# OUTDOOR LEARNING IN NORTHERN IRELAND'S SCHOOLS IN 2026: A REVIEW

# Outdoor Learning in Northern Ireland's Schools in 2026: A Review

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# Executive summary

Acting as an external evaluator, Queen's University Belfast was commissioned by Newcastle University to review Outdoor learning in Northern Ireland, drawing on three sources of data: relevant literature, relevant policy and interviews with teachers in Northern Ireland. This report presents findings from all three data sources and on on-going collaborative work underway between the Northern Irish Forest Schools Association and Newcastle University to develop outdoor learning teaching resources. The impetus for and the connections developed which led to his work came from a stakeholder event which considered the need for an outdoor learning strategy for Northern Ireland. The stakeholder event was supported by the Northern Ireland Forest School Association (NIFSA) and hosted by the Stormont Education Committee in March 2025. Since that event, the Northern Ireland Curriculum Review and implementation of the writing of a new curriculum have been ongoing. More specially, in relation to outdoor learning, a Plenary Motion was successful in the NI Assembly: **Mainstreaming and Strategy for Outdoor Learning in Schools (24/11/2025)**. This was as a direct result of collaboration between NIFSA and the wider outdoor learning community, present at the stakeholder event and who supported this work. This report offers a synthesis of all the evidence required for those in the sector to work together to implement the Motion.

The literature review draws on relevant international literature, followed by Europe-wide literature and ending with UK-Ireland specific literature on outdoor learning. Literature was chosen using a rapid-review style of literature search against specific search terms and presents literature relevant to teaching and learning in Northern Ireland.

The current Northern Ireland curriculum and education policy documentation are also analysed as part of this report. The policy analysis section draws on relevant policy from across Health, Education and the Environment. The interview data has been drawn from a series of six in-depth interviews with teachers in a range of settings, age groups and specialisms.

Globally, research on outdoor learning has focused on primary education. Interestingly pre-school/Early Years Education evidence less focus in the literature, despite the policy focus on outdoor learning/play at this age level. The majority of studies are international, but there has been a strong focus on outdoor learning in the UK/Ireland.

However, when these studies are analysed in depth, it is clear that the majority are from a small group of researchers, who have predominantly focused on the impact of Forest Schools in England. The evidence is overwhelmingly positive; however, authors note that the myriad benefits of learning outdoors apply whether a Forest school approach is utilized or other outdoor learning pedagogies are applied. For example, several studies cite similar benefits when using school grounds. The most important aspect of outdoor learning is that it is outdoors. The benefits span many outcome domains to include affective, cognitive, social and psychological as well as physical health and well-being. Studies reports greater engagement and outcomes for children in challenging situations (such as "looked after" children, during

COVID, disaffected young people, children with SENs). There are specific references to developing children's autonomy and agency in their learning and how effective pedagogical strategies are enhanced when utilized outdoors (dialogic teaching).

The challenges faced in terms of implementing outdoor learning are also well-cited, to include teacher confidence, knowledge and fears around health and safety. Time is also an issue, particularly in relation to curricula and assessment pressures. The importance of professional development is also frequently cited and that this needs to be across schools, not just the remit of one or two teachers. Funding is mentioned but more so with focus on transport and, as highlighted above, outdoor learning in school grounds or local spaces is effective too and a good place to start in terms of building confidence and a toolkit of pedagogies for all staff.

The policy landscape is an important consideration in implementation of outdoor learning. Through analysis of international, national and local policy documentation this report presents strong evidence that outdoor learning is the perfect vehicle through which education, health and environmental outcomes and benefits can be achieved for children and young people in NI. Harnessing of existing frameworks, guidance, strategies and action plans means the Northern Ireland Executive can achieve this with urgency for those pupils in our schools at the minute and for those who will join it in coming years.

Overall, analyses of the NI teacher's interview data were overwhelming positive in favour of outdoor learning. The frequency of codes/phrases relating to the benefits of outdoor learning for everyone far surpassed the frequency of codes/phrases related to the challenges. Several barriers were outlined by participants, and these were very similar regardless of the school type/level in which the teachers work or have worked in the past. Interviewees were generally very positive about how these barriers have and can be overcome and share a clear vision for education in general, and outdoor learning in particular, for all children in Northern Ireland.

Based on the evidence presented from a wide range of sources cited in this report, it is recommended that:

1. A timebound strategy and action plan for outdoor learning for all ages, at all levels, in all school types in Northern Ireland by developed at pace. This must include:
    a. Monitoring, evaluation and review.
    b. A draw on the already existing excellent provision for outdoor learning in Northern Ireland, using a collaborative approach between and within organisations.
2. That an expert steering committee is formed to lead on and be accountable for the implementation of the outdoor learning strategy and action plan.
    a. This should have representatives from the main delivery partners and Governmental and curriculum advisor to include (but not limited to) teachers and leaders from schools, ESDF/NIEL as a membership forum, the Education Authority, the Education Authority (EA), the Council for Curriculum, Examinations and Assessments (CCEA), the Education and Training Inspectorate (ETI)
    b. That a lead partner identified, through a fair process and funded for this role.
3. That outdoor learning is a mandatory part of the new NI curriculum, with every child have a progressive, continuous entitlement to learn outdoors as they move through formal education in NI.

The recommendations outlined above will address various policy agendas across departments to include effective **education** for our young people so that they are prepared for the future, improved mental and physical **health** and improved care for and guardianship of our **environment** now and in the future, when the current generation of young people will be the decision makers, the law makers and the innovators to ensure the viability of all who share this planet.

# Introduction

This report presents findings from a three-part review of outdoor learning in Northern Ireland. The evidence presented here was collected and collated between September and December 2025, at a time of change in the Northern Ireland (NI) Education landscape. At the time of writing, The Curriculum Taskforce Advisory Committee, appointed by the Minister for Education in NI, are beginning work to take forward the recommendations from a review of the NI curriculum in 2024-25. Their remit comes from the main focus of these recommendations, namely a new curriculum framework for NI, and will involve the development of "*relevant capabilities and content, linked to specific curricular strands and subjects*" (DE, 2025).

The review of the NI Curriculum and the associated development of a new curriculum framework for NI is a major part of the TransformED NI Strategy and Delivery Plan. This strategy was published in March 2024 and comprises a 10-point plan to transform teaching and learning through five core areas: curriculum, assessment, qualifications, school improvement and tackling educational disadvantage and will be realised with investment in teacher professional development.

This report focuses on the current position of outdoor learning in NI schools to include Early Years, Primary and Secondary provision. Data has been collected and collated from three sources:

1. *A Literature review* – a brief overview of international, national and regional evidence (where available)
2. *A Policy analyses* – a brief overview of where outdoor learning is explicitly cited in NI policy (to include curricula, health, environment and education policy)
3. *Empirical evidence* – findings from short (online) interviews with a sub-sample of Northern Ireland's teachers to include Special School teachers, Early years teachers, primary teachers and post-primary teachers.

## 1.1 The Literature review - methodology

The definition of outdoor learning is debated in the literature and straddles formal, informal, purposeful, ad hoc, physical and adventure activity domains. For the purposes of this review the following definition is accepted:

> *"…outdoor learning pedagogy is defined as a broad range of regular, purposeful planned learning experiences outdoors, ideally in natural places, during formal education, which promote experiential learning and agency for all, enable learning about and connection to the natural world, towards building relationships between people and places*" (Kelly et al., 2025, p. 2).

This definition came from the synthesis of many within education and curriculum-related studies. Based on this definition, a rapid review style literature search (King et al., 2022) was carried out using variations of the following three key terms: outdoor learning, school(s), Northern Ireland. A summary of the search terms is outlined in the table below:

| Outdoor learning | School | Northern Ireland |
|---|---|---|
| Learning or classroom | Pre-school or early years or kindergarten | NI |
| Learning outside the classroom | Primary or elementary | |
| Learning outdoors | Post-primary or secondary or middle school or junior high school or high school or grammar school | |
| Outdoor pedagogue or pedagogy or pedagogies | | |
| Outdoor curriculum or curricula | | |

**Table 1: An outline of the key terms used for the rapid review style search of literature on outdoor learning.**

The following, more specific, search terms were then applied across all relevant databases:

> "outdoor learning" OR "outdoor classroom" OR "outdoor pedag*" OR "learning outdoors" OR "outdoor curric*"
>
> AND
>
> "pre-school" OR "pre school" OR "preschool" "kindergarten" OR "primary" OR "primary level" OR "elementary" OR "elementary level" OR "post-primary" OR "post primary" OR "secondary" OR "secondary level" OR "junior high" OR "middle school" or "high school" OR "grammar school"

A total of 121 studies were exported with 7 excluded at the first stage as 5 were duplicated and 2 were not peer-reviewed, academic publications. This led to an initial title and abstract scan of 114 articles. At this point a further 18 were excluded as they were magazine-style publications. Therefore, a total of 96 studies were included in this literature review. The following table is a breakdown of the studies in terms of location and education level:

| Location/level | Pre-school/EYE | Primary/elementary | Secondary/middle/high | TOTAL* |
|---|---|---|---|---|
| UK/Ireland | 2 | 21 | 2 | 25 |
| Europe (rest of) | 1 | 11 | 5 | 17 |
| International | 7 | 34 | 17 | 58 |
| TOTAL | 10 | 66 | 24 | |

** There is some cross-categorisation as some studies, for example, have samples in the UK/Ireland as well as Europe (rest of) and/or other countries included.*

**Table 2: An overview of the number studies included in the literature review, within each relevant categorisation.**

Given the low number of studies focused on the UK/Ireland, a search and review of the "grey literature" available was also included. Grey literature was taken to be master's/PhD theses and relevant reports based on Northern Ireland specific data with a specific focus on outdoor learning (as defined above). These studies are summarized in a separate section (See Section 2.4).

