. However, Ms Dwight and Ms Evans noted that, despite this, inclement weather can be a positive experience for the children.

> '*We have to be ready for weather so making sure the children have the wet weather clothes on is a challenge, it takes a lot of time but it's good for them.*'
>
> Ms Dwight

Ms Evans agreed, suggesting that,

> '*If it's raining it takes ages to get wet weather clothes on – it eats into the time we have but it helps the children with dressing skills.*'

Despite the challenges that the weather can bring, it was also noted that weather damage can provide opportunities. Ms Dwight recalled that a snowstorm had destroyed a canopy, which then needed replacing, and that a tree was brought down in another storm. However, the tree was cut up and the logs used to create the seating area, also addressing the budget concerns.

Despite the challenges of funding, location and weather, Ms Clarke was able to identify that these are all surmountable obstacles,

> *'I would think they (people with less enthusiasm) would throw up barriers like we've got no money, we've got no equipment, but you can get round it. I mean there are outdoor people aren't there… but like I say, if you've got enthusiasm and passion for it and you see the benefit the children get from it you'd know how worthwhile it is to them so…'*

8.2.16 Children's experiences of the outdoors at home

The outdoor experiences of the children at home was also raised as an issue by a number of participants.

Some participants identified that, at home, children may not have access to outdoor environments. This can be for a number of reasons. For example, Ms Adams acknowledged that some of the children's gardens at home could be too small to provide space for exploration of the environment or gardening projects, which instead could be achieved at school. She went on to suggest that outdoor learning at school can help to foster a community spirit, as parents volunteered to help with the outdoor learning. Harris (2021) agrees, suggesting that children today are spending less time outside than previous generations. He suggests that outdoor learning at school 'hold the greatest potential to provide children with access to the natural environment' (Harris, 2021: 2).

Ms Begum, too, identified the limited experiences that some children have out of school, suggesting that some children were provided with opportunities at school that they had not had at home,

> *'There are some children I would say that have never walked through a wood until they come to school and walk through the wood with us. Some of our children's experiences are narrow and therefore it allows them to experience them to experience it to learn new vocabulary, gives them opportunity to learn in different ways and to just find out about their world which is really important.'*

The lack of experience at home was also addressed by Ms Clarke, who suggested that this may be due to the increased use of computers and technology in the home. She went on to suggest that the use of games consoles and television allowed parents to know where their children are, as well as providing an easier option, with regards to parental input, than taking them outside,

> *'Parents work, they've got constraints on their time but… you know, it is easier for the child to be at home in front of the television and sometimes you see a different side to the child if they get out because they've not had this experience before. You know, it's sometimes just a wow feeling for them.'*

At Fields School, too, lack of home experience was raised by Ms Dwight. She noted that the children were not always taken to different places by their parents and by utilising outdoor learning, the school was able to provide different experiences.

8.3 Observations and Interviews

The observations and interviews identified a number of aspects. Notably, some of the themes that were identified from both the observations and interviews were similar and can be related to each other.

For example, both observations and interviews raised the consideration of the children's (and staff's) engagement with the activity, being identified both through the children taking part and developing activities themselves and through the staff discussion about children's enjoyment of being outside.

The themes of 'Children responding to instructions and following teacher questions' and 'Children recalling prior learning and planning for future learning,' identified

through the observations, and ‘The links between outdoor learning and the curriculum’, identified through the interviews, can also be considered collaboratively as they relate to the development and demonstration of subject knowledge.

The theme ‘Children communicating with peers and offering help and advice,’ drawn from the observations, aligns with the interview theme ‘How outdoor learning affects children with SEND.’ Both elements identified the social and communicative opportunities brought about through outdoor learning for all children.

Finally, both ‘Children showing an interest in the outdoor environment,’ identified in the observations, and ‘Children’s experiences of the outdoors at home,’ identified in the interviews can be linked as they discuss the interest the children have in the outdoor environment, with the interviews proposing possible reasons for this.

The one theme that did not align to others was the interview theme, ‘The impact of funding, location and weather on outdoor learning.’ The impact of these aspects was not evident during observations (although it should be noted that all observations took place, by chance, on warm, sunny days) and no children made reference to the space they were using or the equipment that was available. In itself, this is interesting. As one of the most prevalent discussion topics during interviews, the fact that there are not obvious outdoor learning barriers to children suggests that any areas that can be adapted so as not to affect learning are not obvious to the children.

8.4 Discussion

The research questions were:

- In what ways do two primary schools in the West Midlands provide Outdoor Learning experiences for children with SEND?
- What is the role of Outdoor Learning in supporting the needs of children with SEND in primary schools?
- How useful is Attention Restoration Theory as an interpretative tool/framework in enabling us to understand the ways in which outdoor learning supports the needs of children with SEND in primary schools?

These will each be taken in turn for consideration.

8.5 In what ways do two primary schools in the West Midlands provide outdoor learning experiences for children with SEND?

To answer this question, it should be acknowledged that the evidence from my research indicates that, in the participating schools, outdoor learning is happening for children with SEND. In the two participating schools in this study, children with SEND were included in outdoor activities and the learning opportunities witnessed allowed all children to make progress.

The outdoor learning provision provided at both River Primary and Fields School was very different in terms of available resources, topics, activities and locations (whilst all observations took place on the school sites, the areas available for use were varied – please see figures 2 to 15). However, all provision allowed the children to develop in understanding of the subject and topic being taught, as well as building opportunities

for developing social skills and independence. Whilst this looked different at each school, the outdoor activities allowed children to develop at a pace and level that was appropriate for them. James (2018: 70; also, Martin, et al, 2015 and Kelly, et al, 2022) highlights the importance of children developing at their own pace, stressing that this is vital for children to be able to 'acclimatise themselves to the sensory and physical environment around them,' engaging with the outdoor setting and the soft fascination that this provides. This varied pace was seen at both schools. For example, children with SEND developing social skills through engagement with the outdoor environment at River Primary included them creating and leading made-up games (races between trees) with their class; they also advised and supported peers with their work (explaining how to create the pine cone people, advising where to find resources), taking a leading role in supporting learning for a variety of children. Bilton (2014) suggests that, for some children, the outdoor environment can be conducive to developing assertiveness and imagination. At Fields School, the social skills the children demonstrated did not involve direct collaboration with peers but did include verbal and non-verbal communication, for example, when using a two-person swing, and peers exploring the wooded area alongside, rather than with, each other.

No children were excluded from any activity and all showed engagement and some progress (academic and social) in each observation (though academic progress was not the focus of this study, it was demonstrated through the use of questioning, relevant comments by the children and the work produced; social progress demonstrated through the observation of interactions and communication between peers). Through the discussions with staff participants, it was clear that whole class participation in outdoor learning was true for all classes in the schools (not just those

being observed), and that all children were included in all outdoor learning sessions, despite some additional challenges that may be faced. For example, at Fields School, Ms Dwight and Ms Evans highlighted the practical considerations for children with physical needs accessing outdoor spaces. They discussed the tarmacked paths to the wooded area that had been developed to support children using wheelchairs and walkers – whilst the main pathway was already in place, they discussed the desire to make more of the paths in the area clearly defined. Equality of access is also highlighted in River Primary's SEND Information Report (2021), which states that risk assessments and staff expertise is in place to ensure that pupils with SEND are able to partake in all outdoor activities Collins and Ferri (2016) suggest that teachers have a responsibility to ensure that all children have equal access to all elements of education (aligning to the Equality Act, 2010 and the UN Conventions on the Rights of the Child, 1989) and that, rather than differentiating activities to support pupils to achieve according to able-bodied activities, all abilities should be provided with the opportunity to excel according to their own talents.

The staff at both River Primary and Fields School recognised the opportunities outdoor learning can bring. There was a developed cohesion and approach to outdoor learning evident in both schools, evidenced by the examples of outdoor learning sessions taught and discussions of past experiences (Kruse, 1996). Key aspects that were identified from the interviews highlighted that some staff are more reluctant than others to lead outdoor learning, but this was largely linked to the weather, or the setting up of larger scale projects:

'…everyone has a bit of a 'oh no it's raining on Forest School day…' we all do that, but we go out whatever the weather unless it's torrential and terrible.' Ms Begum

'There are some who don't like the cold weather or the rain but on the whole they do like going outside and getting involved.' Ms Clarke

Staff at Fields School, however, did comment on the benefits of outdoor learning when it is raining, suggesting that, whilst getting the children ready in wet weather clothing is a challenge, it is beneficial for them as it allows them to practise practical life skills. This approach is evidenced in the school's Teaching and Learning Policy (2021), which states that the interactive curriculum, including outdoor experiences, provides pupils 'with a wide range of learning experiences and opportunities to extend and consolidate knowledge, understanding and skills and to achieve and progress in all areas.' This is also supported by Harris (2021) who acknowledges that one barrier to outdoor learning is supporting children in dressing quickly in wellington boots and waterproofs. However, Harris (2021: 6) does go on to state that 'over time…these issues were resolved as pupils and teachers became more familiar with what was required.'

When it is dry and support is available, staff were reported to be happy to be outside with their class, offering them a range of different activities, therefore ensuring that outdoor opportunities were provided on a regular basis. Ms Dwight noted that, at Fields School, there was some initial reluctance to engage with outdoor learning, but this was due to a lack of resources,

'Staff were reluctant to start, but there was nothing outside. Now, as the area is more developed, people are happier.'

These thoughts were echoed by Ms Evans, who commented on the development of the outside space and that the area is now '*a safe space.*' Dennis, et al's (2014) research agrees, suggesting that when teachers are able to understand the purpose of outdoor learning, and the environment being used, the enthusiasm for outdoor classrooms develops.

All participants at River Primary commented on the fact that they felt 'very lucky' to be at the school and they acknowledged that what happened there did not always happen in other schools (outdoor learning being included in timetables from Nursery through to Year 6, exceeding the statutory requirements identified in the National Curriculum (DfE, 2013). They felt they were more engaged than other schools in the area were when considering outdoor learning.

Indeed, the presence of outdoor learning in Government documentation focuses on the Early Years (in the Statutory Framework for the EYFS, DfE, 2021b), and, as seen in section 3.12, is only mentioned in passing within the current National Curriculum (DfE, 2013) for Key Stages 1 and 2 (notably in geography when using fieldwork, and Physical Education considering the use of outdoor activities). The use of outdoor learning across the different year groups and classes, by both River Primary and Fields School is not one that is required by any legislation, regardless of the benefits that research shows it can bring. This resonates with examples seen in international settings. For example, in Denmark, a school reform of 2014, required children to be active for at least 45 minutes per day, which, although not directly required to be

activity outdoors, did support the development of outdoor learning (Passy, et al, 2019). However, similar to the position in England, any decision on implementing outdoor learning still rests with individual teachers and schools (see section 4.2.51).

Whilst the National Curriculum does not specifically detail the inclusion of children with SEND in outdoor learning, the United Nations Conventions on the Rights of the Child (1989) does highlight the need for all children to have access to equality of education, stating that, a disabled child should have 'effective access to and receives education…in a manner conducive to the child's achieving the fullest possible social integration and individual development...' (UNICEF, 1989: 8). The Equality Act (2010), too, addresses tackling discrimination against children with special educational needs or disabilities and requires that settings made reasonable adjustments to support children to prevent disadvantage compared to their peers. The inclusion of children with SEND in outdoor learning, across both participating schools and seen in all observations demonstrates that, within these schools, provision for all children is embedded. This study adds weight to the value of providing these opportunities to children with SEND.

Throughout all observations, children demonstrated engagement with the outdoor tasks (see section 8.1.2), taking part in activities, discussing with peers and asking and answering questions. In the adult-led, more structured activities, at both schools, this was still evident although children were generally guided or led by adult instruction. Indeed, in a study of outdoor classrooms, Dennis, et al (2014: 42; also, Kelly, et al, 2022) highlight that 'children in natural settings were…more relaxed, focused, engaged, cooperative, creative, nurturing and happy compared to children in indoor

classrooms,' supporting the proposal of Attention Restoration Theory that use of the natural environment enables engagement and refocussing of attention.

Whilst children were not observed indoors as part of this study, children outdoors were seen to be engaged in both schools. Time spent in nature should be a key part of education in order to support children's 'cognitive development, psychological and physical health…' (Li, 2018: 299). This is supported by the Statutory Framework for the Early Years (DfE 2021b), which states that outdoor activities should take place on a daily basis.

The activities seen across all observed sessions in both schools aimed to allow children to develop skills across a range of subjects, this was shown through engaging with the environment on the scavenger hunt (science and geography), cooking food on the fire (DT), creating art work through leaf printing, mud painting and making pine cone people (art), counting found objects (maths), running around a course (PE), and free choice with time to engage with peers (PSHE). This contradicts Maynard and Waters' (2007: 260) research, which found that outdoor learning was focused around the core subjects as 'parents have high expectations – they think in levels, you have to read by the age of five.' Instead, the skills seen across both schools, whilst including aspects of numeracy, literacy and science, did not purely focus on these. Instead, in both schools, all children were seen to be developing social skills and independence, alongside more practical and artistic opportunities. It is encouraging that schools are focusing on the foundation subjects, as well as core. The focus of the current OFSTED Education Inspection Framework (2019) aims to develop a more broad and balanced curriculum, developing children's skills and understanding of a wider range of subjects

(as well as English and maths) and the development of the wider curriculum in outdoor learning may be something that is seen more in years to come.

Staff participants too, commented on the range of activities that outdoor opportunities were used for. Some activities are based around themes used in class (for example, Peter Rabbit and World War II were linked to growing vegetables in River Primary and children hunted for Little Red Riding Hood's cakes to count in Fields School), providing cross-curricular links to wider learning and topics being studied, in order to support children's understanding and progress across a range of subjects through Social Constructivist learning. Indeed, the outdoor learning sessions observed at both schools demonstrated links to subjects including maths, English (Little Red Riding Hood activities), art (Leaf Printing and Mud Painting), Design Technology (Pine Cone People, Cooking marshmallows) and Personal, Social and Health Education (opportunities across all sessions to work with peers and develop social skills during free time, as well as building opportunities for independence), as well as providing practical geographical understanding of the children's local environment. These examples are resonant of international examples of outdoor learning, for example, the SCOPE programme in Zimbabwe (see section 4.2.53) encourages children to learn about growing food through English, maths and science and then puts their knowledge into practice in the school garden.