## 1.2 The Policy Analysis - methodology

Policy documentation was drawn from education, health and environment related portfolios. This documentation was analysed for specific reference to outdoor learning and play. Specific

evidence, through quotations specifically related to these areas, were used to frame the writing of Section 3. All references for the citations used in Section 3 are also included in the reference list.

## 1.3 The teacher interviews - methodology

A total of six teachers from a variety of school types and educational level took part in an online, one-to-one, semi-structured interview. The interview study received ethical clearance from the School of Social Sciences, Education and Social Work's (SSESW) Ethics Committee in Queen's University Belfast (reference number: 134_2425). The key ethical considerations for this study were: informed consent; right to withdraw; data storage; protection of anonymity and confidentiality and the limitations thereof in the case of disclosure of illegal activities and/or child protection issues.

The ethical considerations were addressed through the use of information sheet and consent forms which clearly outlined the purpose of the interviews, data storage, voluntary nature of the interviews, the right to withdraw before or during the interviews and/or withdrawal of data up to two weeks after the interview date as well as detailed information on anonymity and confidentiality and the limitations of these in cases of disclosure of illegal activities and/or child protection issues. In the interests of anonymity and confidentiality, interviewees will be referred to as Participant 1, Participant 2 etcetera throughout this report. The transcripts, and all associated documentation were also edited with the same pseudonyms to replace names (of participants, schools, children, colleagues). All anonymised data is stored on password protected, QUB cloud-based storage in line with the QUB guidelines on research data storage.

An overview of the pertinent background information for each participant is outlined in Table 3, below. The experience of those interviewed spans many settings, age groups and specialisms.

| | School type | Ages taught | Specialist subject | Experience |
|---|---|---|---|---|
| Participant 1 | Outdoor education provider | 4-19 | Geography | 22 years<br>England; NI; SEN classroom assistant; Foundation, KS1, KS2, KS3, KS4, KS5 |
| Participant 2 | Special School (Severe Learning Difficulties) | 3 – 8 | SEN | 21 years<br>NI; Previously a Classroom Assistant in Special School |
| Participant 3 | Secondary (integrated) | 11 – 18 | Biology | 23 years<br>NI; Secondary |
| Participant 4 | Secondary | 11 – 18 | Modern Languages | 20 years<br>Spain, England, NI, RoI; Primary, Secondary |
| Participant 5 | Pre-school | 3 – 5 | Primary (PGCE) | 25 years<br>NI; Pre-school, KS1, KS2 |
| Participant 6 | Pre-school | | Geography degree<br>Primary (PGCE) | 9 years<br>NI; Pre-school, Primary |

**Table 3: An overview of the interview participants' backgrounds.**

Of note is that five out of 6 of the participants who responded to the open, online invite have more than 20 years of experience each. Not all are specialists or hold specific qualifications in environment-related degrees.

The interview protocol was semi-structured ensured that the focus was on outdoor learning throughout, but the approach gave flexibility for open dialogue on the topic (Adeoye-Olatunde & Olenik, 2021; Bell and Willmott, 2014; Cohen et al., 2018). Introductory questions focused on the participants' background, previous and current teaching experience and their overall views on outdoor learning. The questions then explored the interviewee's thoughts on the benefits and drawbacks of outdoor learning, the facilitators and barriers they experience and how outdoor learning is received (or not) by teachers and pupils. Participants were then asked to reflect on where they see outdoor learning in the future in Northern Ireland and why. They were also asked what they would adapt/change within the education system in Northern Ireland and given the opportunity for any further comments before the interview ended. A copy of the semi-structured interview protocol can be found in the Appendix. All questions were asked in an open and balanced way, to mitigate bias on the part of the researcher.

### *1.3.1 Analysis of the interview data*

Data from the interviews were themed and coded into similar 'groups' of responses. This process was similar to Chi's (1997) qualitative analysis procedure. This means that the comments/responses were categorised according to similarity. Anonymised transcripts were analysed using the NVIVO qualitative analysis package. Following a process of iterative coding of each statement in the interview transcripts, the codes were grouped into overarching themes and associated sub-themes, as outlined below:

**Theme 1: The benefits of outdoor learning**

1a. *Learning, skills and capabilities within and across domains*
1b. *Learning for all – health, inclusion, socioemotional and attitude development*
1c. *The drawbacks are few and far between*

**Theme 2: Barriers are inside and outside school**

2a. *Teachers' fears, experience and development*
2b. *Resource, policy and curriculum barriers*
2c. *School leadership and parental buy-in as barriers*

**Theme 3: The facilitation flip side: barriers are removed by facilitators**

3a. *Teachers' commitment, experience and positive development*
3b. *Basic resourcing as a facilitator*
3c. *School leadership and parental buy-in as facilitators*

**Theme 4: Where now? Recommendations from participants**

The findings from the interview data are outlined in order of these themes and subthemes, which are presented in the order of how frequently these areas were talked about across all the interviews.

# Literature Review

## 2.1 Definition of terms and overview

The definition of outdoor learning is debated in the literature and straddles formal, informal, purposeful, ad hoc, physical and adventure activity domains. For the purposes of this review the following definition is accepted:

> *"…outdoor learning pedagogy is defined as a broad range of regular, purposeful planned learning experiences outdoors, ideally in natural places, during formal education, which promote experiential learning and agency for all, enable learning about and connection to the natural world, towards building relationships between people and places*" (Kelly et al., 2025, p. 2).

This definition came from the synthesis of many within education and curriculum-related studies. The literature review was conducted in line with this definition.

### *2.1.1 Location, approaches to learning and outcomes – trends around the world*

The systematic style search and review of literature in the area of outdoor learning led to several interesting trends in terms of the focus areas for this research. Research on outdoor learning has focused on primary education. Interestingly pre-school/Early Years Education evidence less focus in the literature, despite the policy focus on outdoor learning/play at this age level. International literature had a higher percentage of representation of studies conducted at post-primary level, compared to those conducted in UK/England and the rest of Europe. However, studies at primary level still dominated the international studies.

The majority of studies were classified as international, followed in frequency by those conducted in UK/Ireland followed by a lower representation of studies conducted in Europe (see Table 2). There are several important trends within this geographical classification, namely that 17 of the international studies were conducted in Indonesia. It is likely this is due to ongoing Governmental policy and investment through The Indonesian Education Scholarship (BPI) for master's and doctoral programmes. Set up in 2011, these scholarships are managed through the Lembaga Pengelola Dana Pendidikan (LPDP) under the Ministry of Finance, designed to develop Indonesia. In total, over a third of the international studies considered in this report were from North America followed by similar representation from other Asian countries. There were a few studies from South African countries and one from South America, two from Turkey and one from the Middle East. Interestingly, the international studies were dominated with approaches related to subject-specific learning such as STEM subjects, language development and specific references to academic achievement. Many of the international studies (12 studies) considered the importance of the design of school grounds. In terms of curriculum approaches, these were very diverse to include place-based education, faith schools, forest friendly approaches and indigenous/local approaches.

In terms of the studies from UK/Ireland, the vast majority (18 studies) were conducted in England. The UK/Ireland based studies were dominated by a focus on Forest Schools (10 studies), general educational development and more of a focus on health and well-being and inclusion, in comparison to the international studies. Denmark (8 studies) and Sweden (2 studies) accounted for the majority of studies from the wider European region. These studies had more of a balance in terms of areas of focus to include academic development, health and well-being and affective outcomes.

Globally, outdoor learning is hailed as a positive approach to learning and teaching for learners of all ages. It is generally accepted as having multiple benefits and the barriers and challenges, as well as proposed solutions, are also well researched and well-cited. The following sections present a synthesis of the main benefits and challenges cited in literature, under various subthemes. The sections (themes) and subthemes are presented in the order of frequency in which they were found in the literature. For example, the first section is 2.2. The benefits of outdoor learning because this was the area most frequently cited in literature. Section 2.2 then begins with subtheme *Academic outcomes due to an outdoor learning environment* as this was the most frequently mentioned theme within the text related to benefits, throughout literature. Each subtheme begins with the evidence from international picture before moving on to the European (geographically) considerations and ending with the UK/Ireland specific state of play.

## 2.2 The benefits of outdoor learning

### *2.2.1 Academic outcomes*

*International studies*

More than a third of the international studies included in this review mentioned academic achievement as a benefit of outdoor learning. For example, with samples of **primary aged children**, Avci and Gümüs (2020) reported significantly higher academic success in amongst Turkish children who took part in outdoor education in social studies, in comparison to a control group who did not learn outdoors. In Bangladesh, Khan et al. (2019) found that the science scores for a group of primary-aged children were significantly higher after being taught outdoors, compared to indoors. The outdoors is considered a unique and effective learning context for primary children. For example, in constructing understandings in Australia (Lloyd et al., 2018), for tailored learning matched with children's needs in Indonesia (Supadi et al., 2025), achievement of the goals outlined in individualised education plans for autistic children in the USA (Friedman and Morrison, 2021), effective promotion of learning through peer-tutoring in South Africa (Tšepo et al., 2013) and 'improved academic success' for children in Iraq (Zewar, 2024). English language learning was also improved through outdoor learning in primary schools in Argentina (Porto, 2025) and Indonesia (Putra et al., 2023). Improvements in the learning of science at primary level were also reported by Siswoyo (2021) in Indonesia and Photo (2024) in South Africa.

In terms of academic impact for **secondary level** learners, Kuswanto and Rahmat (2024) cited increased understanding and meaningful learning of physics concepts (motion and force) through outdoor learning using games. Likewise, Sari and Paidi's (2018) meta-analysis concluded that learning natural science outdoors, through direct experience, impacts student

academic outcomes. In the USA, Wojcik et al. (2019) found that outdoor active learning environments can tackle education standards for a variety of subject areas (Physical education, Science, Maths, Social Studies) with the added bonus of experiencing nature. Studies by Arti and Ikhsan (2020) and Astutik et al. (2020) reported improvement in high school students' critical thinking, and problem-solving abilities (Wahyuni et al., 2017) in the Indonesian context. Fu et al.'s (2025) outdoor learning on clean power also fostered critical thinking in the USA context, alongside creativity. Vella-Brodrick and Gilowska (2022) conducted a systematic review which specifically considered the effect on cognitive functioning when adolescents learn in a natural environment. Their results provided substantial corroboration of the link between outdoor learning and cognitive function (Vella-Brodrick and Gilowska, 2022). This study included countries in Europe and further afield.

A few international studies considered academic outcomes specifically related to environmental education. Mashfufi's (2018) pre-post comparison of high school students' ecological literacy found improvement for the intervention group versus the control group. Californian high school students' scientific concepts of restoration and conservation were improved through their involvement in restoration project (O'Dowd et al., 2007). As cited earlier Fu et al.'s (2025) study also reported empowering high school students to address global environmental issues in the USA.

*European studies*

A range of academic outcomes were considered within most of the European outdoor learning studies, spanning primary aged and secondary aged students. In relation to **primary education**, Danish researchers found enhanced understanding of taste and wider educational goals when taste education was conducted in school gardens (Nielsen, 2020). In the Czech Republic, Novotna et al. (2025) reported significantly broader knowledge of biology, animal products, husbandry and welfare among those students engaged in outdoor Farm-Animal-Assisted Education, compared with counterparts who learned about these concepts indoors. Researchers in Sweden found improvements in the learning of mathematics (spatial orientation) when lessons were conducted outdoors (Peng and Sollervall, 2014).

In relation to **secondary education**, Haraldsson et al. (2024) noted positive differences in how Swedish students developed knowledge of and use of scientific concepts and skills when they were taught outdoors. The students themselves also reported finding it easier to understand and communicate the scientific content when it was taught outdoors (Haraldsson et al., 2024). In another study, students in Estonia took part in outdoor investigations into plant diversity and air quality around their school (Uus et al., 2021). There were improvements in knowledge at the post-test stage, particularly among girls (Uus et al., 2021). Colombari and Battisti (2023) reported increased awareness of invasive species through use of an outdoor citizen science project in Italy. As cited earlier, Vella-Brodrick and Gilowska's (2022) study included European countries and reported academic improvements in the form of cognitive function when students learned in a natural environment.

*Studies in UK/Ireland*

At this point, it is important to remind the reader that the majority of studies in this category were conducted in England (18 studies), with a large number of these centred on Forest

Schools for **primary and/or pre-school aged** children (10 studies). Specific references to academic achievement were found in Manner et al.'s (2021) and Waite et al.'s (2016) studies of Forest School in England with the former focused on the benefits for adolescent girls. Walker et al. (2021) cite beneficial effects on primary children's development and academic attainment as result of access to nature. Again, in the English context, Marsh and Blackwell (2025) report on the academic benefits of outdoor learning after COVID-19. The academic impact of supporting children's agency and autonomy was also in a further two English studies (Papadopoulou and Vincent, 2025; Riley et al., 2006) and one Irish study (Rafferty and Coulter, 2024). Several other areas of academic development were also cited in the UK/Ireland literature to include improved mathematics, better communication (to include pupil-teacher interactions) and support for school readiness through Forest Schools in England (Cronin de Chavez et al., 2024; Harris, 2024) and creative educational growth in Ireland (Cashman et al., 2025).

### *2.2.2 Impactful outcomes in the affective domain*

For the purposes of this subtheme, the affective domain is broad and understood as outcomes and development other than academic. Affective development and outcomes are considered to be social-emotional, attitudinal and or related to feelings, values, inter and intrapersonal skills. Within these areas, the international literature had more of a focus on environmental care alongside personal social-emotional development, whilst the UK/Ireland literature within this subtheme was more about personal development and experiences. Few studies within the European category focused on this subtheme. A few studies in all geographical categories cited improvements in behaviour to include engagement and focus.

*International studies*

With reference to the international studies included in this review, four studies based on primary aged populations and three studies focused on secondary level students reported positive impacts of outdoor leaning on environmental awareness, care, appreciation, impact and respect. With reference to **primary aged** children, Porto (2025) reported development in eco-consciousness in an Argentinian context. Rivett (2023) cited the positive ecological impact of engaging with school gardens in Australia. Sterrett and Imig (2015) reported on the reduction of environmental impact when learning is taken outdoors in Green Ribbon schools in the USA, whilst Weiss et al. (2023) found that outdoor learning evidenced an increase in relational behaviours which promoted the well-being of and respect for nature in pre-school in the USA. Photo (2024) specifically recorded how negative preconceptions about animals were addressed through outdoor learning in South Africa.

Within this subtheme, international studies with **secondary** level students present evidence for an improvement in attitudes towards environmental care in Indonesian high schools (Firmansah and Suryadarma, 2019), an increased awareness and appreciation of the value of a local environment (Creek) as a result of a restoration project in the USA (O'Dowd et al., 2007) and the impact of lived experiences in the environment on geographical consciousness (interconnectedness of all species and the planet) of secondary learners in Namibia (Wepener and Pretorius, 2023).

Other codes within this subtheme were related to improvements in cultural awareness in Indonesia at primary (Supadi, 2025) and secondary (Kuswanto and Rahmat, 2024) levels in

Indonesia. The benefits of outdoor learning for social and emotional development included improvements in **primary aged** Indonesian children's motivation to learn (Dwi Kurnianti Fajar Cahyadi, 2020) and enhanced enjoyment of learning (Syafitri, 2020). Enhanced enjoyment was also cited in a study of Bangladeshi primary level students (Khan et al., 2019) and Indonesian **secondary** level students (Kuswanto and Rahmat, 2024).

References to improvements in behaviour, engagement and focus were cited across five international studies. In terms of **primary** level, Campbell et al. (2025) found that outdoor learning spaces increased student engagement in Canada. Largo-Wight et al. (2018) considered the frequency of USA teachers' 'redirections' of pupils' behaviour and found that these were significantly fewer when learning in nature ($t = 2.49$, $p < 0.05$) compared to the control group, who did not learn in nature. They also found that, when learning in nature, fewer pupils were off task (Largo-Wight et al., 2018). In Indonesia Putra et al. (2023) reported that the children did not get bored in the outdoor learning environment and followed all materials.

Similar findings were reflected in the **secondary** level studies, internationally. Norwood et al. (2012) found that Australian students (13–14 years old) in outdoor classrooms spent more time on-task, an effect that lasted for quite a few weeks after the intervention. They also reported that the students spent more time on task at the rate of an extra 20 seconds per teacher redirect. Likewise, Vella-Brodrick and Gilowska's (2022) systematic review presented evidence that selective attention and sustained attention is higher in an outdoor learning environment.

*European studies*

All of the European studies which cited development and outcomes in the affective domain were focused on **primary and/or pre-school** children or pre-service teachers. Peng and Sollervall (2014) reported increased enjoyment among primary children in Sweden and Bølling et al. (2018) found improvements in intrinsic motivation among primary children in Denmark. Risky outdoor play was explored by Bahrenscheer and Sederberg (2019) in Denmark pre-schools and they found it enhanced social and personal development as well as motor development and children's initiative in learning. Partoune et al.'s (2023) study focused on Belgian pre-service teachers who, after a five-month full-time eco-traineeship, said they now see school grounds as a place to develop children's eco-citizenship and environmental education.

*Studies in UK/Ireland*

Personal development and experiences and experiences featured strongly in the literature from UK/Ireland. All of the studies within this subtheme on the affective domain in UK/Ireland were based on **primary/preschool** aged children. Three studies were about Forest Schools in England, with Manner et al. (2021) reporting that most of the participants felt that the approach positively affected their mood, confidence, social skills and relationships and this continued when they left the Forest School setting. Harris (2024) found that Forest School provision helped children to overcome shyness, increasing confidence their confidence and aided cultural and social integration. A pre-school Forest School programme in England also cited improvements in the children's personal, socio- and emotional development (Cronin de Chavez et al., 2024).

Macauley (2024) considered the impact of a 15-week Forest School programme on care-experienced primary and secondary (aged 8-13) pupils in Scotland. She reported that the programme had a positive impact on their self-confidence, willingness and ability to take on leadership roles and improved interactions. An improvement in their *"social and practical skills that can be transferred into learning/life settings*" was also evidenced (Macauley, 2024, p. 127).