The outdoor environment is also used for a number of science activities, work investigating wildlife and habitats for example. This was observed during the Nature Scavenger Hunt at River Primary. Staff participants at schools also commented on the use of the outdoors to support science lessons. For example, Ms Clarke discussed the activities in River Primary stating that,

'It starts to be more on the science (in Key Stage 2)*… if it's plants and animals or habitats we focus on more around that but we still do creative elements to that as well…we've looked at different nests and we've given them challenges to build nests and see how difficult it is to build a nest and evaluate it, how could they make it better.'*

This was true, too, for Fields School, where children also focus on wildlife and habitats,

'(We) do pretend fishing in the pond, counting fish. We look at the wildlife in the area – frogs, robins…there's a cat who is a visitor and the children like to see it.' Ms Dwight

James (2018) highlights the benefits of exploring locations with children, suggesting that they see environments in different ways – that somewhere familiar to one person can become something different in another's eyes. Similarly, the visiting wildlife can take on a different role or meaning to children with SEND, providing an additional depth to the location, turning it into a shared space between the children and animals.

Staff recognised how the outdoor learning sessions can be embedded within the curriculum to support the children with SEND academically. Ms Adams noted the apparent lack of enthusiasm from children with SEND for reading but recognised that they did read plant labels whilst outdoors. It could be suggested here, that the more relaxed environment, allowed the children to focus on aspects that may seem overwhelming in class.

Ms Clarke agreed, stating that children who find academic, desk-based work difficult are able to achieve more whilst outside as the learning is more practical, supporting

the aims of The Equality Act (2010), by providing reasonable adjustments to support children's learning. Guardino, et al (2019) agree, suggesting that the outdoor environment supports children with SEND's focus, commenting that children are more on task outside. The removal of the hard fascination of the classroom allows children to refocus and reenergise, allowing them to participate in the learning, even text-based work, in a more relaxed environment.

James (2018) suggests that the outdoors allows teachers to set certain boundaries, but also provides an element of freedom, allowing children to take ownership of the area and to feel comfortable in the environment. However, the changing expectations and rules about using the same space at different times and for different reasons can be challenging for children who benefit from clear instructions and routines. At Fields School, this was a particular challenge for the children with ASD,

> *'It's different on the playground at lunch – they can do whatever they want and then we're asking them to follow instructions. The change in rules can be difficult for them to follow.'* Ms Evans

To support the children, a clear start to a session outside, in the form of the spot game, was always used. Martin, et al (2015) agree with this approach, suggesting that the use of sustained instruction is beneficial for children with SEND, and will support them in developing and understanding routines. Whilst children would be able to refer back to prior learning and understanding about a location, the varied uses of one place for multiple purposes can be challenging to relate to. Tiilikainen, et al, (2019) suggest that Constructivism is an internal process, allowing children to use prior learning to support new experiences and activities. Whilst this can be beneficial in many situations, as

seen during the fire safety talk at River Primary, it can also cause confusion when children may be recalling information from the same location but a different context. The use of a Social Constructivist approach, however, will enable children to be supported by peers and adults, whilst still maintaining independent learning and construction of knowledge.

Another method used to highlight and clarify expectations in the environment was to encourage the children to take part in the organisation of the activities. For example, children were asked to help carry equipment outside. Whilst this was observed at River Primary, with a range of children, including those with SEND participating, it was not seen at Fields School. However, Ms Dwight at Fields School noted that children do enjoy helping carry equipment outside, supporting the development of responsibility and community amongst peers. A routine such as this, which can be associated with outdoor learning will also help to develop familiar procedures and practice for outdoor learning, which will be supportive and reassuring to the children who benefit from familiarity. For children who are diagnosed with ASD, for example, this may be related to the routine and fixed ideas that are typical of the condition. James (2018: 106) comments that 'once a single meaning is attached to an object or situation then this meaning is likely to become fixed', suggesting that once the instructions for using the mallet, or getting ready to go outside, have been communicated, then that is what children expect to happen, and for their peers to follow these instructions too.

It is recognised that outdoor learning encourages informal communication and provides varied opportunities, particularly of non-literacy based work, for different groups of pupils, including those with SEND, to allow them to express themselves and,

subsequently, to develop more social interactions (Purdy and McGuckin, 2015; McCusker, 2017), as was evidenced in the observations, as well as discussed in the interviews. The focus on developing social skills through outdoor learning is seen in New Zealand, too, where outdoor learning is a key area of learning, aiming to develop pupils' personal and social skills (Remington and Legge, 2017). The development of social skills is seen in the participating schools; Ms Evans, for example, commented on the communication seen outside, suggesting that there are opportunities for children to work together in a different environment (to the classroom). From her experience she felt that children are able to learn in a more focused way outside as it is quieter and more peaceful than in the classroom. Kelly, et al (2022) agree, stating that the outdoor environment allows for children to develop different relationships and group dynamics.

The soft fascination provided by the natural environment allowed the children to refocus and restore their attention, away from the harsher environment of the indoor classroom. This can be supportive, particularly for children with ASD who may find it challenging to 'filter out other input from your thoughts or the environment around you' (James, 2018: 26). The soft fascination of the outdoor environment will allow them to focus on the tasks set rather than being distracted by the noise and artificial lights of the classroom.

The outdoor learning allowed children who enjoy being outside and who may benefit from tangible, 'real life' experiences to engage more with the learning topics through more practical examples, or in a more natural learning environment (Kaplan and Kaplan, 1989; also, Kelly, et al, 2022). Ms Clarke at River Primary noted that staff have

developed their use of the outdoor spaces and are now able to adapt a range of lessons so that they can transfer learning to the outdoor environment. Ms Evans noted similar aspects for Fields School, suggesting that the outdoor area's versatility and different zones, supports a range of different needs and activities, such as collecting twigs, mark making and planting seeds.

The different zones mentioned provide many of the exemplar areas identified by Kaplan and Kaplan (1989) and Joye and Dewitte (2018) in supporting renewed focus (see Figure 1). The pond, campfire, areas of vegetation and 'the motion of the leaves in a breeze' are all proposed as those which provide soft fascination (Kaplan and Kaplan, 1989: 192). Dennis, et al (2014) highlight the benefits of the water, suggesting that its presence, in its sight and sound, is calming.

Using Constructivist and Social Constructivist lenses when observing outdoor learning allows consideration of children learning through experience, being able to relate to prior learning and being supported by adults and peers, rather than being provided with information. Ms Begum, at River Primary, discussed this point during her participant interview, suggesting that outdoor learning:

> *'…allows the children to go from their own experiences and their own interests so it's not sort of you've got to do that and you've got to do this.'*

Independent learning and Social Constructivism was also evidenced in the observations, for example, at River Primary, Ali set up and engaged peers in a pine cone people race and at Fields School, when given free use of the woodland area, Qasim and Regan were able to engage with the space collaboratively and independently. Kelly, et al (2022: 76) note the development of children's

independence when learning outside, suggesting that children can, ‘experience more freedom.’

The practical nature of outdoor learning can also support children in relating the information learned outside to other curriculum areas (Knight, 2016; Grigg and Lewis, 2016). For example, at River Primary, classes grew vegetables as part of their topic on World War II, which then also developed their understanding of plants. Knight (2016: 99) links this to Forest School, highlighting that Social Constructivism is ‘the underpinning paradigm’ of the programme, aiming to develop children’s adaptable skills and understanding. The additional links made between subjects, and to practical examples, can support children’s developing understanding of a range of subjects, and helps to support those who may struggle with purely theoretical or desk-based learning, as seen through the SCOPE programme in Zimbabwe. At Fields School, for example, as part of a literacy lesson on Little Red Riding Hood, children developed counting skills by hunting for (laminated pictures of) cakes in the woodland. This activity also helped develop directional language as children were using, following and understanding language associated with location (up, down, left, right) to find the cakes.

Couch, et al (2014) suggest that little research exists currently about the experiences of marginalised young people in general. However, by using more informal learning opportunities, such as outdoor learning, not only can marginalised voices be heard but disengaged pupils and children with SEND will have a greater opportunity to develop their social, peer and group working skills, demonstrating their abilities, which, in a more formal setting, may not be as dominant. The relaxed outdoor environment, as

purported by Kaplan and Kaplan (1989) supports this engagement. Interviewed participants identified that, when children are outside, they are more willing to open up to the adults with them, sharing opinions and providing answers that they may not be willing to risk in a more formal classroom environment. Green and Rayner (2020: 248) agree, suggesting that, when outside, children show 'increased participation…heightened understanding…and a preparedness to participate without fear or getting an incorrect answer.' Ms Begum noted that children who were more insular are more willing to talk when learning outside.

Ms Clarke, too, suggested that,

> *'It (outdoor learning) works a lot for the children who find academic work difficult, they flourish in that environment because the challenge is things they can achieve and it's hands on and it's practical, so we see what…we see a different side to children when we take them out.'*

Researching more into outdoor learning with those marginalised voices therefore suggests that we will hear more about the lives and experiences of those who may otherwise not be heard.

8.6 What is the role of outdoor learning in supporting the needs of children with SEND in primary schools?

All children observed, at both schools, took an active role in the outdoor learning sessions, taking part in all activities. At times, this was at odds with their engagement and interest shown during indoor lessons, as reported by their class teachers. Children who did not have confidence in the classroom took a lead role outside, supporting, directing and giving instructions to others, for example, as seen demonstrated by

Cerys during the hide and seek game and the Nature Scavenger Hunt; Ali, who led a pine cone person race amongst his peers; Owen, who encouraged his peers to play Hide and Seek during Observation 5 and Qasim who ensured that his peers had somewhere to sit at the log seating area at Fields School during Observation 6.

Children in both schools were able to demonstrate leadership through the outdoor activities. Staff in both schools noted that this was typical of the behaviours seen outdoors. Ms Begum recognised that developing independence is often evident in outdoor activities at the school, stating that the children use,

> *'Any resource that they can get their hands on. They lead their own learning.'*

Fox and Wirth (2015; also, Kelly, et al, 2022) support this suggestion, arguing that resources provided for children should be open-ended to encourage and enable imagination. This also aligns to the aims of the United Nations Conventions on the Rights of the Child (1989) by ensuring that children with SEND are able to progress to 'the fullest possible social integration and individual development...' (UNICEF, 1989: 8).

Ernst (2013; also, Waite, 2017), suggests that encouraging children to develop an interest in the environment supports children who have low self-esteem or poor social skills. Ernst (2013) notes that low self-esteem and poor social skills are attributes that are often associated with children with SEND, thus suggesting that outdoor provision is key not only to mental health and well-being but in supporting self-esteem with the

more vulnerable pupils in school. As was noted in the interviews, the staff see an increase in confidence when learning outside, for example, Ms Adams commented,

> *'One of year 6 was dyslexic, he saw it as an environment where he had control, he had a lead in what he was doing and could give direction. It boosted his confidence.'*

James (2018: 39) agrees, suggesting that one of the central ideas behind Forest School, for example, is to raise 'learner's self-esteem through achievable challenges,' with children able to make constructivist links to prior experiences and build on their knowledge. The positive experiences of being outside in a calm environment will support children's growing confidence (Sackville-Ford and Davenport, 2019). Maynard and Waters (2007: 257) too, comment that outdoor experiences help children develop 'confidence in themselves…'

Warden (2015: 35) suggests that outdoor activities are often seen as a 'lesser space' with regards to education, that the main, and therefore important learning, takes place indoors and that outdoor learning is an add-on to more important, desk-based education. In New Zealand, this is being addressed through moves to ensure that outdoor learning takes place as part of the school day, to ensure that it is embedded, rather than added on to the curriculum (Waite, 2017). It is therefore reassuring that the children observed seemed happy and keen to be outside and learning outdoors – they did not vocalise (or demonstrate in other ways) that they saw the outdoor learning sessions as 'lesser' or not important. Ms Evans agrees, commenting that,

'One child just wants to run all the time – when we're outside it allows him to run around in a structured way. It gives independence and develops skills.'

Indeed, in all of the sessions observed, all children demonstrated an initial interest in the activity. They listened to the given instructions about being outside (how long they would be outside for, what to do when the whistle blew, who they would be working with) and the activity they were undertaking (what equipment was available, what they were going to be doing), as well as completing any actions required (carrying equipment, sitting in certain places, following the fire safety expectations). This engagement continued into the activities themselves, with children demonstrating a prolonged fascination, both with the activities planned, as well as with the outdoor environment, completing tasks and discussing the environment around them (see sections 8.1. 2 and 8.1.5). As Sivarajah, et al (2018; also, Kaplan and Kaplan, 1989) note, the soft fascination provided by more natural environments, and outdoor spaces, allows for children to regain their focus.

Children also extended the learning beyond that which was planned. For example, their natural interest in the outdoor space led to questions and considerations of the environment, Cerys made observations about the grass being slippy during the Nature Scavenger Hunt, demonstrating her cross-curricular understanding by likening the slippiness of wet grass to that of ice. Sarah, too, was able to consider the outdoors when using the binoculars during Observation 6 – although she was unable to see any birds, she did demonstrate knowledge in habitats and wildlife by looking in the trees for them. Exposure to outdoor environments can be supportive of mind wandering, allowing children to apply constructivist approaches to their learning, making

connections between ideas, applying new and prior learning to different contexts (Williams, et al, 2018). This ‘spontaneous formation of associations between previously unconnected ideas’ is proposed by Williams, et al (2018: 36) who also suggest that creativity, stemming from natural environmental experiences is underpinned by Attention Restoration Theory. In the examples given, this manifested in some of the children linking wet grass to ice because of the slippiness, and recognising the different animal habitats in a woodland.