Studies which consider outdoor learning in general, and which were not specific to Forest Schools, also reported improvements in student–teacher relationships, peer relationships and safety awareness (Cashman et al., 2025) and social skills and friendships after the impact of the Covid-19 lock downs (Marsh and Blackwell, 2025). In Ireland, Rafferty and Coulter's (2024) findings show that children developed their learner identity competencies after outdoor learning and linked this to the relational and reflective experiences of outdoor learning. Re-engaging disaffected pupils in London, England was the focus of Riley et al.'s (2006) study and they found that outdoor learning can transform views about themselves as learners.

Four studies based in UK/Ireland specifically mentioned improvements in behaviour, to include attention and focus to include Manner et al.'s (2021) research on Forest Schools and Marsh and Blackwell's (2025) study on outdoor learning post Covid-19 pandemic. A particularly important piece of research with 76 children aged 4-5 years old considered the differential effects of an urban outdoor environment on their attention in school (Atkinson et al., 2025). This study is particularly useful as it considered a total of 954 lessons across 8 matched pairs of indoor and outdoor sessions, and did not have a specific focus on Forest Schools, unlike many of the England-based studies. Atkinson et al. (2025) found that children who struggled the most with their attention indoors, benefited the most when learning outdoors. They considered the number of teacher redirects, the percentage of time on task, periods of peak focus, the time spent looking at what they were supposed to and their performance on a literacy task. When in an outdoor environment, those children with low baseline attention spent significantly more time on task ($p=<.001$, $d = -1.554$). They also spent a longer time focussed on individual tasks ($p = .005$, $d = -.455$) when outdoors.

### *2.2.3 A diversity in learning environments and teaching approaches*

*International studies*

Within this subtheme related to learning environments and teaching approaches, a total of 10 of the studies classified as international considered the design of outdoor spaces/school grounds. Most of these studies were in the context of North America. Larimore (2018), Weiss (2023) and Coe (2019) considered outdoor design/environment type for **pre-school learners** in the USA. Larimore (2018, p.35) developed a continuum from "*no nature*" to "*nature indoors, outdoors and beyond - daily*!". They concluded that small shifts practices can have a big impact on giving children more meaningful experiences, from "*adjusting the physical environment, being intentional about integrating nature into teacher-directed activities, and embracing nature-based approa*ches" (Larimore, 2018, p.41). Weiss (2023) cited the important of "relatively wild" forest settings in terms of children relating to nature. Coe (2016) called for a shift in how teachers think about outdoor learning, from looking for reasons not to take pupils outdoors to seeing outdoor learning as a pedagogy.

Also in the USA and without specific reference to the ages of the learners, Wagner and Gordon (2010) advocate for thoughtful and imaginative design of outdoor learning spaces which are flexible, bring a closer cultural connection to the wider community, can bring environmental, energy and cost savings as well as being less likely to be impacted by pupil vandalism and accidents. A Canadian study (Trudeau, 2011) highlighted the importance of the design of outdoor areas in schools, for the benefit of the environment and learning. Trudeau (2011) outlines that the construction of schools is just as important as what is taught in them, in relation to fostering ecological awareness among learners for a sustainable future. Vella-Brodrick and Gilowska's (2022) systematic review included studies from many international and European countries and argues for the importance of 'green' settings for education to deal with pupil health and well-being in regard to reducing stress and cognitive overload for learners.

Three studies based in Asian countries provide evidence for effective design of outdoor settings in schools, two in **primary** schools and one at **secondary** level. In Bangladesh, Kahn et al. (2019, 2020) investigated what various groups would like to see from an outdoor learning space to include connecting with nature, challenging themselves, being active and socialising with friends in an attractive space (the pupils); gardening spaces (parents) and availability of loose parts for play so that children can self-direct learning (teachers). They concluded that these things need not be mutually exclusive and go on to present, in the latter paper, empirical evidence for building effective outdoor environments for teaching and learning. Shaojie et al. (2019) concluded that a permaculture and symbiotic approach to outdoor spaces at primary school in China has a huge impact on natural education at this level. The only **secondary**-specific study under this subtheme, in the international literature reported how objects that already exist outdoors, in school grounds, are effective for teaching secondary physics.

*European studies*

Five studies which considered countries within Europe looked at the design of school grounds, mainly at the **primary** level. As cited above, Vella-Brodrick and Gilowska's (2022) called for the importance of 'green' settings for learner health and well-being. Bentsen et al.'s (2010) study focused on the Danish udeskole (translates to "outdoor school") approach and concluded that it plays an increasingly important role within the Danish education system and is an important concept for green space planners and managers to consider. In a later survey of Danish teachers who were practicing udeskole, Bentsen et al (2013) found that the majority preferred forest spaces, but that these spaces need to be easy to access. Through consideration of Finish schools as a case study, Laboy (2019) contends that there is much to learn about the design of outdoor learning spaces in Finland. The importance of outdoor-indoor design and dedicated timetabling for outdoor learning is among the factors which contributes to educational success in Finland and improved physical fitness. Specific use of secondary school yards/grounds for a citizen science project in Italy, led to the identification of invasive species which had not been found in the region before and improved knowledge of the potential impact of such species.

The findings related to this subtheme were much more nuanced, when compared with the international literature, as there was more discussion around teaching approaches in an outdoor learning context as opposed to the design of outdoor spaces per say. At **pre-school**

level, risky play is considered an effective approach to outdoor learning in Denmark (Bahrenscheer and Sederberg , 2019)

In considering Forest School as a pedagogical approach in Denmark, Dean (2019, p.53) concluded that is presents numerous opportunities for learning within a natural environment, at **primary** level, but calls for more research into the "*complexities of standardization and Forest School's application within distinct cultures*". McGee et al. (2022) highlight the importance of teacher autonomy in the udeskole curriculum and call for an approach which includes parent participation in decision making within udeskole to allow teachers a different perception of risk. They report that this will allow "*more experimentation and better integration of a wider curriculum in udeskole*" (McGee et al., 2022, p.23).

Partoune (2023) emphasised the importance of **primary** teacher professional development in teaching approaches to outdoor learning in Belgium. Another study of teachers of all levels in Spain specifically considered the use of technology for learning geography outdoors and emphasised the importance of teacher professional development for this type of approach (de Lázaro y Torres et al., 2016).

In terms of teaching approaches at **secondary** level Haraldsson (2024) and Vella-Brodrick and Gilowska's (2022) note that when teachers make a specific effort to take pupils outside to learn, it is effective regardless of how short this time is.

*Studies in UK/Ireland*

Consideration of the physical environment as it pertains to Forest Schools at **primary** level is considered by several studies in the UK/Ireland. Cronin de Chavez (2024) highlight the importance of maintaining and protecting urban Forest Schools in England to facilitate the effective nature connection they bring. Harris (2018) reveals how Forest School environments allow educators and children to co-create a learning environment and that practitioners see this environment as a "*more flexible and responsive learning environment*" which is "*removed from the physical constraints of the classroom*." In a later study, Harris (2025) also reports that a Forest School learning space is more permissive and that the whole class benefits as children can engage and respond in line with their own needs.

Several other studies at **primary** level in England consider other physical environments and designs, aside from forests. Atkinson (2025) posits that the beneficial effects of outdoor learning were observed even when learning took place in urban outdoor settings with limited natural features. Harvey (2020) concluded that school grounds were effective in running outdoor learning about biodiversity and were a low-cost location for this. Quinn and Russo (2020) analysed how primary schools in England adapted their outdoor space when children returned to school after Covid-19 lockdowns. They concluded that dividing outdoor spaces which are divided up are better as they lots of uses can happen at once, as opposed to unstructured, open space which may limit opportunities for outdoor learning (Quinn and Russo, 2020). In Scotland, Boyle (2025) published findings from an analysis of an approach to the design of a **pre-school and primary** setting, which followed Passivhaus certification. They reported that the school encompassed a modern design which facilitated supportive pedagogy because children had easy access to outdoor spaces for learning (Boyle, 2025). The build also considered how the school connected to the physical community around it and

to encourage active travel to school and the reduction in energy costs were estimated to be 70 percent (Boyle, 2025). Riley et al. (2006) conducted a study with disaffected **secondary** level pupils in England, which utilised outdoor learning. Experiencing learning in an active, outdoor environment was found to be effective for them.

Studies on Forest School approaches at **primary** level accounted for five of the eight studies conducted in UK/Ireland, which made specific reference to teaching approaches in outdoor learning. Harris (2018) found that Forest School approaches are perceived as free from the pedagogical constraints of the national curriculum, embrace a child-led ethos whereby children can embark on individual learning journeys (Harris, 2024) and respond to their individual needs (Harris, 2025). Waite (2016) compared English Forest Schools with Danish udeskole and concluded that we need to pay close attention to the pedagogical principals within Forest School if we are to compare them across countries and expect alignment of purpose and practice, as they can be attuned to culture and policy. Friedman's (2024) study focused on the perspectives of 18 mothers who chose Forest School provision for their children. The findings reported that these children were afforded novel autonomy and compassion, unlike other groups they had been involved in, and this was particularly true for children with additional needs (Friedman, 2024). Two further primary level studies in Ireland also reported that outdoor learning in general, not specific to Forest School, offered experiential richness which led to educational growth and improved well-being (Cashman et al., 2025). The embodied, autonomous, relational, and reflective teaching approaches utilised in outdoor learning led to numerous benefits and development of competences in the Irish context (Rafferty and Coulter, 2024).

One study reported on the teaching approaches within outdoor learning in **secondary** schools in England. As already cited, Riley et al. (2006) focused on disaffected young people and discussed the approach to outdoor learning as allowing the students to become change agents, who were working with teachers in new ways. The outdoor learning approaches gave teachers time to develop strategies which removed some of the barriers to learning for these disaffected young people (Riley et al., 2006).

### *2.2.4 Health, well-being and inclusion*

*International studies*

A total of 10 of the international studies reported on the benefits of outdoor learning for health and well-being, for both pupils and teachers, and most of these focused on **primary level**. The majority of these studies were conducted in North America. For example, Campbell et al. (2025) found that outdoor learning spaces contributed to the overall sense of wellbeing, increased physical movement amongst pupils in Canada and promoted the creation of an inclusive learning space (for all needs) that promoted diversity (consideration of all cultures and related approaches to learning/nature, including indigenous). Largo-Wright et al. (2018) reported a modest increase in student wellbeing when learning in nature in the USA. Evidence from a study on Green Ribbon Schools in the USA also reported gains in relation to improvement in health and wellness (Sterrett and Imig, 2015). Wojcik et al. (2019) called for the need to develop school sites to enhance physical wellbeing in the USA and, likewise, Kahn at al. (2020) found that primary-aged children want to be physically active when learning outdoors in Bangladesh. A literature review by an Indonesian scholar concluded that outdoor

learning reduced sedentary behaviour and, therefore, the diseases associated with it as children move around a lot more when learning outdoors (Hernawan, 2023).

With a specific focus on primary teacher-wellbeing in relation to outdoor teaching and learning, Deschamps et al. (2022) found that Canadian teachers who teach outdoors score significantly higher on a measure of subjective wellbeing, when compared to colleagues who do not teach outdoors (d = 0.21 to d = 0.36). Friedman and Morrison (2021) reported positive effects for Special Educators of children with Autism in the USA in relation to mental, emotional and physical wellbeing.

One study considered **secondary** level pupils - Vella-Brodrick and Gilowska's (2022) systematic review found that enhanced wellbeing was an underlying mechanism for improvements in cognitive functioning when learning outdoors.

Connection to nature is often cited alongside health and well-being in studies which consider outdoor learning. In general, connection to nature is viewed as an important contributor and/or correlating factor for improvement in health and well-being. Two studies identified from this literature review focused on **preschool** children's connection to nature in the USA. Calan's (2020) study of urban pre-schools cited the importance of connecting nature, learning and academic success to mitigate the second-hand and passive interaction with science through video games/TV. Weiss et al. (2023) considered 26 modelled child-nature interactions in a pre-school Forest School and found that children who had a bond with nature were more likely to relate to nature and have the ability to cohabit (instead of dominate) with other life forms.

The remaining international studies which made specific reference to connection to nature were all focused on **primary level** education. Atmodiwirjo's (2013) Indonesian study called for the need to address school design for more connection to nature, particularly in a tropical climate which lends itself to this. Also in Indonesia, Kahn et al. (2020) reported that children want to connect to nature in the outdoors. In South Africa, Photo (2024) presents evidence for the importance of fostering emotional connections with nature for science learning. Rivett (2023) found a significant increase in connection to nature as a result of outdoor learning in the school garden in Australia. In the USA, Largo-Wright et al. (2018) found that learning outdoors is an encouraging method of increasing children's connection to nature and well-being. Vella-Brodrick and Gilowska's (2022) systematic review highlighted the importance of providing opportunities for connection to nature to improve cognitive functioning.

*European studies*

Exploration of and the positive outcomes associated with connection to nature was more frequently mentioned within the European literature, than specific health and well-being outcomes. All of these studies which mentioned connection to nature focused on **primary** level. Dean (2019) consider Danish Forest Schools and reported that they provided opportunities to engage with nature, but this was dependent on culture and history in a specific geographical context. Partoune et al. (2022) cite the importance of pre-service teacher education around outdoor learning, given the dearth of such approaches in Belgium primary schools and little to no connection to nature among recent generations of student teachers. Reis (2017) considered how nature is perceived as the "other" which has led to misuse by humans and calls for the inclusion of outdoor learning to (re) naturalise childhood, provide

contact with nature and bring peace as a value. In a comparison of English Forest Schools and Danish udeskole, Waite et al. (2016) reference the importance of the global call for increased connection to nature.

Two European studies specifically reported on **primary** aged children's health and well-being. Culková and Dušková (2025) found that active conditions within school, to include outdoor learning, had a positive effect on the physical activity levels of children in the Czech Republic. Using statistical analysis of date from digital pedometers, they also found that family lifestyle did not have a significant impact on engagement with physical activity during school hours, highlighting the importance of prioritising physical activity during the school day and building in specific policies and approaches for this for all children (Culková and Dušková, 2025). In Finland, purposeful school design to promote more outdoor learning and time outdoors, was found to promote physical activity (Laboy, 2019).

*Studies in UK/Ireland*

Physical and mental health promotion/improvement, connection to nature and inclusion (removal of barriers to learning) were considered in equal measure within the studies based in UK/Ireland.

Cronin de Chavez et al. (2024) focused on A forest School approach for **preschool** children and concluded that it is a promising and feasible way to increase connection to nature. In relation to studies which considered **primary** aged children and connection to nature, Harvey et al. (2020) evaluated a biodiversity-focussed outdoor learning project in English schools and found that the programme increased children's connection to nature and resulted in significant improvements in children's mood and wellbeing, which was sustained for the whole school year. Walker et al. (2021) explored English pupils' access to nature and found that it mitigates declining levels of connection to nature and has positive effects on health. They report that access is often cited as an issue, however, most schools in their sample had access to green space nearby. In another study with a sample of primary children in England, Marsh and Blackwell (2025) considered the impact of the Covid-19 pandemic on pupil well-being and presented outdoor learning as an effective way to address this. Aronsson et al. (2015) teamed up with health professionals to investigate the health benefits of outdoor learning for primary children in England, who were engaged in outdoor learning. They cited positive impact on physical activity and whole school health promotion, as a result of outdoor learning.

With specific reference to Forest School approaches at primary level, Harris (2024) evidenced the impact of outdoor learning on calming anxious children and as cited earlier, Waite (2016) cited the importance of such approaches in England and in Denmark for increasing children's connection to nature.

Manner et al. (2021) focused on **secondary** level girls who engaged with Forest School in Scotland and showed evidence for improvements in their mental well-being, resilience and mood.

Studies based in UK/Ireland has more of a focus on inclusion and children with Special Education Needs, than those conducted internationally/within Europe. Again, many studies focused on **primary-aged** children. Harris (2024) considered the use of English Forest School

settings and identified disaffected learners and school avoiders as one of the specific groups who benefit from this approach. Harris (2025) also reported that Forest School approaches are in line with individual developmental needs and, as a result, the whole class benefits as all needs are met. Friedman et al. (2024) considered mothers' perspectives of the impact of independent Forest School provision, and they reported that it was good for those with additional support needs. As cited earlier Atkinson et al. (2025) found that children who struggled the most with their attention indoors, those with the lowest baseline attention, benefited the most when learning outdoors. This is an important finding in relation to planning strategies which are effective for children who struggle with focus and attention in regular classroom settings.

Hine (2024) compared primary-aged children's constructions of gender in the classroom, with their construction of gender in a Forest School setting. They found that whilst children were more constrained by gender norms in the Forest School setting, being in the Forest School offered more opportunities to be free from these gender norms. Therefore, they recommended that Forest School approaches are adapted to support equality in terms of gender (Hine, 2024).

Macauley's (2024) study of the impact of a Forest Schools programme on care-experienced **primary and secondary** aged children found evidence for improvements in well-being and resilience (as well as practical learning, skills and leadership capabilities) and noted that these findings are particularly important given that this was a diverse group of young people who have experience multiple barriers to learning in a regular school setting. Riley et al. (2006) also considered the impact of outdoor learning, not Foerst School specifically, for **secondary** level disaffected students and found that it removed barriers to learning for those students.

## 2.3 The challenges with outdoor learning

### *2.3.1 System and teacher-level considerations*

*International studies*

Three international studies of **preschool** education critically discussed some of the barriers to successful implementation of outdoor learning. Mart (2023) considered preschool teachers' planning for daily maths lessons in the outdoors, in Turkey, and found that there was a discrepancy between the actual lesson plans and what was delivered as the outdoor learning opportunities were limited. They called for professional development programmes on the use of pedagogic practices for outdoor learning (Mart, 2023). Similarly, in Canada, Omidvar et al. (2019) reported a limitation in the quality and range of preschool children's nature experiences because of access to nature and restrained pedagogical practices. Coe (2016) also discuss the limited opportunities for Canadian children in the early years and advocate for a conceptual shift from a culture of excuses to the perception that outdoor learning is a pedagogy and a problem-solving opportunity.