All of the interviewed participants commented on the differences staff see in children once they move to an outdoor environment. Children *'come out of their shell'* and some *'insular children are more willing to talk'* (Ms Begum). Waite (2017) states that the outdoor environment allows some children to excel in a way that the indoor cannot. The use of Social Constructivist teaching approaches, with the teacher facilitating learning, rather than leading all aspects of sessions, allowed children to develop independence when learning outdoors (Tiilikainen, et al, 2019; also, Kelly, et al, 2022). Ms Dwight agrees, highlighting that outdoor learning provides children with the opportunity to become more independent. Ms Dwight also noted the impact of the outdoor environment in particular on one boy with behavioural needs, claiming that 1-1 outdoor visits ‘*helped him to calm.*’

Participants also recognised the benefits of using the outdoor spaces to impact upon the mental health and well-being of the children, suggesting that the outdoor environment affected this. At River Primary, for example, Ms Clarke commented,

'It (outdoor learning) *improves the children's mental health. Some children, you see the weight come off their shoulders when they get down there… as if they can just relax.'*

Though Harris (2021) notes concerns over losing control of class behaviour as a barrier to outdoor learning, the supportive nature of the outdoors is identified by Maynard and Waters (2007) who argue that the less constrained environment of the outside allows children to move away from confrontation, which then impacts positively on reducing frustration and building more positive relationships (see further information on the impact of the outdoors on behaviour in section 4.4.11c). This was evidenced during Observation 4, when some children tried to take Jasmine's hat from her. Rather than this leading to a confrontation, Jasmine was encouraged, by the class teacher, to tell the children to leave her alone. She was also able to remove herself from the situation by moving to a different part of the playground.

White and Stoecklin (1998) and Li (2018), too, suggest that time spent in natural environments both supports a general feeling of well-being and reduced stress, as well as aiding the development of imagination and creativity, evidencing the soft fascination purported to be provided by natural environments (Kaplan and Kaplan, 1989). Indeed, during the observations, children were seen to show collaboration with peers, there were no incidences of behavioural challenges during any of the six observations that were carried out.

Ms Adams also noted that using the outdoor spaces had an impact on children with negative behaviour in class, stating that,

'Some children with behavioural difficulties enjoy making things, they like the compost heap and birdwatching, you see differences in them outside.'

This was especially evident in responses from Fields School. Ms Dwight noted that the outdoor environment supported children's ability to work together and develop teamwork, enabling children with SEND to work with and alongside peers through use of shared equipment and group activities, such as hide and seek.

The provision observed supports children's development as required and directed in the United Nations Conventions on the Rights of the Child (UNICEF, 1989), which highlights the need for children with SEND to have access to provision that supports their academic and social development and the CoP (2015: 92), which states that children 'are entitled to an appropriate education…(that)…should enable them to: achieve their best.'

The limited experiences of children outside of school were also highlighted. Participants commented on the fact that some children,

> *'Have never walked through a wood until they come to 'River Primary' and walk through the wood with us.'* Ms Begum

This was particularly true for the children at the special school. Ms Dwight noted that the children,

> *'Don't always have that chance (to develop independence) at home, parents sometimes don't take them to many places so they can experience different things here.'*

Providing different learning activities through outdoor learning will, therefore, offer a wider range of life skills to a generation of children who may otherwise not have the opportunity to experience them. Indeed, it is noted that the current generation of children spend less time engaged with nature than previous generations (Harris, 2021).

Rather than outdoor experiences, children may, instead, be exposed to other opportunities at home,

> *'I don't think a lot of children do get outside. They go home and the technology is there…it is easier for your child to be contained at home in front of the screen rather than to take your child out into the environment…sometimes you see a different side to the child if they get out because they've not had this experience before.'* Ms Clarke

This is supported by Louv (2005) and Grigg and Lewis (2016) who comment on the loss of childhood and the limited outdoor experiences that children have today. Their time is filled by directed attention - screens (whether the whiteboard at school or the computer or television at home) offer no respite from objects of hard fascination. Kaplan and Kaplan (1989: 182) suggest that, without the opportunity to step away from busy, artificial environments, mental fatigue will result. They explain that, 'the struggle to pay attention in cluttered and confusing environments turns out to be central to what is experienced as mental fatigue.'

Participants also felt that children with SEND related to communication issues (participating children at both schools were diagnosed with different communication difficulties. Sp&L was evident at River Primary and, at Fields Schools a number of the

children were non-verbal) were more willing to talk outdoors. Becker, et al (2017: 485), agree, suggesting that outdoor learning 'improved team-working and communication skills.' Ms Begum at River Primary suggested that the outdoor environment allows children who may have communication difficulties to find different ways of communicating and making use of new vocabulary.

At Fields School, too, Ms Evans commented,

> '*Anything in class can be done outdoors…communication, chances of the children to work with each other…some learn better outside.'*

The willingness to communicate, both verbally and otherwise, was one of the main themes that were identified from the observations (please see section 8.1.3), demonstrating that children were often more able and willing to communicate with peers and adults when outdoors.

8.7 How useful is Attention Restoration Theory as an interpretative tool/framework in enabling us to understand the ways in which outdoor learning supports the needs of children with SEND in primary schools?

Attention Restoration Theory proposes that engagement is recovered through time spent in environments that provide 'fascination,' 'being away' (from usual spaces), 'compatibility' (the participant showing an inherent interest in the new environment) and 'extent' (connectedness with the new environment) (Kaplan and Kaplan, 1989).

The use of Attention Restoration Theory as an interpretive approach in this research, a lens to see the research through, has allowed for the consideration of the use of the

natural elements seen in outdoor learning. How have the schools made use of the natural environment to contribute towards learning? Whether this be the soft fascination of the tangible elements, such as plants, trees and grasses or the wooden log seating areas used at both schools, or the weather itself – the breeze and natural sunlight, the outdoor environment has been fundamentally linked to the learning experienced.

8.7.1 Soft fascination

Outdoor learning observed at both schools demonstrated the use of soft fascination. Bingley (2013: 137) suggests that the light, winds, colours, sounds and smells of a natural diverse landscape, such as a woodland, will support soft fascination as it 'is found to be restorative, in comparison with a fatiguing, forced 'directed attention or 'hard fascination'…such as loud repetitive noise, harsh visual patterns and so on.' Williams, et al (2018: 39), agree, proposing that the natural environment allows rest from 'effortful preparation' of a task, allowing engagement and focus to be restored.

This was seen in the mud painting activity at Fields School, which allowed children to physically interact with natural elements of water and soil. Children were engaged with this activity, focused on the natural elements they were using, working alongside each other to mix the mud and then paint with it.

At River Primary, too, the soft fascination of fire engaged the classes when cooking, children listened to guidance, asked and answer questions and were able to recall safety instructions from previous sessions. The Nature Scavenger Hunt also allowed children to fully engage with the outdoor environment, identifying elements of flora and fauna on the school field. Chawla, et al (2014) and Li (2018) suggest that being outside is beneficial for children's well-being, contributing to a more positive mind-set and reduced stress.

8.7.2 Being away

The 'being away' component of Attention Restoration Theory relates to the act of being elsewhere than the usual space. As Kaplan and Kaplan (1989) identify, for many, natural environments are no longer the norm, and so, being in and engaging with more natural elements will be considered as 'being away.'

Staff participants acknowledged the opportunities that being away from usual learning environments provided. Ms Evans suggested that the outdoor learning sessions at Fields School provided *'something different.'* She commented that,

> *'You get to see the children do different things…It's an opportunity for them to show development of their skills.'*

Mr Fisher agreed, suggesting that, '*Lots of kids get bored of being inside*.'

Outdoor learning observed at both schools supported this suggestion that the change in environment allows for renewed focus. Moran (2019: 36) suggests that the component of 'being away' allows for a 'departure from attentionally-fatiguing activities achieved by…taking a break from usual contexts and activities.'

Children at both schools demonstrated interest in and made observations about their learning environment, and engaged in opportunities provided by the outdoor environment, but not directly related to the learning activity. For example, during the cooking session at River Primary, Ali discussed the environment with Bryan, commenting on the insects they could see. Ali also responded to his environment, moving seats to distance himself from the insects. Bryan, too, spotted the insects, but showed an interest in them rather than moving away.

At Fields School, too, children reacted to their change in learning environment by engaging in opportunities unavailable during indoor lessons. During the free choice outdoor learning session, some children instead chose to spend time exploring the environment. For example, Kieran watched a football game being played at the primary school next door, through the fence.

8.7.3 Compatibility

The element of 'compatibility' in Attention Restoration Theory notes the ease with which one aligns to the new environment – how well we feel we fit and can relax. The compatibility of the outdoor environment for the children at both participating schools was noted by the staff participants.

At River Primary, Ms Adams noted that, for a child with dyslexia, the use of the outdoor environment gave him a feeling of control as he could take a lead in activities, this, in turn, boosted his confidence.

Ms Begum agreed, suggesting that the more informal learning outdoor environment supports those more reluctant talkers, who feel more able to communicate outside, making use of new ways of communicating and new vocabulary, a proposal supported by Becker, et al (2017) who note that outdoor learning supports children's opportunities to develop communication skills .

The same was true at Fields School. Ms Dwight and Ms Evans recalled pupils who had specific behavioural needs. The use of the outdoor environment allowed them to engage with more physical behaviours. One child took the opportunity to break sticks, which facilitated in calming his emotions. Another enjoyed running, and made the most of the greater space outside to '*run around in a structured way'* (Ms Evans).

Moran (2019) suggests that compatibility is personal, and the fit between individuals and the environment are dependent on the needs and inclinations of those individuals. It is interesting, therefore, that there was no element of negative response to the outdoor learning sessions seen in any of the observations by any of the participating children. At times, participating staff acknowledged that some children may prefer a classroom,

> *'A child that…needs those four walls needs that simple environment of a table, then obviously they're not going to enjoy it as much.'* Ms Begum

It should be noted, though, that these were theoretical examples. No actual examples of a lack of enjoyment were provided or seen in this research.

8.7.4 Extent

Extent refers to what the restorative environment is like, the comfort that it is able to provide for the user. By providing an environment which offers no unexpected element, it enables the user to feel at ease and able to restore attention, engagement and focus.

When considering the organisation of outdoor learning for children with SEND, perhaps one aspect that is worthy of note is how the pupils' habitus impacts on their feelings and comfort when using the outside spaces in school. If the children understand the outside space to be part of their learning environment, one which is familiar through its repeated and frequent use, then they are more accepting of it as one of their known places. It is the unfamiliarity of the place which can lead to disquiet amongst those who favour the reassurance of the known. The more the outdoor

environment is used, far from it being an unknown, foreign location or becoming routine, and therefore, uninspiring, it becomes familiar and safe. If children are familiar with an environment, there will be fewer unknown or unusual aspects that demand their directed attention. Fox and Wirth (2015: 3), suggest that 'a wild, untouched natural environment might seem overwhelming at first. A more organised and accessible natural environment can allow children to feel safe.' Indeed, this was true for children at Fields School, where the outdoor environment was used to support behaviour management with a pupil who found it to be a calming environment.

James (2018) identifies the benefits of a familiar environment for children with conditions such as ASD, who can feel anxious in unfamiliar situations. The use of known areas, such as school grounds or a local environment can support children's feelings of ease and support engagement (Moffett, 2000; Rickinson, et al, 2004 and Harris, 2021).

Extent was demonstrated in both schools in their use of outdoor learning. At Fields School, Ms Dwight noted that the familiarity of the location can cause challenges for children who are required to use the same space for different reasons. At lunch and play times, children can use parts of the outside space freely and are confident in doing this, however, there are set rules and expectations for the same space during outdoor learning sessions. The challenges of this are overcome by utilising a familiar PE game to start every outdoor session, helping to identify the expectations. Martin, et al (2015) comment on this, suggesting that there are benefits of utilising a sustained routine approach for activities.

At River Primary, too, Ms Clarke noted the benefits of engaging with a familiar environment. She commented on the approach used at the school to utilise outdoor

learning across all year groups, from Nursery to Year 6, thus enabling children to develop familiarity with their school site, and the local woodland used by the school. She stated that outdoor learning was supportive, particularly for *'the children who find academic work difficult,'* commenting that these children can meet the practical challenges of outdoor learning.

Regardless of the children's needs, both schools were able to adapt the environment activities and approaches used, to ensure that all children in the class were able to access the learning and make progress in academic understanding and personal/social skills. Khan, et al (2020b) support this view, stating that, when learning takes place in outdoor environments, children are able to show progress. Bilton (2014: 8) suggests that, if a particular location is one where children feel at ease, 'it seems logical to teach them in that area.' The techniques used showed that changes, either school-wide, such as the development of paths, or individual, relating to one pupil or class, such as clear direction or use of a routine, can enable all children with SEND to be catered for in the outdoor environment.

The following chapter draws together the evidence in a Conclusion. The data gathered is considered to answer the initial research questions, reflections are made on choices made in the research, and limitations of the study are considered. Implications for practice and/or policy and possible directions for future research are outlined.

Chapter 9 Conclusion

9.0 Introduction

As identified, there has been very little research undertaken considering the experiences of children with SEND in outdoor learning (Chawla, et al, 2014; Quibell, et al, 2017 and Li, et al, 2018). This study has identified that, despite this lack of visibility in existing research in the area, children with SEND are included in outdoor learning in the participating mainstream and special schools. In the outdoor learning sessions observed, it is noted that children are able to engage with the learning, demonstrating social connectedness with peers, as well as leadership potential and academic ability, including referring to prior learning and relating learning to different contexts.

The change in environment, from one utilising the hard fascination of technology and illuminated by artificial lights to one of soft fascination, fresh air, natural lighting and vegetation also appears to support children's engagement, allowing them opportunity to encounter different sensory experiences. The outdoor environment allows children to reset their engagement, the change in location providing variation to the day and allowing children to be away from their day-to-day learning environment. As noted by Ms Begum, the outdoor environment allows children to access different experiences

> *'it allows them to experience it to learn new vocabulary, gives them opportunity to learn in different ways and to just find out about their world...'*

This is supported by Stavrianos (2016: 420) who states that, 'we know that direct contact with the natural environment has positive consequences for mental and

physical health.' Li, et al (2018: 77-78) too, note the benefits for children to be exposed to a natural environment, suggesting in their research that parents of children with ASD 'realised that children needed to experience the world to reach their full potential.'