Three international studies considered the barriers and challenges with outdoor learning at **primary** level. In Indonesia, Asrial et al. (2019) explored preservice teachers' views on the obstacles to teaching language and found issues relating to curriculum, resources for outdoor (and indoor) learning as well as the initial abilities of pre-service teachers and their motivation

and ability to critical reflect on their practice. In the USA, Potts (2022) and Campbell (2025) considered some of the challenges with primary outdoor learning. Taking too much time away from core curriculum content was cited as an issue by educators (Potts, 2022). The physical design of an outdoor learning space was reported as only one part of the support necessary for sustained outdoor learning, wider systemic, pedagogical and cultural supports are also required (Campbell, 2025). For example, directed policies and funding, increased decision-making and choice around the design of outdoor learning spaces for schools and professional development (Campbell, 2025).

One US study considered **secondary** teachers' concerns about using the school grounds for outdoor learning. They cited similar system and teacher level concerns to those raised in studies focused on preschool/primary outdoor learning. Fowler (2012) reported that the teachers' main concern was how they would learn to fit the outdoor learning lessons into the current curriculum (standards), the provision of necessary equipment, adequate time for planning and preparation and reassurance for teachers that there would be academic benefits.

*European studies*

Two European studies specifically considered the challenges with outdoor learning, and both focused on Forest School, **primary** provision. Dean (2019) reviewed the historical and conceptual background to Forest Schools provision in Denmark. They acknowledged that whilst Forest Schools provide numerous benefits in terms of young children learning outdoors, more research is needed to explore and understand the complexities of applying Forest School approaches in difficult cultures and its standardisation in application. McGee et al. (2019) compared policy and practice in outdoor learning in English outdoor education and Danish udeskole. They concluded that policies were similar, but the application was different. Placing outdoor education as an area under Physical Education in England was found to narrow its use whilst school management approaches in Denmark allowed better integration of outdoor learning. For example, through the input from local boards in Denmark and parent participation and the greater freedom teachers enjoy to trial and explore creative approaches to outdoor learning (McGee et al., 2019).

*Studies in UK/Ireland*

Aside from McGee et al.'s (2019) findings related to **primary** level Forest Schools in England, Morgan (2018) critically considers the scaling up of Forest Schools as a dilution of what was originally intended. Morgan (2018) argues that effective outdoor learning in a Forest/woodland setting only takes place when it is delivered by 'silvanatives' (educators with considerable practical and pedagogical knowledge) in areas which are physically, significantly forested. This study guards against the delivering of Forest School approaches in deforested areas or with educators who are only trained to a surface level, both of which are reported as the common characteristics when Forest Schools are 'scaled up' (Morgan, 2018). In a similar vein, Harris (2024) reported that Forest School delivery is better if it is not delivered by an external provider but an educator who knows the children.

Several UK/Ireland based studies reported challenges with general outdoor learning and did not consider Forest School approaches in particular. Both studies by Walker et al. (2021) and Papadopoulou and Vincent (2025) cited issues with curriculum demand having an impact on

effective implementation of outdoor learning at **preschool/primary** level, with alignment between the two being a specific concern. Walker et al. (2021) also reported that cost is a barrier, when planning external field trips, but that there are still barriers that limited its use to include pressures around curriculum delivery and teacher's lack of engagement with outdoor learning. As cited earlier, whilst there are many benefits to learning outdoors, issues with the consistency in implementation of outdoor learning as a teaching strategy, in the longer term (Marsh and Blackwell, 2025)

### *2.3.2 A suitable outdoor learning environment within the confines of school-based education*

*International studies*

Omnidvar et al. (2019) considered the Reggio-Emelia approach to education in Canadian **preschools**. Whilst there were lots of opportunities for time in nature, the children's cognitive, emotional and attitudinal affinity was weak. Authors critiqued the sample size (20 children) and the measures used in the study because of concerns around the children' s interpretation of the measures (not age and stage appropriate) as well as the pedagogical approaches. Also, with reference to Canadian preschools, Coe (2016) cited issues with practical access to the outdoors within the school environment. In the USA, Calan (2020) emphasised the importance of dealing with neglected and unused spaces in school grounds so that children grow up as guardians of nature.

At primary level in Indonesia, Asrial et al. (2018) found that physical learning environments in schools were an obstacle to teaching language outdoors. Atmodiwirjo (2013) also reported that Indonesian primary school grounds are not fully utilised and a rethink of the design of school grounds is needed to make it accessible for outdoor learning. Also based on Indonesian primary schools, Syafitri (2020) highlighted the importance of an effective outdoor learning space in the development of positive attitudes to learning. Trudeau (2011) advocated for the importance of the development of outdoor spaces in Canadian primary schools to enhance ecological awareness for a sustainable future. Campbell et al. (2025) also advocate for professional development and choice in design by educators to avoid limited designs which mimic indoor learning (seating with a white/blackboard). In South Africa, Tšepo et al. (2013) found that peer tutoring in the outdoors was effective but that schools need to establish tutor and tutee interactions more carefully, beforehand. Khan et el. (2019, 2020) considered the physical qualities (lighting, acoustics, seating) of primary outdoor learning spaces in Bangladesh and called for improvement in these qualities, as well as ensuring the spaces are attractive for children, so learning outdoors is effective.

At **secondary** level. Norwood et al. (2021) also cited the system-level issue around measurement of grades, as they found that whilst there were benefits in engagement and behaviour when learning outdoors, this did not translate to improved grades. Wepener and Pretorius (2023) also found that planned fieldwork is not accessible to all learners in Namibia secondary schools. Fowler (2012) highlights the importance of allocating enough time to building outdoor spaces at secondary level.

*European studies*

Culková, D. and V. Dušková (2025) highlighted the importance of supportive **primary** school conditions in which activities are structured and found that the school size also influences outcomes for learning outdoors. In Finland, Laboy (2018) calls for better design of primary schools so that the relationship between inside and outside is effective and further research on how these impact upon going outdoors.

*Studies in UK/Ireland*

Several studies considered the confines of a school system in relation to **preschool/primary level** Forest Schools in England. Maintenance and protection of wooded areas, as well as logistical issues, were cited as a challenge for Forest School delivery in English preschools (Cronin de Chavex et al., 2024). The impact of parental choice in relation to independent Forest School provision was also cited as an issue in terms of children who access the benefits of such approaches. Friedman et al. (2024) contend that parental choice is related more to parents' own feeling about their childhood experiences, as opposed to their current views of nature. Morgan (2018) cautioned against later implementation of Forest School delivery within schools as such spaces are viewed as controlled spaces for curriculum enrichment, which is known as 'scolonisation'.

Several other studies in England considered general outdoor learning. Atkinson et al. (2025) reported on the challenges with evidencing group level effects, even though there were positive effects on some children, whose baseline attention was poor. This is a relevant issue in terms of system-level expectations for educational development among groups.

Osborne et al.'s (2021) literature review on air quality around primary schools in England highlighted the importance of pollution monitoring to choose times when children will be least effected as well as consideration of the amount of green space (we need more greening of school grounds) as well as paving. Similarly, Walker et al. (2021) called for better planning at the level of urban planning so that children have access to green space and that non-spatial limitations to access are removed. As already cited, Quinn and Russo (2020) found a substantial disparity in the amount of outside space per pupil in primary schools across England and called for equity in relation to this as well as designing spaces which respond to children's needs and the positioning of buildings to allow the best use of school outdoor spaces.

## 2.4 The Northern Ireland-focused "grey literature"

Given the dearth of Northern Ireland-specific peer reviewed studies on outdoor learning, a search of the 'grey literature' was included. Grey literature is defined as information and evidence which is produced by government, academics, business and industry. The important difference between grey literature and the peer-reviewed literature cited in sections 2.1 – 2.3 of this report is that "commercial publishers" do not control it (Paez, 2017). For example, grey literature can include theses and dissertations, research and committee reports (sometimes for Government), conference reports.

The grey literature included for this report focused on "outdoor learning" only (from the year 2000 onwards), as per the literature review outlined in sections 2.1 – 2.3. A few studies were excluded because they were not based in NI, did not refer to outdoor learning, were not publicly available or were conducted before the year 2000. The search resulted in the inclusion of 14 studies/reviews, as listed here: Bradford, (2025); Brown, (2025); Campbell, (2019); Frazer, (2025); Kerr, (2016, 2017, 2019a, 2019b, 2020); Latimer, (2021); McCormick (2025); Kane (2025); Sommerville (2023); Walsh (2000).

These studies are particularly important as they are all based on findings/reviews of outdoor learning in Northern Ireland, with teachers and/or leaders and/or outdoor educators and/or pupils in Northern Ireland.

The study types, focus areas and themes and subthemes which were derived as a result of the analyses of these literatures/reviews were similar to the informaiton found in the literature outlined in sections 2.1 – 2.3. Three of them were not focused on specific age groups (included all learners) (Bradford ,2025; Frazer, 2025; Kane, 2025), nine focused on primary level pupils and/or samples (Brown, 2025; Campbell, 2019; Kerr, 2016, 2017, 2019a, 2019b; Latimer, 2021; McCormick, 2025; Sommerville, 2023; Walsh, 2000) and three included secondary level pupils and/or samples (Kerr, 2016, 2019; Kerr, 2020). Seven of the included references considered outdoor learning in general (Bradford ,2025; Frazer, 2025; Kerr, 2016, 2017, 2019a, 2020; Kane, 2025), four had more of a focus on outdoor play as outdoor learning (Brown, 2025; Latimer, 2021; Sommerville, 2023; Walsh, 2000) and two were specifically focused on Forest Schools (Campbell, 2019; McCormick, 2025). The majority of studies utilised qualitative research methods to include interview and focus groups and observations of settings. Several studies included engagement with children in the research process and two were reviews of existing literature.