9.1 Reflections on choices made in the research

9.1.1 Underpinning theoretical framework

Previous research has made use of different theoretical approaches to support practitioners in understanding how children with SEND can be supported through outdoor learning. For example, Li et al (2018: 72) considered Stress Recovery Theory, which details that 'exposure to nature yields positive affective and physiological responses,' as well as Attention Restoration Theory. Whilst Stress Recovery Theory supports stress reduction through exposure to natural environments, this is largely considered as side effect of 'immediate positive affective responses induced by (unthreatening) natural settings' (Joye and van den Berg, 2011: 262) In this way, Stress Reduction Theory differs to Attention Restoration Theory which proposes that restoration itself is achieved through exposure to natural environments.

Collado and Staats (2016), meanwhile, consider the use of Behaviour Setting Theory, noting, in particular the theory's use of spatial interdependence, suggesting that the same location can be used for different purposes. Whilst this theory would be relevant for consideration of the outdoor space for different roles (as discussed in section 8.5), the theory is not specifically related to outdoor learning or discuss the relationship between the natural environment and engagement or restoration.

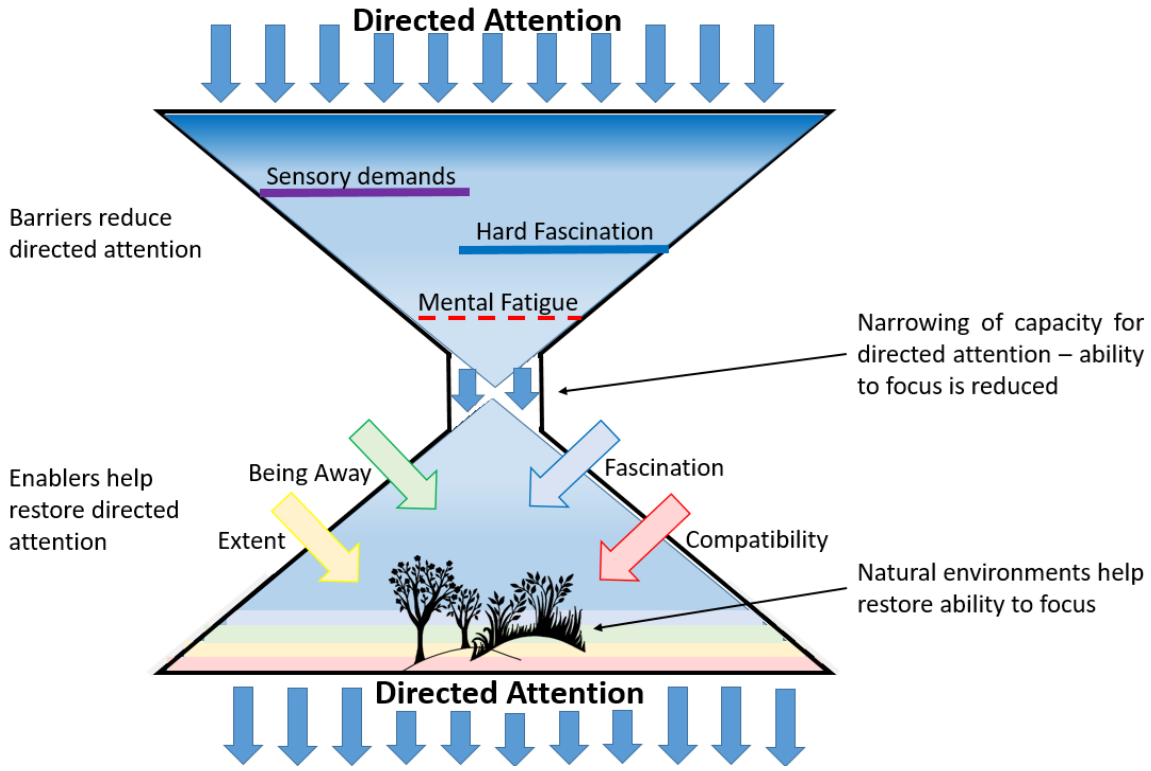
The underpinning theoretical framework of Attention Restoration Theory has not previously been widely used when researching with primary school-aged children and has only been seen in a limited number of studies (Chawla, et al, 2014; Sivarajah, et al, 2018). It has only been used once when researching with children with ASD (Li, et al, 2018 – a non-school based study) and has not been used at all when researching with children with a range of SEND. This research is original in its chosen theoretical approach when researching with the identified participants.

Attention Restoration Theory was chosen due to its strong connection to the opportunities afforded by outdoor experiences. When conducting interviews as part of the pilot study, participants noted that children seemed more relaxed and engaged during outdoor learning sessions. This suggested that all four elements of Attention Restoration Theory were being met through outdoor learning at the school. Children felt comfortable, engaged and were confident in being away from their usual teaching space.

Attention Restoration Theory is appropriate and relevant in considering the experiences of children during outdoor learning sessions due to the consideration of the use of outdoor spaces seen in the theory and the focus on how an individual's attention can be redirected (restored) during time spent in a natural environment. Using this theoretical lens allowed for the identification and consideration of the benefits of outdoor learning for children with SEND in relation to their learning and, more broadly, their sense of well-being. Attention Restoration Theory should be considered for future research into supporting children with SEND's experiences in outdoor learning, as it focuses on renewed engagement. As many barriers are raised when planning outdoor learning (see sections 4.4.11 to 4.4.11e), if it can be highlighted

through Attention Restoration Theory, that outdoor learning can support engagement and learning, the case for providing outdoor opportunities is stronger. The pictorial representation was devised to support understanding of the little-known theoretical approach, and to demonstrate the impact of a more natural environment.

Figure 1: A pictorial representation of Attention Restoration Theory (interpreted for this study from Kaplan and Kaplan's (1989) definition)



9.1.2 Methodology

Including children with SEND in educational research does present some challenges, for example, an outside researcher being invited into a lesson can cause anxiety or

confusion for some children, although, it should be noted that this was not seen during the observations. The experiences and feelings of some children may be challenging for a researcher to gather, due to limited communication, or reluctance to communicate with strangers, amongst others. However, it is important to represent these children's voices and their experiences and for researchers to recognise the value of these if educational policy and practice is to ensure that the needs of all children are met during their time in the education system. As identified by James, (2018) and Li, et al (2018), there can be challenges and concerns for children with SEND in learning outdoors. These concerns, as well as the positive, celebratory achievements seen in outdoor learning deserve to be acknowledged and recognised through research, particularly when this is already being represented in research for children without SEND. The observations were conducted in an unobtrusive manner. This allowed the researcher to act as a non-participating observer, so as to avoid impacting or affecting the independent and typical actions of the participating children.

The use of staff interviews allowed the research to include views from those organising the outdoor learning sessions. Individual Interviews provided confidentiality for each participant to discuss their thoughts and feelings about the use of outdoor learning within their school. The semi-structured approach chosen allowed for the interviews to have a series of set questions, to facilitate comparative analysis between the interviewees, but also allowed participants to answer questions according to their own understanding, as well as focusing on areas important to them (Cohen, et al, 2018).

While it would have been interesting to further develop this by including the thoughts of the children experiencing the outdoor learning, both the schools and I felt this would not have been in the best interests of the children involved in this study. The participant

children all have SEND and conditions such as anxiety; interviews, conducted by an unknown person about outdoor learning when children were not taking part in an outdoor learning session, may have been confusing or cause anxiety.

9.1.3 Limitations of the study

This study was a small-scale research involving two schools (a mainstream and a special school) and limited numbers of classes in each setting. Whilst the research gained from observations of the participant children in outdoor learning sessions was beneficial to understanding how children with SEND respond to outdoor learning, this could be further developed. The participant children present with conditions including ASD, VI, speech and language difficulties, global delay, difficulties with fine and gross motor control and specific learning difficulties (predominantly dyslexia). Therefore, they cannot be representative of children with SEND who may present with other needs or diagnosed conditions. There were no children with physical mobility difficulties included in the study and this would be an interesting inclusion, to consider the adaptations that may be needed to support children who use, for example, walking aids or wheelchairs. Fields School had noted that a tarmacked path had been created to enable children to access the outdoor area, but this was not seen in use in observations.

Time constraints were also in place and each school was visited for three observations. It would be interesting to see how children respond to outdoor learning sessions over a longer period of time. All observations also took place during sunny, dry days. Both schools acknowledged that they undertook outdoor learning during any weather conditions, and observing outdoor learning sessions in wet or cold weathers may provide an interesting comparison to those carried out.

However even given these limitations, the study generated some important findings that have the potential to be of use to children with a wide range of SEND in various school contexts. These are that all children can be included within outdoor learning, the participants in this research were able to engage in all set tasks and work with and alongside other to complete these. Children with SEND were able to recall prior learning, including health and safety requirements, although these were developed by the schools to be repeated, in order to provide a consistent approach when learning outdoors. When engaging in outdoor learning, children with SEND were able to show leadership and innovation, sharing ideas with peers and creating new opportunities other than those provided by their teacher.

9.2 How can schools be best supported with providing outdoor experiences for children with SEND?

There are noted benefits and barriers to providing outdoor learning for children with SEND. When considering barriers, schools note the challenges of access, weather, behaviour and health and safety concerns.

The concerns over access to suitable outdoor locations for outdoor learning for children with SEND can be addressed through the use of more local locations. James (2018) suggests, for example, that for those with elements of attachment disorder or ASD, a familiar environment, reducing anxiety about unknown settings, may be more supportive.

Weather is often raised as a barrier to outdoor learning, though Gould (2012: 5) suggests that the ‘changing and variable weather should be seen as an opportunity’ and one that can help develop independence, if children are asked what equipment they need to be outdoors at different times and in different conditions (Beames, et al, 2012).

An area often raised as a barrier is concern over pupil behaviour outside. contrary to teacher concerns, Maposah-Kandemiri, et al (2009), Dennis, et al (2014) and Chawla, et al (2014) suggest that children are more relaxed and engaged when learning outdoors, and the lack of walls and noise limitations outside can also benefit children with noted poor behaviour. James (2018) agrees, suggesting that, for children with ASD, the outdoor environment is not constraining, allowing them the freedom to move around as they wish.

Health and safety of learning outdoors is often cited as a barrier has been raised as a concern (Louv, 2005, O’Brien, 2009 and OFSTED, 2008). However, other research suggests that certain risk is important in developing children’s independence and confidence. For example, if children are not exposed to stinging nettles, and taught how to deal with these, how will they manage in their future when they are faced with more serious risks (Maynard and Waters, 2007; Harris, 2017; Harris, 2017 and Barlow and Whitehouse, 2019). The supportive environment provided by school outdoor learning would therefore seem a beneficial opportunity for children with SEND, who may have difficulty in aligning theoretical risks and environments to the real world, to experience low-level risk experience in a safe space.

Whilst these can be highlighted as areas to overcome, the participating schools were able to demonstrate how they have managed to embrace these challenges. For example, Fields School saw inclement weather as an opportunity for the children to

practise putting on wet weather clothes and dressing themselves, despite some of the children being more reluctant to go outside in the rain, it provided opportunities for developed independence. Staff participants at Fields School recognised the opportunities that poor weather can bring, noting that a tree that was brought down in a storm was used for additional seating.

Staff at Fields School also acknowledged the benefits of the outdoors in supporting children's behaviour, suggesting that the outdoor environment allowed children to engage with more physical behaviours, such as running and breaking sticks. At River Primary staff also noted that behaviours were supported through outdoor learning, suggesting that children with identified behavioural needs are able to focus more outside through the use of more practical activities, such as gardening.

River Primary highlighted how the barrier of health and safety concerns can be overcome, commenting that health and safety awareness was demonstrated during the cooking session, and ensuring that children are aware of, and follow, the fire safety rules and can demonstrate the Fire Respect Position before cooking.

When considering the barrier of access, both participating schools were able to use their own site for outdoor learning, though did make use of local sites too - Waite (2007); Moffett (2009); Grigg and Lewis (2016) and Dolan (2016) highlight that outdoor learning does not have to take place away from the school site, acknowledging that all sites will have a suitable location within walking distance.

The close proximity of location to the school may also benefit children with SEND who may have concerns and anxieties about learning in outdoor environments due to the unknown and unpredictable nature of the outside. Harris (2017); James (2018) and Li,

et al (2018) note that children may feel anxious about learning away from their classroom in an unfamiliar setting. However, there is little research that considers the benefits of outdoor learning for children with SEND or, considers how they can be supported when learning outside. Indeed, in this research, considering the experiences of children with SEND when participating in outdoor learning, there was no element of negative response seen in any of the observations by any of the participating children.

One issue raised at both participating schools was that often, children have little time outside when away from school. This is supported by Grigg and Lewis (2016) who state that children, on average, spend around one hour per day outside, compared to their grandparents' generation, who would average three hours outside every day. One reason proposed for this is the increased interest in indoor entertainment, such as computers, as well as concerns about safety outdoors (Grigg and Lewis, 2016; Louv, 2005). This can be counteracted through increased parental opportunity to be involved with outdoor learning through the school. For example, Ms Adams noted that some parents attend school to support outdoor learning sessions, and that this fosters a community spirit amongst participants. The opportunity to engage with outdoor learning can also support parents' understanding. Li, et al (2018: 77-78) note that, following engagement in research, parents of children with ASD 'realised that children needed to experience the world to reach their full potential.'

The two participating schools demonstrated that it is possible for all children to be included within outdoor learning activities, and that all children are able to show progress (both academic and social). The schools supported the inclusion of children with SEND in outdoor learning by ensuring that the sessions and activities planned

allowed the children to develop their own understanding, as well as allowing them opportunities for developing social skills and independence. Whilst this study did not aim to focus on children with SEND's academic progress, both this, and social progress was shown, and linked to the schools' planning activities that allowed children to develop at a pace and level that was appropriate for them (Martin, et al, 2015; James, 2018).

Whilst some additional challenges may be faced for some children, such as the practical considerations for children with physical needs accessing outdoor spaces, these can be overcome (for children using wheelchairs and walkers, a tarmacked path had been added to the outdoor space). Teachers have a responsibility to ensure that all children have equal access to all elements of education (aligning to the Equality Act, 2010 and the UN Conventions on the Rights of the Child, 1989) (Collins and Ferri, 2016).

9.3 Implications for practice/policy and direction of future research

One area that was not fully developed through this study was the opportunity to understand outdoor learning for children with physical difficulties and disabilities. Whilst the participant children in this research were able to access the outside space with no physical challenge, a study into how children with physical difficulties access outdoor learning would show a different experience of the outdoors and could consider how these challenges can be met. Whilst this would be an interesting next step to research, in Fields School, this would involve working with children who do not respond well to outside visitors. A different approach to research would therefore be

required, either spending more time with the children, or developing research working alongside their class teacher, who they would be familiar with.

Despite outdoor learning being part of the Statutory Framework for the EYFS (DfE, 2021b), there is no statutory requirement for children in Key Stages 1 or 2. The research shown here demonstrates the benefits of outdoor learning for children with SEND, including social connections, ability to show engagement, and the development of independence. It provides new empirical evidence to support the need for a change of practice for children with SEND in relation to outdoor learning. There is, therefore, a case to be made for schools being required to provide children with SEND with outdoor learning opportunities on a regular basis. For policy makers, the intention of this thesis is to highlight the opportunities for progress provided for children with SEND through outdoor learning, it will contribute towards providing empirical evidence to the limited but growing field of evidence for future educational policy to include outdoor learning for all primary children. One barrier that has been raised to providing outdoor learning for all is the issue of funding. Staff participants at both schools raised this as a concern, and a lack of funding has the potential to restrict outdoor learning opportunities (Harris, 2021). At River Primary, Ms Adams recognised that there is enough funding for smaller items, though larger pieces of equipment would require additional fundraising. She did identify that schemes, run by supermarkets, were sometimes in operation, but these were not consistent. Ms Begum suggested that Government funding was prioritised for desk-based learning and tests rather than outdoor learning opportunities. Similar thoughts were echoed by staff at Fields School. Mr Fisher and Ms Dwight identified funding as the most challenging aspect of outdoor learning, but, similar to River Primary, recognised that the school was able to address some needs by reusing and repurposing equipment. In order for outdoor learning to

be accessible to all primary children, additional Government funding would need to be made available to ensure schools can provide appropriate equipment for on-site outdoor learning, or be able to travel to a suitable location.

For practitioners, the intention is to demonstrate that outdoor learning is both possible for children with SEND (whether in a mainstream or special school) and also beneficial in supporting social and personal development. Whilst staff participants at both participating schools recognised that some staff were reluctant to lead outdoor learning, all could still see the benefits of taking children with SEND outside. Staff enthusiasm and confidence was also developed with this was reduced by access to more equipment and increased experience (Harris (2021). It is the intention that outdoor learning, as well as dedicated time spent in natural environments, should be recognised as a supportive approach, aiding the well-being of children with SEND in special or mainstream primary education.

9.31 Summary of contributions of the research for policy makers, practitioners and the theory around outdoor learning and Attention Restoration Theory

Policy

For policy makers, this research highlights the opportunities that outdoor learning can provide for children with SEND (including social development, engagement in learning, and independence, as well as opportunities to support academic progress). It provides new empirical evidence to suggest that there is a case to be made for policy and practice change. It supports the proposal that schools should be required to provide children with SEND with outdoor learning opportunities on a regular basis.

Practice

For practitioners, the intention of this research is to highlight the opportunities (social, personal and academic) afforded through outdoor learning for children with SEND, and to demonstrate how this has been achieved at a mainstream and a special school. It identifies that, whilst some staff may be reluctant or inexperienced in leading outdoor learning, enthusiasm and confidence can be developed through access to more equipment and increased experience (Harris (2021).

Theory

The use of Attention Restoration Theory as the theoretical framework in this study is novel. It has not been used previously when researching with children with a range of SEND or in relation to outdoor learning in primary schools. Attention Restoration Theory was chosen due to its strong connection to the opportunities afforded by outdoor experiences, as it considers the use of outdoor spaces and how an individual's attention can be redirected during time spent in an alternative (ideally natural) environment. Attention Restoration Theory should be considered as a theoretical approach for future research into outdoor learning for children with SEND as it focuses on renewed engagement. If the use of Attention Restoration Theory highlights that outdoor learning can support engagement, the case for providing learning opportunities outside is stronger.

9.4 Conclusion

This research is particularly timely. Following Covid-19-related extended indoor or limited outdoor periods, a ‘Summer of Play’ was proposed in 2021 as an opportunity to enable children to re-engage with the world outside of their own homes, including allowing children to experience wider social engagement (PlayfirstUK, 2021). The group suggested that prioritising outdoor opportunities would enable children to ‘recover from the stress that the past year has placed on them…children should be encouraged and supported to spend time outdoors, playing with other children and being physically active’ (PlayfirstUK, 2021: 1).

An updated version of the Statutory Framework for the EYFS (DfE, 2021b), as well as Development Matters (DfE, 2021a), the non-statutory guidance for EYFS came into effect in September 2021. In both documents, the need for children to engage with the outdoor environment, across a range of learning areas remains. ‘Providers must provide access to an outdoor play area or, if that is not possible, ensure that outdoor activities are planned and taken on a daily basis’ (DfE, 2021b: 30).

Calls for a ‘Summer of Play,’ alongside the updated Statutory Framework (DfE, 2021b), the updated Development Matters (DfE, 2021a) document, and the focus on children re-engaging with the natural world to best support their well-being, aligns to research identified throughout this study (Chawla, et al, 2014; Grigg and Lewis, 2016; Stavrianos, 2016; James, 2018; Li, et al, 2018) and suggests that children’s engagement with the natural world is being prioritised by some. This recognition then, further supports the case for a requirement for schools to provide children with SEND with outdoor learning opportunities on a regular basis.

Ms Evans at Fields School states,

'There's lots of positives (to outdoor learning). New skills…it's noisy in class, it's more peaceful outside and you can get more from them. You see more from the children.'

Whilst there are no current guidelines from the Department for Education to promote outdoor learning past EYFS, this is important. Policies to ensure that outdoor learning opportunities are provided for children with SEND and that these children are not limited to indoor classroom-based lessons are needed. It would be beneficial for any future policy to note the importance of outdoor learning for children with SEND, and to ensure that this can be delivered regularly. This would support children's demonstrated interest in, and engagement with, the outdoor environment, and allow them to develop and progress social, as well as academic skills. The research presented, considering children with SEND's outdoor learning experiences through Attention Restoration Theory, found that the children in the study communicate with peers, demonstrate leadership and independent skills, relate new knowledge to prior experiences and engage in learning when learning outside. The need for children with SEND to participate in outdoor learning is important and it matters to their well-being, as well as their progress, both academic and social. Children with SEND should have the right to participate in outdoor learning and schools need to be supported, both at policy and practice levels, to ensure this happens on a regular basis.

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Appendix A – List of policies, Acts, legislation and key events relevant to special and outdoor learning in England.

Date	Act/Legislation	Notable Event	Main Points
1893/1899	Elementary Education Acts (Blind and Deaf Children – 1983 and Defective and Epileptic Children – 1899)		Established the requirement of school authorities to provide education for children with certain disabilities and conditions
1904		First Open Air Schools open in Germany (later to also open in England in 1914)	Aimed to support children who lived in urban areas by providing more access to fresh air
1912		The Montessori Method is published – using examples from Italian educational experiences	This looks at, amongst other aspects, the importance of outdoor learning
1918	Education Act		All fees in state elementary schools were abolished. The provision of medical inspection, nursery schools, and special needs education were widened.
1933	Haddow Report		Highlighted the importance of detecting 'early signs of retardation.' Disapproves of separate schools for 'retarded children' Open air and semi-open air provision is recommended to ensure children can access fresh air, sunshine and light.
1941		Outward Bounds Trust founded	The first Outward Bound school opens in Aberdovey, Wales

1944	Education Act		Primary and secondary education were defined and separated. Education was made compulsory to age 15. Children with SEND referred to as 'maladjusted', 'educationally subnormal' and provided with special provision in separate schools
1956		Duke of Edinburgh Award founded	This was initially for boys aged 15-18
1981	Education Act		After the Warnock Report (1978), Local Authorities are to identify, assess and plan for provision and support for children with SEND. The term 'Special Educational Needs' is introduced
1988	Education Reform Act		Introduction of first National Curriculum
1989		United Nations Convention on the Rights of the Child	Highlighted rights for all children, including rights for disabled children. Recommended internationally
Mid 1990s		A visit to the Netherlands (1993) inspires teachers to develop Forest Schools	Forest Schools start to develop across England
1994		UNESCO's Salamanca Statement	Promoted inclusion for all children with SEND, internationally
1997	Green Paper: Excellence for all children meeting special educational needs		Inclusive education and inclusive schools promoted following the UN statement on Special Educational Needs, 1994
2000	Curriculum Guidance for the Foundation Stage		Early Years Foundation Stage established with the importance of outdoor learning recognised

2001	Special Educational Needs and Disabilities Act SEN Code Of Practice		Improved legislation to support children with SEND in education
2004	SEND strategy document: Removing Barriers to Achievement: the Government's Strategy for SEND		Aimed to improve opportunities for children with SEND in schools and enable them to reach their full potential
2006	Learning Outside the Classroom Manifesto		Encouraged schools to develop their use of outdoor learning
2010	Academies Act		All schools able to transform to Academies to allow more autonomy in individual schools
2010	Equality Act		Aimed to protect people in the workplace and wider society (including education) from discrimination
2012	Development Matters in the Early Years Foundation Stage (EYFS)		The non-statutory Guidance included reference to using the outdoor environment
2013 (updated 2014)	National Curriculum		Mentions outdoor learning explicitly
2014	Children and Families Act		Updated information and guidance to be implemented by the SEND Code of Practice
2017	Statutory Framework for the EYFS		Updated guidance to be implemented in the EYFS Providers are required to provide access to an outdoor area or ensure that daily outdoor activities are incorporated
2018	A Green Future: Our 25 Year Plan to Improve the Environment		The Plan set out government action to help the natural world regain and retain good health. It

			included aims for schools to support children's understanding about the natural world.
2021	Development Matters in the Early Years Foundation Stage (EYFS)		Updated guidance – includes numerous references to using the outdoor environment for a range of areas of learning

Appendix B - Search terms used for literature review

Search Catalogue	Summon	JSTOR
Search terms used	Outdoor education	Outdoor education
	Outdoor education SEND (special educational needs and difficulties)	Outdoor education SEND
	Outdoor primary education SEND	Outdoor education special educational needs
	Outdoor education primary school special educational needs	Outdoor education primary school special educational needs
	Outdoor education primary school mental health	Outdoor education primary school mental health
	Outdoor education primary school UK	Outdoor education special school
	Outdoor education special school	Outdoor education special education
	Outdoor education special education	

Appendix C: Participant information form (staff)

Participant Information Leaflet (staff)

Research Title:
Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs

The aim of the study is:

- to develop understanding of how effective outdoor education can be incorporated into a school timetable and to consider the potential benefits for children with SEN.

- through providing evidence of how outdoor education can be developed to support children with SEN's academic and social abilities, schools which may be either reluctant or unable (or struggling) to develop their own outdoor provision would be supported and encouraged by others' experiences.

The research questions are:
How can outdoor education be embedded in the primary school curriculum? Is this beneficial for children with SEN?

The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part. All information will be anonymous and confidential and participation is on an entirely voluntary basis.

You have been invited to take part as someone who has direct experience of running outdoor education activities with a class of primary school children.

Participation is entirely voluntary, you will be asked to provide voluntary informed consent. If you wish to withdraw from the research at any stage, this will be accepted and all gathered data from the withdrawing participant will be destroyed confidentially.

If you require the use of an interpreter one will be made available.

As a member of school staff, your participation will equate to

a) One interview, lasting around 20-30 minutes, this will take place at a time convenient to you, in school. Interviews will be recorded via a digital recorder (voice only) and transcribed. You will be entitled to read through the transcription or listen to the voice recording if you wish.
b) Observation of typical outdoor lessons/activities planned and taught by you as the class teacher as usual. Children will be observed to see how they engage with the activities and their peers. If consent is granted, photographs may be taken of the activities. You will be entitled to read through the observation

notes and look through the photographs (photographs will be of the setting or activity equipment only. No photographs will be taken of any children, staff, or identifying features of the school) if you wish. Observations will not focus on the teaching but on the engagement of children. No comments will be made about the teacher (or other staffs') teaching or planning.

Your identity will remain anonymous throughout the research process. Any identifying features of individuals or the school made during the interviews or observations will be made anonymous in the notes, transcription and written thesis. Participants will be referred to as A, B etc. Any photographs will not contain identifying aspects such as the school logo.

Data will be stored for up to 5 years and may form part of a future doctoral thesis. Data will be stored securely on a password protected computer. Data will be accessible by the researcher, supervisor and participants (access to their own interview data).

You have the right to informed consent, the right to withdraw from the study at any stage (without prejudice), the right to anonymity and data protection.

The supervisor for this research is Dr Jane O'Connor

Should you have any questions or concerns about the study please contact:
Dr Jane O'Connor, School of Education and Social Work, Birmingham City University, Birmingham, B42 2SU

The research will be carried out by:
Kate Glanville
Kate.Glanville@bcu.ac.uk
0121 331 7349

Initial consent will be collected via email by Kate Glanville, to be confirmed via a letter of consent provided at the interview.

If you wish to make a complaint, please contact:
Barbara Howard-Hunt, Birmingham City University
Via HELS_Ethics@bcu.ac.uk

Appendix D: Participant information form (parents/carers of child participants)

Information Leaflet (parents/carers of children involved)

Research Title:
Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs

The aim of the study is:

- to develop understanding of how effective outdoor education can be incorporated into a school timetable and to consider the potential benefits for children with SEN.

- through providing evidence of how outdoor education can be developed to support children with SEN's academic and social abilities, schools which may be either reluctant or unable (or struggling) to develop their own outdoor provision would be supported and encouraged by others' experiences.

The research questions are:
How can outdoor education be embedded in the primary school curriculum? Is this beneficial for children with SEN?

The purpose of this information leaflet is to inform you about the project so that you can decide whether you want to take part. All information will be anonymous and confidential and participation is on an entirely voluntary basis.

You have been invited to take part as the parent/carer of a child with SEN who takes part in outdoor education activities at school.

Participation is entirely voluntary, you will be asked to provide voluntary informed consent. If you/your child wish to withdraw from the research at any stage, this will be accepted and all gathered data from the withdrawing participant will be destroyed confidentially.