The key themes from the grey literature were: the many benefits of outdoor learning for children in Northern Ireland, the barriers and challenges and recommendations for outdoor learning in NI. The benefits were most prevalent in the studies/reviews to include (from most to least frequently mentioned):

- **Academic learning** was cited in all studies and included evidence for enhanced engagement and focus, curriculum being covered, improved behaviour and authentic learning.
- **The development of skills and capabilities** was cited in the majority of references. The most frequently mentioned aspects were social emotional development, enhanced awareness/knowledge of environmental care and protection, physical development, improved teamwork and co-operation, improved communication and ability to problem solve. Other areas were also mentioned a few times – improved autonomy/independence, creativity, leadership and risk taking.
- **Development of the affective domain** was an outcome in almost all of the studies. The most frequently mentioned areas here were in relation to improved connection to nature, enjoyment, confidence development and a more positive attitude to learning outdoors. A few other areas were mentioned to include enhanced civic/environmental engagement/responsibility and motivation for learning.
- **Improved health and well-being**. This was cited as a benefit in seven studies.
- **Benefits for children with SENs and for inclusion** in general was cited in five studies.

- The **benefits for teachers and educators** were mentioned in three studies and **benefits for families/family life** was mentioned in one study.

Whilst the frequency of information related to the benefits surpassed the number of times that barriers or challenges were mentioned, they did cover a variety of issues. The barriers and challenges are listed below, in the order of how frequently mentioned they were across the references:

- **Governmental, policy and curriculum challenges**. These were mentioned in all studies and included concerns around overload in the curriculum, a focus on assessment and measurement of outcomes, the lack of value placed on outdoor learning in policy and curriculum, time and lack of financial support from central sources.
- **Teacher perceptions and lack of training**. This was cited in eight studies and mainly focused on a lack of professional development leading to a lack of confidence in teaching and learning outdoors, personal experience and value perceptions.
- **Financial concerns** were raised in seven studies and focused on the direction of funding for pedagogical sound spaces (not necessarily new, expensive equipment), access to such spaces within schools and staff time as a resource. A few studies also emphasised the importance of funding for appropriate clothing and footwear and/or the reusing of these from year to year.
- **Aligning outdoor learning with the specific needs of some children** was identified in seven studies to include behavioural, sensory and social needs.
- **Fears around perceived risk and health and safety concerns** was very prevalent in six studies. There was in depth discussion around systemic, teacher and school orientated concerns around the management of risk in outdoor learning, and outdoor play in particular. These studies raised this as a concern in terms of the opportunities that are then (not) afforded to children in NI.
- **School-related challenges and barriers** were identified in five studies and mainly focused on lack of support from school leadership and a lack of appropriate outside space and/or access to outdoor space.
- **Parental influence** and concerns were cited in four studies and mainly referred to parents' perceptions of risk and a lack of understanding of the benefits of outdoor learning. Four studies also cited the **views/perceptions of the wider community/population** in terms of the value of outdoor learning.

Of particular note is the most recent evidence specifically focused on outdoor learning in NI, provided by an evaluation of Forest Schools in NI (McCormick, 2025), a specific consideration of outdoor learning for children with ASD in mainstream schools (Brown, 2025), interviews with three outdoor educators (Bradford, 2025) and a study of risky play in the early years (Somerville, 2023).

A total of 124 teachers responded to McCormick's (2025) survey on the impact of Forest Schools, the majority of whom (n = 101) had completed a Forest Schools qualification and were located in primary schools (78%), within school grounds (61%). The questionnaire focused on the perceived impacts of and barriers to outdoor learning. The findings were very positive with 97% of respondents agreeing that NIFSA has enabled outdoor learning to take place. All of the respondents (100%) agreed that Forest Schools had a positive impact on pupil behaviour, creativity, supported socialisation, understanding of the natural world, appreciation

of their local environment and sustainability education. In total, 99% of responses were positive in relation to the broader educational benefits of Forest School as an extension of the classroom and 98% were positive that it had contributed to educational outcomes, with 82% reporting that they think it is aligned with the NI curriculum. Almost all of the respondents (99%) agreed that it gave accessibility to the curriculum and 88% agreed that it had a positive impact on addressing disadvantage. A total of 66% reported that it contributed to attendance, although they could not attribute this to Forest School alone. One of the most frequently cited critiques of the Forest School approach is that suitable settings are not accessible for all children in all schools. The findings from McCormick's (2025) partially support this as responses were less positive than the responses related to benefits of Forest School. A total of 26% of teachers agreed that Forest School required substantial resources, with 60% in disagreement. However, only 20% said they felt a large, forested areas are needed. McCromick (2025, p.13) concluded that a "*strong majority opinion demonstrates that such a setting is not essential, indicating flexibility in implementation*". The findings related to barriers to outdoor learning were clear with time selected as the most prevalent issue (40%) with funding (35%) chosen as first choice and support from Government bodies ranked most frequently in second place (27%). The recommendation from respondents in relation to how these barriers could be addressed were in line with the recommendations outlined in the majority of studies cited in this report: curriculum and policy integration, dedicated positions and time in schools, funding access and guidance, training and CPD (at all levels), leadership buy-in and shifts in mindset, time and workload management, development of school grounds and access to sites, as well as value, advocacy, awareness and visibility.

Brown (2025) interviewed ten teachers across five primary schools, with specific reference to outdoor learning for children with ASD. She found strong agreement that outdoor play results in developmental benefits to include progression in physical development (gross and fine motor skills, co-ordination, dexterity, special awareness), social development (peer interaction, turn taking, friendships, organic and spontaneous social exchanges), particularly for children with ASD. However (Brown, 2025) reported that teachers recognised the challenges for children with ASD in terms of behaviour and sensory issues, particularly when overstimulated or when routine was interrupted. The key issues cited by the teachers were lack of training (at all levels of their career) which led to a lack of confidence in planning and delivery of outdoor learning. Funding and resourcing, as well as timing, the constraints of the curriculum and health and safety worries (accountability, fear of accidents) were the main barriers. Sensory issues around the weather were also cited as well as an overreliance on technology, since the Covid-19 pandemic, particularly for children with ASD (Brown, 2025).

Bradford (2025) interviewed three outdoor educators about the implementation of outdoor learning in NI. Very similar themes were developed from the data in relation to benefits of and barriers to outdoor learning. Health and well-being, social skills and emotional intelligence, benefits for children with SENs and learning engagement as well as civic responsibility and helping the planet were reported as the benefits (Bradford, 2025). Financial barriers as well as Governmental/policy issues, barriers for teachers (training, awareness), parental and community attitudes were themes in the data. In line with other studies, Bradford (2025) recommended integration of outdoor learning into the curriculum, awareness raising (policy makers, teachers, parents, communities), stronger community-school links, expansion of Forest School training to develop teacher confidence, targeted funding and an accompanying outdoor learning strategy for NI.

Whilst Sommerville's (2023) study focused on risky play, the findings include general benefits, barriers and recommendations for outdoor learning in NI. Overall, the NI teacher sample were positive about the use of outdoor risky play for the development of problem-solving skills, communication and achievement of learning intentions, physical and social/emotional development as well as confidence (Sommerville, 2023). The barriers and challenges were similar to those reported in other studies: fears around health and safety (particularly for children with SENs), staffing levels during outdoor play, lack of training, school leadership, pressures to achieve 'learning' outcomes and lack of understanding of the value of outdoor play among colleagues (Sommerville, 2023). This study concluded with the recommendation that cultural and environmental factors should be considered when approaches to risky play are formed and that it should be incorporated into the NI context to enhance physical, cognitive and socio-emotional development in NI children.

Overall, the recommendations outlined in the grey literature mirrored the recommendations cited in the other literature (2.1 – 2.3) and by the teachers in their interviews (see section 4.5).

# The Policy Analysis

## 3.1 Overview and remit

This section will take a similar remit to the approach taken in the literature review section in that it will start by consideration of the wider, international policy landscape relevant to outdoor learning, moving onto specific UK and NI-relevant policy. This section considers outdoor learning in particular, which includes appropriate reference to the most frequently cited factors which policy incorporates in relation to this: education, health and well-being and environment.

## 3.2 The international backdrop

The United Nations (UN) is an intergovernmental, global organisation tasked with maintain global peace and security. It was founded in 1945 following the signing of the UN charter and ratification by five permanent member states (he Republic of China, France, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America). The most relevant area of work in terms of education and outdoor learning was the adoption of the 2030 Agenda for Sustainable Development, by all member states, in 2015, as a plan for people, planet and prosperity. The 17 Sustainable Development Goals (SDGs) and the 169 underlying targets have become one of the best-known global policy-related action plans of our time. The most recent evaluative report on the SDGs was published in 2025 and presents a "stark message" as progress is not sufficient to achieve all the goals. It reports that 35% of SDGs have evidenced moderate progress, 47% show that progress is too slow/marginal and 18% have regressed (UNDESA, 2025). This report calls for six transformations to rescue the SDGs:

1. Food systems
2. Energy access and sustainability
3. Digital connectivity
4. Education reform
5. Jobs and social protection
6. Climate and biodiversity action (UNDESA, 2025)

Education reform is perhaps the most relevant transformation in the context of this current review. However, education reform is also the gateway to achieving the other five transformations listed by UNDESA (2025).