If you require the use of an interpreter one will be made available.

Your child's participation will be:

Participation in typical outdoor lessons planned and taught by the class teacher as usual. Children will be observed to see how they engage with the activities and their peers.

If consent is granted by the school, photographs may be taken of the activities (photographs will be of the setting or activity equipment only. No photographs will be taken of any children, staff, or identifying features of the school). You will be entitled to read through the observation notes and look through the photographs if you wish.

Your/your child's identity will remain anonymous throughout the research process. Any identifying features of individuals or the school made during the observations will be made anonymous in the notes, transcription and written thesis. Participants will be referred to as A, B etc. Any photographs will not contain identifying aspects such as the school logo.

Data will be stored for up to 5 years and may form part of a future doctoral thesis. Data will be stored securely on a password protected computer. Data will be accessible by the researcher, supervisor and participants (access to their own observation data).

You have the right to informed consent, the right to withdraw from the study at any stage (without prejudice), the right to anonymity and data protection.

The supervisor for this research is Dr Jane O'Connor

Should you have any questions or concerns about the study please contact:
Dr Jane O'Connor, School of Education and Social Work, Birmingham City University, Birmingham, B42 2SU

The research will be carried out by:
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Initial consent will be collected via email by Kate Glanville, to be confirmed via a letter of consent.

If you wish to make a complaint, please contact:
Barbara Howard-Hunt, Birmingham City University
Via HELS_Ethics@bcu.ac.uk

Appendix E: Participant information form (parents/carers of children who are not participants)

Information Leaflet (parents/carers of children not involved)

Research Title:
Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs

The aim of the study is:

- to develop understanding of how effective outdoor education can be incorporated into a school timetable and to consider the potential benefits for children with SEN.

- through providing evidence of how outdoor education can be developed to support children with SEN's academic and social abilities, schools which may be either reluctant or unable (or struggling) to develop their own outdoor provision would be supported and encouraged by others' experiences.

The research questions are:
How can outdoor education be embedded in the primary school curriculum? Is this beneficial for children with SEN?

The purpose of this information leaflet is to inform you about the project so that you are aware of the observations taking place with your child's class. All information will be anonymous and confidential and participation is on an entirely voluntary basis.

Whilst observations of your child's class will take place, your child will not be observed as the focus is on children with Special Educational Needs.

If you/your child have any questions about this research please contact me via the contact details below. I can also attend the school for a face to face meeting if this is requested.

If you require the use of an interpreter one will be made available.

Your child's participation will be:

Participation in typical outdoor lessons planned and taught by the class teacher as usual. No observations will be made of your child.

If consent is granted by the school, photographs may be taken of the activities (photographs will be of the setting or activity equipment only. No photographs will be taken of any children, staff, or identifying features of the school). You will be entitled to look through the photographs if you wish.

Any identifying features of individuals or the school made during the observations will be made anonymous in the notes, transcription and written thesis. Any photographs will not contain identifying aspects such as the school logo.

Data will be stored for up to 5 years and may form part of a future doctoral thesis. Data will be stored securely on a password protected computer. Data will be accessible by the researcher, supervisor and participants (access to their own data only).

You have the right to informed consent, the right to withdraw from the study at any stage (without prejudice), the right to anonymity and data protection.

The supervisor for this research is Dr Jane O'Connor

Should you have any questions or concerns about the study please contact:
Dr Jane O'Connor, School of Education and Social Work, Birmingham City University, Birmingham, B42 2SU

The research will be carried out by:
Kate Glanville
Kate.Glanville@bcu.ac.uk
0121 331 7349

If you wish to make a complaint, please contact:
Barbara Howard-Hunt, Birmingham City University
Via HELS_Ethics@bcu.ac.uk

Appendix F: Consent form (staff)

BIRMINGHAM CITY University

Participant Consent Form (staff)

Research Title: Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs	
I am interested in the developing understanding of how effective outdoor education can be incorporated into a school timetable and to consider the potential benefits for children with SEN. This will be developed through discussions with members of staff and observations of outdoor education lessons.	
Participation is voluntary, the choice to be involved or not be involved will not have any impact on your role, rights or access to services. You will be asked to provide voluntary informed consent. The data collected from interviews (voice recordings and transcription) and observations (notes and photographs of the equipment/setting) will form part of a piece of research on outdoor education, provisionally titled: Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs. The data will be used as part of a doctoral thesis. If you wish to withdraw at any point, this will be accepted and data collected from you will be confidentially destroyed.	
If you are a class teacher with experience of leading outdoor education activities with a children with SEN in an EYFS, key stage 1 or 2 class then I would welcome your input into this research.	
Please indicate whether you agree with the following statements:	Tick if you agree with each statement:
a) I have read and understood the information sheet;	☐
b) I have had the opportunity to ask questions;	☐
c) I understand that participation is entirely voluntary;	☐
d) I agree to –	
i. Take part in an interview	☐
ii. Be recorded (voice recording)	☐
iii. Have outdoor lessons observed	☐

iv. Have photographs of the activity taken*	☐
e) I understand that I have the right to withdraw at any stage of the study without prejudice;	☐
f) I understand my right to anonymity/confidentiality (e.g. anonymous quotes may be used in the research).	☐
Signed: _____ Date: _____	

Appendix G: Consent form (child participants)

Your Permission - Please tick if you agree

	It's OK for someone to watch some of my outside lessons to find out more about what we do at school.	
	I know I can say '*NO*' to my part of the lesson being watched.	
	I know that my name will not be used when you tell people about my lessons.	
	I understand and agree to all of these things. I want to join in.	

Name: _____ Signed: _____

Date: _____

Name of adult supporting the child in understanding this form:

_____ Signed: _____

Appendix H: Consent form (parents/carers of child participants)

BIRMINGHAM CITY University

Participant Consent Form (children)

Research Title: Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs
I am interested in the developing understanding of how effective outdoor education can be incorporated into a school timetable and to consider the potential benefits for children with SEN. This will be developed through observations of outdoor education lessons.
Participation is voluntary, the choice to be involved or not be involved will not have any impact on your role, rights or access to services. You will be asked to provide voluntary informed consent. The data collected from observations (notes and photographs of the equipment/setting – no photographs will be taken of children or staff) will form part of a piece of research on outdoor education, provisionally titled: Embedding Outdoor Learning in the Primary Curriculum: Enhancing Provision for children with Special Educational Needs. The data will be used as part of a doctoral thesis. If you wish to withdraw at any point, this will be accepted and data collected from you/your child will be confidentially destroyed.
If you are a parent/carer of a child with SEN in an EYFS, key stage 1 or 2 class then I would welcome your input into this research.

Please indicate whether you agree with the following statements:	Tick if you agree with each statement:
a) I have read and understood the information sheet;	☐
b) I have had the opportunity to ask questions;	☐
c) I understand that participation is entirely voluntary;	☐
d) I agree for my child to be observed taking part in outdoor lessons*	☐
e) I understand that I have the right to withdraw at any stage of the study without prejudice;	☐

Signed: _____	f) I understand my right to anonymity/confidentiality (e.g. anonymous quotes may be used in the research). Date: _____	

Appendix I: Interview transcripts

Transcription of Interview – participant A

What is outdoor education?

A: The opportunities of learning in an outdoor environment. On school site, Forest School or out on fieldtrips.

What's happening with regards to outdoor education, in terms of this school and on a wider basis?

A: It has increased in school. The garden club started 5 or 6 years ago – I had not long been here at the time. Forest School started not long after. The amount of children interested in learning outside has increased, they are gaining awareness of their surroundings.

I don't know what's happening wider. I've been involved in RHS (*Royal Horticultural Society*) training, aimed at schools, growing your own food. There were lots of people there.

Even in the severe weather, children still want to go outside. Year 6 last year redid the pond, we've had the first frog spawn. One of year 6 was dyslexic, he saw it as an environment where he had control, he had a lead in what he was doing and could give direction. It boosted his confidence.

Do teachers in this school enjoy outdoor education?

A: Some teachers enjoy it, about half. School life is so busy and it's not quick and easy to set up a project. It varies in the time of year, what they're learning, if the support is

there. There are no links between if a teacher enjoys it and how long they've been teaching.

The minibeast hunts have increased, year 5 are going out more. There's a Peter Rabbit project, the children read the book and they grew vegetables in the story so they had competitions and grew onions. There was a World War Two project and they grew rhubarb.

Children with SEN have read labels in plants. They're not keen on reading usually so we can give positive feedback to home. We grew Marie Curie daffodils and raised money for the charity through this. The children name the wheelbarrows and enjoy using it.

We have trips out, we went to Essington Fruit Farm to see produce in a large environment, the children are given instructions from people other than those in school. They're more likely to eat the food they've grown themselves. We're classed as an orchard school because we have more than five fruit trees.

Are there any barriers to outdoor education? What are they?

A: There are no barriers, it's for everyone. There can be obstructions, like traffic can be a distraction. There's no reluctance. The children like using the fields in the summer.

What are the positives and negatives of outdoor education?

A: The positives – it's for everyone, everyone has a place. At home, gardens can be quite small, there's no space for growing or exploring, but they can in school gardens. Parents come in to help out, it helps form a bond between parents.

The negatives – weather and money. The Morrisons vouchers, they're not doing these anymore, they were fantastic. We bought soil, compost, trees…Now budgets are very

limited, very tight. We can still get small items but we can't get, for example, a shed unless we use fundraising. We won't be the only school, this is an issue across the country.

We have 8 children a day in gardening club at lunchtime, so around 22 in total. Toby Carvery do a free project looking at food used in their meals but there's the cost of getting the children there.

Some children with behavioural difficulties enjoy making things, they like the compost heap and birdwatching, you see differences in them outside.

We had some damage from Storm Doris, we lost one tree. The children are protective over the garden.

What would you like to see, with regards to outdoor education, in the future?

A: I wish that everything in primary school was continued in secondary. We had an Autistic pupil who loved gardening but there was nothing like that at secondary. I wish there was a Government pot for projects.

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Transcription of Interview – participant B

What is your understanding of what outdoor education is?

B: Well I work in early years so obviously to us our outdoor environment is an extension of our learning rooms so when the children are in their lab time, which is what we call it, which is child initiated learning time we have the doors open so they have access to indoor and outdoor provision. What's available outdoors is slightly different to what's

available indoors so they have a range of activities across the two and it's just an opportunity for them to learn outside

What kind of things do you have outside?

B: we have a mud kitchen which is exactly what it says on the tin. It's a big vat of mud and they mix and they make things, so next week we have a challenge in there where they're going to make mud pies and they have to find ten different ingredients to go in so it's kind of a maths challenge. We've got a huge sand pit; we've got outdoor constriction so large construction and we've got water play outside. We've got art outside, so we've got painting and drawing…sort of like a little creative table se we can take anything we like out there really. We've got boxes outside for junk box modelling; we've got a music area outside so that the children have got access to musical instruments and also music that they can play on a CD. We've got role play outside which tends to be theme based, so, for example, when we did space we turned it into a space station so they could investigate what it's like to be an astronaut and they've got various activities that improve the children's physical development so stepping stones to practise walking across an uneven surface. We've got the stepping stones they walk along using lots of things that are physical. We have got a great big climbing frame that is in the middle but it's actually closed because it's not the best. First of all it doesn't really enhance their learning and second it can be slippy. So the long term plan for our outdoor area is that it's going. So that's what's out there, that's our provision and then we add enhancements to it. So we're having a big maths focus at the minute because the children aren't quite as confident when we came to do our last assessment so we're doing things like big games, throwing balls through the shark's mouth then they're finding out what number they've thrown, counting out

objects to that number or they're adding the numbers together…because we're doing an under the sea theme at the moment the children have been using the sand pit as the beach and yesterday they wanted to make a beach tent so of course any resource that they can get their hands on they lead their own learning. Last week they had a music festival so they made a tent and camping and campfire so again it allows the children to go from their own experiences and their own interests so it's not sort of you've got to do that and you've got to do this. A lot of it is based on the children so all sorts going on out there. I've probably missed something but…

Do you use the garden areas?

B: at the moment we don't use the garden but what we're hoping to do is to extend. In fact, we've got plans in place. We've had two quotes so far to actually extend our area so we can take it out further on to the field and have a designated playing area. We do have planters, we've got like a garden centre area but we'd like some big beds for them to plant in and be able to plant their own vegetables and things like that and then the mud kitchen will be part of that as well so we're actually be going to have a gardening area but that's sort of a long term plan at the moment. Hopefully the summer.

What do you think is happening with regards to outdoor education in the school as a whole and on a wider field across the country?

B: Gosh, well in the school as a whole I think we're very lucky. We don't just have outdoor learning in early years. Obviously in early years it is popular, we have outdoor learning every day but it's one of only a few schools where children as far as year 6

go to Forest School, so that's obviously a huge part of our curriculum now, which is amazing because a lot of time Forest School is only in nursery, it's not even rolled out to reception so it's lovely that all children across the school get a chance to go. I wouldn't say nationally that's going on. I think in Early years (EY) definitely and pre-school definitely but I'm not sure how much that's going on in Key Stage 1 and 2 in terms of any outdoor education other than they might go and read a story outside. I don't think…I mean I've worked in KS1 and there isn't the resources or the set up to be able to do what we do in reception so Forest School is a good alternative.

Do you think teachers here in school enjoy outdoor education?

B: Definitely I mean everyone has a bit of a 'oh no it's raining on Forest School day…' we all do that but we go out whatever the weather unless it's torrential and terrible. Everybody sees the benefit of children learning outside especially for our boys, they love being outside and they love learning, just being out in the fresh air they adore Forest School. We see children who are very insular come out of their shells; children who are reluctant talkers, suddenly you can't stop them talking when they're in the forest and I think every member of staff really sees the value of that. I think maybe some staff are a bit dubious maybe…I couldn't give you names, I couldn't name a member of staff that would definitely hate being outdoors but I think even when there are reluctant staff they can see the benefit of it so it's really pro getting out there and being outdoors. We're very lucky here.

What are the barriers to outdoor education?

B: I think barriers to outdoor education generally from an early years' point of view – we are really lucky to have an outdoor area that opens from our indoor area. We can have what we call free flow, the children can go in, out at their leisure there's a lot of schools and settings that don't have that privilege their outdoor areas are not even close by, they're at the other side of the school, not ideal and I've been to a few schools like that so their outdoor provision is managed very differently to the way ours is so we're very lucky. I think the fact that we have amazing grounds the school is also a huge benefit because I've worked in schools where you've literally just got roads all the way round. And so to be able to go outdoors or to go to the local forest is a 20 minute walk to get there before you've even done anything, whereas we've got amazing grounds around the school which we can use and we've got the wood down the road. Another school nearby which does Forest School really well is ** and they've got a wood nearby as well so it does depend on the location of the school so that can be a barrier and the set up and the layout of the school in terms of being able to do your free flow in early years. Other than that, I mean not here, but staff attitudes is a bit of a barrier you know. We've got a dedicated Forest School leader if you've not got that in your school it would be more tricky to manage, you'd have to do it as part of your own curriculum and you're leading it yourself and of course ** is fully trained in Forest School. So if you haven't had the training what you would offer wouldn't necessarily be true Forest School but can you train up every single teacher in the school to do it? No. I think we are really lucky here.

What do you think the positive and negatives of outdoor education are?

B: Positives, the boys. Our boys in early years especially thrive in the outdoor area and some of girls as well. It's very stereotypical to say boys but the boys just want to

be outside and doing, they just thrive outdoors. I think it give our children experiences that they may not get if they didn't do learning outdoors. There are some children I would say that have never walked through a wood until they come to school and walk through the wood with us. Some of our children's experiences are narrow and therefore it allows them to experience them to experience it to learn new vocabulary, gives them opportunity to learn in different ways and to just find out about their world which is really important. I don't think there are any negatives really. It doesn't suit every child to be outdoors so in early years obviously it's ok cause they can choose to be inside. When we troop off to Forest School, if you're not into it then it's not so much fun for you, but all part of life is experiencing things that you're not overly interested in or excited by…there's never really that many children that don't want to go. They're not bothered about the cold they just love putting their suits on and getting out there. Sometimes on a very cold day, after a while their feet have turned to ice and they're a bit…urgh but generally they love it.

Every child is different, so a child who is quite happy for an environment to be unpredictable the way a forest would be or to be outdoors (enjoys being outside), then again the children with SEN thrive in the same way that any child who adores the outdoors would. However a child that needs stability, needs those four walls needs that simple environment of a table, then obviously they're not going to enjoy it as much. I think it does allow children with communication difficulties to thrive because I think they learn new ways of communicating and new vocabulary opens up to them, in perhaps the ways that the walls of a learning room wouldn't so it would really depend on the individual.

What do you think you would like to see in the future in terms of outdoor education?

B: The dream? Every child would have an early years' environment until they left primary school. Every child would learn in the same way we learn in reception. Obviously there would be more formal elements of the day as they got older, but children are children and they should be allowed to go and explore their environment, indoor, outdoor, test their own theories, find their own ways of doing things and in Wales the EYFS lasts until the end of KS1. I think they've got it right. I think it's fab but I'm an early years person, so I'm going to say that. I trained for early years but I've always taught KS1, possibly more years in KS1 and I see the benefit of the way they teach in KS1 but I also don't see why how we do it in early years wouldn't benefit them, I think it would.

Funding. Government level funding; there is never enough funding for anything and the Government is very much based on testing the children, sitting them down, getting them to do…I don't think they would ever…It would take a very forward thinking outward thinking Government to provide an early years' experience to the end of KS1 that would never happen. It would be lovely, it would be great but I'm not sure… I could campaign, there are lots of people who would campaign for it but they like their tests.

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Transcription of Interview – participant C

What is your understanding of what outdoor education is?

C: Forest school leader…it's taking children and extending their learning to the outdoor environment, giving them new experiences outside of the classroom, giving them chance to apply what they've learnt in the classroom and develop skills in the outdoor

area that can be applicable to all areas of the curriculum so it's very cross-curricular based.

When you think of an outdoor area for learning is that something you would imagine to be on school site or does it have to be on school site?

C: My area of learning is **Wood it's just approx. say 500 yards down the road so we take groups out to ** Wood and work in the public woodland; apart from nursery who work onsite.

What is happening with outdoor education in terms of this school and on a wider basis?

C: It's very positive in this school. Obviously the children are given the opportunity to do Forest School or Forest School to support science across the school so it runs from nursery to year 6. So all children are given the opportunity to do learning in the outdoor environment. This school is very positive and looking at education as a whole has been a bigger focus on Forest School and the benefits of Forest School over the last few years, and it's becoming increasingly more popular. More schools are taking the initiative. A lot obviously haven't got the facilities we've got with the local woodland but a lot are creating their own little environments in situ in the school grounds so at the moment it seems positive.

It depends how it's run, you can still do a lot of Forest School skills and learning on a small-scale. Obviously it's a lot better in the woods because the seasons are changing and the environment's changing all the time, you never know what you're going to encounter and a lot of it is learner led so if you see something that is different you can investigate that.

What kind of things do you do?

C: I do team building with the little ones. We do team building it's a lot of team building, working together. We've done bridge building, we've done magic fire, we've made dens… we make things individually like journey sticks, woggles, we make…we get the children's imagination fired up you know. We've got little scenarios we teach them, there's little people who live in the woods we never say what they look like so the children's imaginations…we've got a dragon who lives in the woods so it just sort of helps in literacy as well because they talk about these things in their own stories. It starts to be more on the science (in KS2), we look at the science curriculum, what's been taught if it's plants and animals or habitats we focus on more around that but we still do creative elements to that as well, like the year 4s have been learning about adaptations, we've looked at different nests and we've given them challenges to build nests and see how difficult it is to build a nest and evaluate it, how could they make it better…so sort of Key Stage 1, Key Stage 2 it's more around the science topics and supporting the science. But also during explore and discovery weeks I will support staff and do activities for staff that will help with other areas and I've done maths as well in the woods, we've done measuring trees and working out the ages of trees, so it's very cross-curricular, the support.

I would say Forest School gives them an opportunity to use it practically; the scenarios we produce down the woods, it gives them an opportunity to do the skills they've learnt on paper. It's doing the skills once you get down to the woods. As I say, a lot of our respecting each other, tolerance and things, working as a team, collaboration listening to ideas and respecting what other people's views are, it's a learning community and if we make a mistake it's learning from our mistakes. We say 'I wouldn't have done it

that way' and it if didn't work, say your shelter fell down, what do we do? What could we do as a community to improve that? It works a lot for the children who find academic work difficult, they flourish in that environment because the challenge is things they can achieve and its hands on and it's practical, so we see what…we see a different side to children when we take them out.

Do you think the teachers here like going outside?

C: Yes. There are some who don't like the cold weather or the rain but on the whole they do like going outside and getting involved. You get bit in the summer I must admit, you get gnat bites, but on the whole most of the staff are really up for it and the children absolutely adore it. They're just happy to be out there because we give them time to explore and with the EYFS they get time to play so they're climbing trees, so they're doing things they want to do and they're doing learning activities together, so they're quite happy. I don't think they see it as work, they are learning they've done the activity, later on it will all click and they'll say 'ooh miss we did that then' and it will all click but it's so much fun they don't realise that it's…they are learning. Like the bridge building we're getting poles and they've got to span this gap and it's all maths and sizes finding the right sizes and it's only after we've done it that they realise that yeah, we were doing maths so it's a fun way of doing it.

What are the barriers for outdoor education are?

C: Barriers… that's difficult to say. Sometimes because we use a public wood we have to be careful where we go and if there other people using the wood we have to go to some areas but I don't think there really is…I mean if you're passionate about it you

can do it on your school grounds, you can include outdoor learning wherever you are, so it just depends on your own passion and your own enthusiasm for it.

I would think they (people with less enthusiasm) would throw up barriers like we've got no money, we've got no equipment, but you can get round it. I mean there are outdoor people aren't there. I will appreciate that, but like I say, if you've got enthusiasm and passion for it and you see the benefit the children get from it you'd know how worthwhile it is to them so…

What are the positives and negatives generally of being outside?

C: Positives are limitless. I mean, as I say, I've seen the difference in the children, I've seen the children's attitude to it, I've seen what skills they can develop I've seen them work as a team, I've seen their sort of awareness of nature and awareness of living things and caring for living things improve conservation. I've been…many a time I've been called by a lot of children very, very upset that they've found a caterpillar on the playground. They haven't had the confidence to pick it up but they don't want it to get squashed, so I've had to remove the caterpillar and put it somewhere safe. They are getting an awareness of nature. Obviously, research, you've got the physical aspects getting them outside, getting them active, we do a lot of physical games and again research, mental health, it improves the children's mental health. Some children you see the weight come off their shoulders when they get down there, their posture's a lot better, they stand up, it's as if they're not weighted down, as if they can just relax. I think there are a lot of pressures for children these days, they've got the SATs testing and they are conscious that they need to know their targets and I don't think a lot of children do get outside. They go home and the technology is there, they're using the technology, the x box, it is easier for your child to be contained at home in front of the

screen rather than to take your child out into the environment. Parents work, they've got constraints on their time but…you know, it is easier for the child to be at home in front of the television and sometimes you see a different side to the child if they get out because they've not had this experience before. You know, it's sometimes just a wow feeling for them.

Negatives to outdoors? Sometimes in the curriculum there's so much in the curriculum that you've got to fit in that sometimes staff are thinking we could be doing reading or writing but I think they've found through the years, they've found they can address it through the outdoor learning. But sometimes there is a worry with staff that they have got other things they've got to get done and they've got targets.

If you had a dream for what you wanted to happen in the future for outdoor education what kind of things would you want to see developing?

C: …there's not a lot of sort of post development once you've got Forest School leader's certificate. There's not a lot from then. We're trying to set up a cluster group at the moment to get other like-minded schools to meet together and develop our skills further so it'd be nice for some further training, or you know some way that leaders can get together and discuss things and just share good practice and things like that. I think Staffordshire have got one and I think they've tried Walsall before and it wasn't very successful so…I'm liaising with countryside services at the council and we're…hopefully everything's gone through and we've got our first one on the 5th and we've invited our cluster group so you know. There is the development of the Forest School association that's come online in the last few years so thing are moving, but I think it could be developed further. There could be further professional development for leaders.

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Transcription of Interview – participant D (special school staff)

What is outdoor education?

A: Any education that is outdoors. It gives opportunities for developing social skills, which is really useful for our children. It gives them the chance to develop teamwork. Some of our children struggle with this so it's a good chance for them to work on it.

What's happening with regards to outdoor education, in terms of this school and on a wider basis?

A: It's more developed now. We started off with not much outside at all but it's getting there. I asked the head if we could develop the area, it wasn't used at all and now all classes are using it on a weekly basis. We're trying to get the paths more clearly defined as some children are in wheelchairs or use walkers. It'd make it easier for them to get around.

Do teachers in this school enjoy outdoor education?

A: Some are more reluctant than others. Staff were reluctant to start but there was nothing outside. Now, as the area is more developed, people are happier. I did a PowerPoint recently to show people how the area has developed, they'll have more interest if they can suggest their own ideas and see them inputted to the area.

Are there any barriers to outdoor education? What are they?

A: Funding is the hardest element. Nobody throws anything away any more, we always see if it's any good for the Forest School area. Sometimes it is, sometimes it isn't but we always check. We've developed the pond area after one child stepped in it. The

Wildlife Trust came in to help – we fenced the pond off. We have to beg and borrow resources as money is tight. We're reusing equipment from the classrooms.

The weather has a big impact. Snow brought a canopy down. A tree came down in the storm, when the council came to clear it we asked if we could have the sections they were cutting up, it's now our seating area. It was just luck. We've got a new member of staff who makes a lot of things for us. He's built up the seats.

What are the positives and negatives of outdoor education?

A: One positive is independence. The children need to develop that so it's a good opportunity for them. They don't always have that chance at home, parents sometimes don't take them to many places so they can experience different things here.

Children can be more challenging outside. We can't use the typical '123 where are you?' game, they weren't getting it so we developed a PE game that they already knew so they know when to come back. We remind them of this every time they're out.

We do pretend fishing in the pond, counting fish, we look at the wildlife in the area – frogs, robins. There's a cat who is a visitor and the children like to see it. We take them to different places, other parks, to climb trees. The children love it and can't wait to go out.

We had a boy with specific behavioural issues. He went on 1-1 visits outside which helped. He could break sticks, it helped him to calm. Being in the environment was calming and we used it as a reward.

The negatives are more…some health and safety concerns. I mentioned about the child who stepped in the pond. There was no danger but we had to fence the pond off. We have to be ready for weather so making sure the children have the wet weather clothes on is a challenge, it takes a lot of time but it's good for them. Sometimes parents don't want the children going out if it's too wet or cold.

What would you like to see, with regards to outdoor education, in the future?

A: I'd like to see everyone get involved. The staff who were reluctant because there was nothing outside. The children like helping to carry things out and there's more outside now. There's always someone who's reluctant but most are more willing now. I've not come across any children who are reluctant…

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Transcription of Interview – participant E (special school staff)

What is outdoor education?

A: Anything in class can be done outdoors – it's another classroom. We're working on physical targets so some things are more physio than PE outside. Communication, chances for the children to work with each other in other areas. Some learn better outside, we go out in all weathers.

I didn't have any training at uni so was a bit put off as I didn't know what to do but I think of it as anything indoors that can be outside too.

What's happening with regards to outdoor education, in terms of this school and on a wider basis?

A: We've defined the pond to make it safer. We've looked at different aspects, for example a sensory path for children to move their walking equipment around.

I'm not aware of any national issues.

Do teachers in this school enjoy outdoor education?

A: It's nice to get outside – it's something different. You get to see the children do different things, they initiate hide and seek games with each other. It's an opportunity for them to show development of their skills. Now it's a safe space it's better. I've been here over 5 years. At first everyone was reluctant. Nothing was there. Over time, it's been developed. Now every class goes out. The children in wheelchairs can access the area from the car park.

Are there any barriers to outdoor education? What are they?

A: The safety element. I want to make sure every child has the opportunity to learn in 1-1 and small groups but that gives them a chance to all learn together – that's a challenge in itself. It's a different story on a Friday as we have more staff in then. It plays on your mind – have they all had the opportunity to do everything? Behaviour management. It's harder to manage in an open space.

It's different on the playground at lunch – they can do whatever they want and then we're asking them to follow instructions. The change in rules can be difficult for them to follow…we always start with the spot game to help them distinguish what the rules are.

What are the positives and negatives of outdoor education?

A: There's lots of positives. New skills…it's noisy in class, it's more peaceful outside and you can get more from them. You see more from the children. It's versatile so you get more – they collect twigs, do mark making, plant seeds…

One child just wants to run all the time – when we're outside it allows him to run around in a structured way. It gives independence and develops skills such as looking. When we did the Little Red Riding Hood lesson (NB one of the observed lessons) only one child could look for the cakes independently.

The negatives…if it's raining it takes ages to get wet weather clothes on – it eats into the time we have but it helps the children with dressing skills. The section around the water is a bit too open so I'm a bit nervous to take children into that area. So there's not many negatives, as long as they're safe.

What would you like to see, with regards to outdoor education, in the future?

A: I'd just like to enclose the pond so we could access the other parts of the area. I'd like an outdoor tap and an outdoor area for storing things like wellies. It's difficult, we have to change before we come into school so we don't walk the mud in. It'd be good to have somewhere we could wash the mud off and store things outside.

In school, it'd be good to share positive practice between ourselves. This would be good across all elements of the school. Sharing ideas.

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Transcription of Interview – participant F (special school staff)

What is outdoor education?

A: Interacting with each other, things like physical games.

Do you think PE is outdoor education, or do you need to interact with the environment for it to be outdoor education?

A: Some could relate to the environment I suppose. It really depends on the topic.

What's happening with regards to outdoor education, in terms of this school and on a wider basis?

A: We're informed of the topics for Forest School. I make the things that will be more accessible for the children. You can do so much in Forest School, so many topics can be adapted for the outdoors.

I don't know what's going on on a wider basis.

Do teachers in this school enjoy outdoor education?

A: Well they all sound enthusiastic to me.

The kids don't enjoy it if it's raining. It takes a long time to get them ready.

Are there any barriers to outdoor education? What are they?

A: The weather can be a problem. But when the storm brought the tree down we got some seats out of it so… The lack of staff can be difficult, especially over the pond area. The clothes…

Activities – we can't do some. It's difficult to look for sticks if you've got no trees isn't it. The barriers depend on the environment.

What are the positives and negatives of outdoor education?

A: Positives. I'm a great believer in kids getting dirty. You'll always get their attention outdoors.

The negatives…like I said, the environment can limit what you can do outside. The weather can be a negative. I try not to focus on the negatives.

What would you like to see, with regards to outdoor education, in the future?

A: I'd like an endless supply of wood…to build more equipment and seats and things for the Forest School area. It's getting there but there's more we could do.

I’d like the opportunity to do different things, having the budget to be able to get things done, but there’s lots to spend money on inside too so outside isn’t a priority. Lots of kids get bored of being inside so if it’s raining I’d like to have more things to enable them to still go outside.

Appendix J: Observation template

Observation Notes recorded on: _____ at School____ for Child_____

Overview of activity: _____

_____

_____

_____

_____

_____

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

Observation Notes recorded on: 2/7/18 at School A for Child ren in [redacted].

Overview of activity: Lighting a fire, fire safety. Children taking it in turns to roast marshmallows.

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted]

All children listening to safety talk.

[redacted] - I - answering question, - with friends.

[redacted] - I - crossing fingers when told (hoping fire lit).

[redacted] C with each other over smoke

[redacted]. stood up to move away from insect [redacted] to have to be asked to sit.

[redacted] - taking an interest in insects in logs. Talking to teacher about them. ([redacted], [redacted]). C.

[redacted] - C with peers about marshmallows.

[redacted] - A - remembered 'fire respect position' without reminding. - paired flowers to peers. - v. engaged with task. Turned marshmallow to ensure even cooking. C with peers whilst cooking. Noted by teacher - smiled when praised.

[redacted] - A - cooking marshmallow - additional support provided

[redacted] - A - wanted to skip queue to cook.

[redacted] - A - remembered respect position (RSP). Needed support. C with CT about cooking.

[redacted] - A (RSP) - C with CT about cooking.

[redacted] - A (RSP) - needed support in remembering to turn marshmallow. Needed reminding of where to go next.

[redacted], [redacted] - C with each other & CT - describing taste of marshmallows & expressing ~~pa~~ feelings

[redacted] - C with peers about marshmallows - making jokes
C with CT - 'have you tried it yet?'
[redacted] - 'no it's still too hot'.

[redacted] [redacted] - encouraged by others to discuss feelings of food (hording biscuits).

[redacted], [redacted], [redacted] & others - eating together & laughing about getting marshmallows on their faces/hands.

[redacted] - eating marshmallows with peers - not much communication.

[redacted] - sitting with friends to eat quietly talking.

[redacted] - put spiderman hat on friends head "There's a spider on your head!"

[redacted] - putting hands up to answer qs.

[redacted] - joining in TTYP.

[redacted] - answering safety questions.

[redacted] could express opinions on cooking - didn't enjoy because it's sticky.

Observation Notes recorded on: 9/7/18 at School A for Child [redacted]

Overview of activity: played 123 where are you?
Discussed findings of lots of feathers & animals catching prey.
Activities - Scavenger hunt
- pine people } carousel of activities
- owl medallions

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted]

Played [redacted] - C - telling friends about hiding spaces "I thought trees were a good hiding place but I was found".
[redacted] - C with each other.
[redacted] C with friends - friend telling her she'll tell her where to hide next time.
[redacted] - sharing out answers when whole class asked.

[redacted] - all listening to instructions of how to make pine person.
[redacted] - making suggestions how to develop person & asking questions.
[redacted] - checking with peers what they are doing.
[redacted] - working with CT to use clay
[redacted] - "I'll glue the mouth on"
[redacted] working quietly on task. Didn't ask for help but said she needed it when CT checked.
[redacted] - working quietly but responding to Qs.

[redacted] - "shall I show J where I found the small sticks?" offering to help others.

[redacted] - finding hugs to spell out letters "It's a [redacted] for [redacted]" (stressing the '[redacted]').

[redacted] - volunteered answer of how she would change her pine person next time. (Would add arms).

[redacted] - "I'd put some arms on too" (next time.

[redacted]

Scavenger hunt

[redacted] - abl carrying boards to identify objects.

[redacted] - trying to keep group together "keep up girls"

- "You could find that (4 leaf clover) probably as that's really hard to find" - remembered comment from start of lesson.
- "some of the grass is really slippy, like ice".

[redacted] - answering questions posed by CT.

[redacted] - needed prompting for some facial features for pine person. "I'm happy with my hat". unprompted.

Helping others "you have to push it through to make them (the sticks) stick on".

Moved away from CT to gather sticks - working with peers. Stick wouldn't stay in "It's dried up again" - clay had dried.

Was referring to clay as 'dough' - after being corrected by CT, was able to correct himself

"We can't use all the clay because next time it will all be gone.".

"Mine (pine person) can have one leg like a lollipop"

Observation Notes recorded on: 16/7/18 at School A for Child [redacted] in [redacted]

Overview of activity: Owl medallions, pine cone people, mallet textures (imprints of leaves on cloth).

30 children

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted] , [redacted] .
[redacted] , [redacted]

[redacted] - asking questions about task.

Owl medallions

[redacted] - (A) - following instructions, using palm drill to drill hole in wooden medallion

[redacted] - (C) - talking to peers. "This is how I do it (drilling a hole). I press down really hard."

[redacted] - (C) - collecting materials with peers.

[redacted] - first one to drill through the wood - very pleased about achieving this. Praised by CT.

[redacted] - needed encouragement to continue, but then determined.

Mallets

[redacted] - Not focused on activity. Not all could join in at same time, "She's had 3 goes" - complaining when he wasn't using the mallet. "Look, that's mine and ___'s" - pointing out his own leaf impressions.

[redacted] - listening to instructions - other children not all following, [redacted] sitting & waiting for mallet. Needing reminding of how to use mallet a couple of times but focused on task.

[redacted] - (C)(A) reminded others of position to sit in. Encouraged others "hit it a little bit harder".

[redacted] -- "I think it's really good". when looking at cloth.

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pine cones

[redacted] - (A) creating pine cone person.

(C) answering questions posed by CT

"I can't use them sticks (for his arms) they're too big".

(C) with peer about design ideas for person - discussed putting them on top of each other, adding more faces.

"Mine's got 2 eyes on each side".

(R) set up a race between pine cone people between the trees. Decided who was racing & who won.

All discussing activities with talk partners - which activities they liked.

[redacted] "I like the modelling" "I like decorating it"

[redacted] "I like the medallions because I like art too".

Observation Notes recorded on: 11/7/18. at School B for Child ren in [redacted] class.

Overview of activity: Indoor observation compared with freeflow outdoor time (unstructured)

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted]

Indoor [redacted] - on own in room, walking/spinning on carpet. Shouting
[redacted] - sitting on own at table. Looking at books. Worked with CT when they approached him.
All children to sit on chairs in circle. [redacted] first 2 to sit down, others more reluctant. Once all sitting, listening to songs None joining in with actions but all watching screen. One child ([redacted]) chose next song.
Assembly - welcome song, [redacted] interacting with CT. [redacted] focussed on peer.
Counted children - all Ok with a peer touching top of their head.
"Then board stated assembly was over one child ([redacted]) stated "assembly has finished". [redacted] sitting with CT
Children sitting for snack. [redacted] using PECS walking/spinning whilst others are eating. [redacted] looked when name was called but didn't otherwise respond. [redacted] sitting with CT. [redacted] encouraged to speak rather than using PECS.

Outside. [redacted] on trampoline with peers. Then wandering on own.
[redacted] wandering with [redacted]. Then with CT
[redacted] still working with CT but smiling more.
[redacted] singing - hand not been verbal inside.
All children calmer outside - none showing any distress or upset even when one took straws off another

[redacted] - climbing on equipment

[redacted] - on bag swing with peer. Encouraged to communicate to stop peer moving with her hat.

[redacted] wandering on own singing - was non verbal indoors.

[redacted] - on trampoline. Some interaction with others.

[redacted] on trampoline together.

[redacted] upset after bumping into peer. Ok when he fell over.

[redacted] - watched football game through fence (next door's school - m/s).

[redacted] - responding when sitting on side of trampoline & other child jumping on it (calling out 'Ahh')

[redacted]'s hat was kept by a CT when she was lying on grass. When she saw it she called out "my hat" whilst reaching towards it - only unprompted conversation.

INDOOR All children having a drink.

[redacted] - uses a spray bottle as mini drink

[redacted] - wouldn't drink as was handed wrong bottle.

[redacted] - sitting with CT.

Children all have instruments. Exploring sounds with these. Handed back without problems. [redacted] found large tambourine to play.

Children given scarves to dance with / relate to CT dropping them. [redacted] walking under scarf. [redacted] not engaged with materials

[redacted] dancing with own material

Some children happy to dress up. [redacted] in dress, [redacted] in dress & dancing

[redacted] wore horse outfit & bent to get horse's feet to reach floor.

[redacted] playing with maracas

[redacted] - singing with vegetable song.

[redacted] - didn't want to sit during songs - wanted to sit with CT.

Observation Notes recorded on: 13/7/18 at School B for Child: [redacted] in [redacted] class

Overview of activity: Indoor - snack, warm up exercises, assembly.

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted]

Indoor Using PECS to ask for different snacks.
[redacted] - counting out loud using PECS with CT.
[redacted] - not reaching to child next to him grabbing him using PECS to ask for toast.
All joining in exercises. following instructions. [redacted] listening but not joining in, supported by CT. [redacted] - supported by CT, clapping to music.
Assembly - saying good morning - [redacted] - not vocal, game with fine,
[redacted] & [redacted] spoke "good morning — "(teachers name).
[redacted] - clapping to song. [redacted] - supported by CT to be engaged in song.

Outdoor standing on spots - all following instructions
[redacted] - laughing
[redacted] first time at FS - needed further support.
Listening to story - All sat.
Collecting cakes in baskets. - in pairs with CT each.
[redacted] - looking for cakes, picking them off trees
[redacted] - collecting following support.
All counted cakes they had found.
Hide & seek - children interacting with each other "I found you".

[redacted] - smiling in game
"Let's play hide & seek"

Indoor separated for literacy work.

[redacted] - working 1-1 with CT on literacy. Verbal C. spelling words/reading

[redacted] - did not go to groups when asked. supported to move by CT.

[redacted] - listening to story & following in book with support. Sounds rather than words.

[redacted] - upset, crying sounds - not engaging with activity without support.

Swapped - [redacted] working with CT 1-1. Following instructions on 1-1 basis. Became reluctant, crying when looking at book & moving away from it.

[redacted] - listening to story - engaged with activity, looking at what peers are doing.

Observation Notes recorded on: 17/7/18 at School B for Child [redacted] in [redacted] class.

Overview of activity: Spt game to start
Mud painting

Key areas of focus:

- Taking an initial interest in the activity (I)
- Being involved in the activity (and whether any skills/knowledge are demonstrated) (A)
- Communicating with others (C)
- Taking on responsibility/leadership roles (R)

[redacted]

All chose own colour spot. Ran round wood - all keen to be first.
[redacted] "I'm winning" [redacted] "I did it!"
[redacted] "I'm going to sit down, I'm a bit hot."

Feeling soil before adding water
[redacted] - observing then mixing mud - washing hands after his turn.
[redacted] - stirring mud
[redacted] - observing.
[redacted] didn't want to mix the mud "No thank you" was OK with having mud in her bowl.
Painting with mud on roll of paper. [redacted] "The mud is on my hands"
[redacted] "[redacted] CT's name I've got a feather" Trying diff things to paint with.

[redacted] - using balance beams.
[redacted] - exploring using binoculars - what can you see? "I can't see any birds" (under the trees).

[redacted] & [redacted] interacting - in and around kitchen area.

Returned to logs. [redacted] "Do you want to sit down — ? There's plenty of room for you".

[redacted] - recalled information - called a pine cone an a corn then could remember what it was -

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unstructured on playground.

[redacted] playing with peers on climbing frame.

[redacted] running round with peers.

[redacted] - playing with peers -