Among other responsibilities, the global agency that is the United Nations Educational, Scientific and Cultural Organization (UNESCO) has a mandate to foster peace through international cooperation in the areas of science, education and culture. The most recent UNESCO (2020) Roadmap for Education for Sustainable Development outlines five priority action areas for member states, as outlined in Figure 1, below.

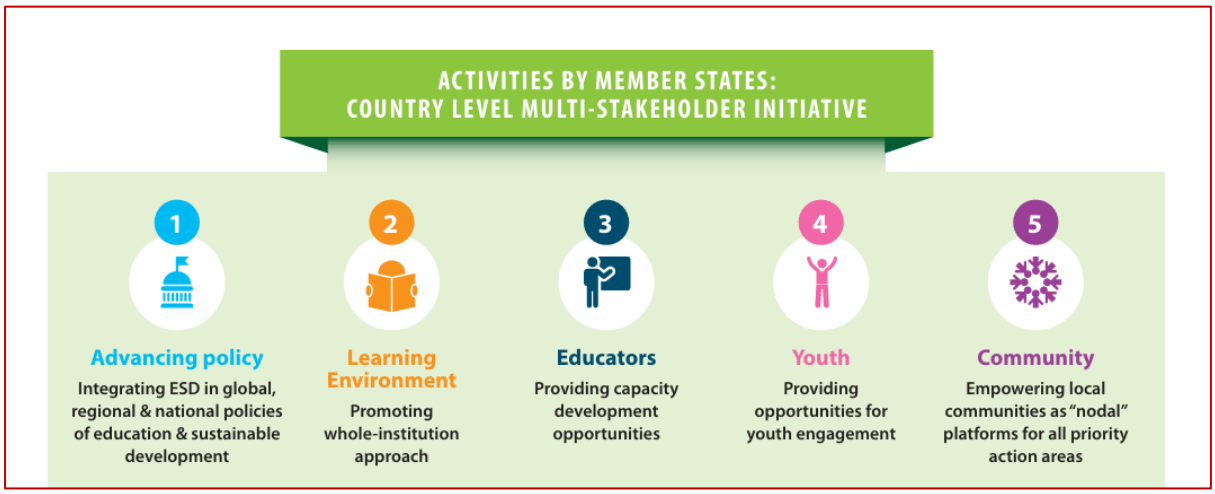


**Figure 1: A diagrammatic representation of the five priority action areas for member states in the achievement of ESD 2030. Taken from UNESCO (2020, p. 54).**

Of note is the similarity in priority actions to those outlined for outdoor learning in NI through the literature and teacher interviews (section 4). Outdoor learning is a key part of these priorities for NI teachers, pupils and schools.

Aside from the ratification of the UN global charter, many states throughout the world have also ratified the United Nations Convention on the Rights of the Child (UNCRC) to include the United Kingdom and Northern Ireland. The recently published UNCRC General Comment 26 (2023) on children's rights and the environment with a special focus on climate change references UNCRC articles 2, 3, 6, 12, 13, 15, 17, 19, 24, 26-31 and states that "*Children should be given environmental education that is accurate and in ways they understand. Environmental education should support children to connect with, and respect, the environment. The places where children learn should be safe from environmental harm*". In line with the literature reviewed in this report, and evidence from NI teachers, outdoor learning fulfils this obligation for children in NI.

In September 2022, the UNESCO Greening Education Partnership (GEP) was established as result of commitments made at COP26 (2021) and the Berlin Declaration on Education for Sustainable Development (2021). This is a whole system approach for all member states to transform education across four pillars: Greening Schools, Greening every Curriculum, Greening teacher training and education system capacities and Greening communities by 2030. There are 98 member states signed up to the GEP, and the UK was a founding partner and signatory. The establishment of GEP led to further guidance for each pillar, the most relevant in the context of the focus on this report (outdoor learning) is the UNESCO (2024) *Greening Curriculum Guidance: Teaching and learning for climate action* publication. Figure 2, below, presents the overview of key concepts and associated topics and learning outcomes as targets for member states.

**Figure 2: An overview of the key concepts and associated and learning outcomes for Greening Education. Taken from UNESCO (2024, p. 43).**

As a member state of the GEP and as evidenced in the literature and through teacher interviews, outdoor learning in NI has the potential to address all of these, in particular "Natural Environments", "Human Relation to Nature", "Reconnecting to Nature", "Engagement with Nature".

## 3.3 Cross-departmental policy considerations in the UK/NI

The current mandate period for **education** in NI has brought and will bring significant reform to early years provision, teacher education, curriculum and qualifications. At the request of DENI, Crehan (2025) published a Strategic Review of the Northern Ireland Curriculum. Whilst there is no mention of outdoor learning, specifically, the review cites the importance of environmental considerations within an updated curriculum to include that Climate Change is no longer "no longer a distant risk to be discussed in theory" (p.71) and that young people *"need more than information about climate change; they need the skills, attitudes and confidence to respond to it"* (p.72). Crehan (2025) also cited The Climate Act (Northern Ireland (2022) and the Green Growth Strategy in relation to the important part education much play leading to the fact that "*there is now a strong argument for making environmental learning a much more deliberate, connected part of what young people experience at school."* Crehan (2025, p. 78) then goes further to state:

> *"7.53 To take into account societal changes since 2007, the new curriculum framework and the associated policies guiding curriculum making at other levels, should: incorporate knowledge, skills and dispositions in young people that will equip them to respond to the environmental challenges they will inherit."*

In addition, within this curriculum review the following is recommended in relation to replacing the current curricular 'Key elements' () is made:

> *8.26 These capabilities should be developed during the curriculum design process as part of a two-way process between subjects and aims, taking into account:*
> *b) the capabilities that are needed in the context of Northern Ireland to support pupils to develop as individuals, contributors to society, contributors to the economy and environment and lifelong learners;* (Crehan, 2025, p.86)

In addition, a further recommendation is proposed in relation to the Environment:

> *"Recommendation 14 – World Around Us*
> *From KS 1 onwards, this Area of Learning should be replaced by two separate Areas of Learning called 'Science & Technology' (consisting of Science & Technology and Digital Technology curriculum strands) and 'Environment & Society' (consisting of History and Geography curriculum strands)."* (Crehan, 2025, p.158)

Based on the evidence cited in this report and the globally accepted need to link environment and society, outdoor learning in NI offers the perfect opportunity for the delivery of this updated Area of Learning. Whilst all of the evidence in this report points towards the need to an embedded, holistic approach for outdoor learning, across the curriculum these recommendations are a place to start in terms of the minimum entitlement for children and young people in NI and outdoor learning is the vehicle through which they can be delivered.

Indeed, within the same year, DENI (2025) published outdoor learning guidance to sit alongside funding for outdoor equipment. It begins by outlining the benefits of outdoor play, to include the point that outdoor areas in pre-school and primary schools provide "*young children with one of the best possible environments in which to learn*" as a place to achieve "*all areas of learning across the curriculum*" whilst enhancing "*long-term social, emotional and mental health*" (p. 2). The main benefits of **outdoor** play and **learning** for children are then listed, which mirror those from the evidence in the literature and from the teacher interviews (see Section 4): "*physically healthier*" (gross and fine motor skills), "*mental health benefits*", "*significant impact on learning*" (to include "*collaboration, resilience, concentration and focus*"), "*use their imaginations and develop creativity*", "*play and socialise freely and use their own imagination and initiative*" (through "*assessed risky freedom*"). These benefits are drawn from and linked to the benefits outlined in CCEA's (2022, p.4) Learning Outdoors in Pre-School and Foundation Stage publication, which also specifically promotes outdoor learning as a context for exploring "*topics associated with the environment*" so that children have "*opportunities to think about their role in looking after the world around them in their local context*."

DENI (2025) go on to outline several principles which underpin high-quality outdoor play: a combined, integrated indoor-outdoor environment which is "*available to the children simultaneously*", equity in value of indoor and outdoor settings to include prevalence of "*planning, management, evaluation, resourcing, staffing and adult interaction*". An emphasis is placed the fact that an outdoor learning environment is "*both a teaching and learning environment*" to provide opportunity for various "*modes of learning – play, movement and sensory experiences*". The guidance document cites the important of "*careful design and*

*layout*", "*versatile equipment and environments*" which children can "*control, change and modify*" alongside staff being supportive toward outdoor play (DENI, 2025, p.2-4). The principals draw on Bilton's (1998) book, cited in CCEA's (2022, p.5) earlier publication which also cites outdoor play as "*central to young children's learning*" and that the "*design and layout should promote and develop the progression of skills*". Outdoor learning as defined in this study (See Section 2.1) and supported with evidence from the literature and teacher interviews meets all of these requirements.

The Education and Training Inspectorate (ETI, 2021) in Northern Ireland published a report on the delivery of the pre-school and foundation stage curriculum, outdoors. They cite their previous reports on "*the importance of increasing opportunities for children to engage in learning outdoors*" (p.2). The report reiterated the increased understanding of:

> *"…the importance and value of outdoor play across all phases within the early years' sector to promote young children's learning and development, resilience, health and a sense of well-being."* (ETI, 2021, p.2)

Following various visits to pre-school and foundation stage schools, they found that "*Almost all areas of the early years' curricula are being delivered successfully through outdoor learning experiences*" but that staff highlighted the:

> "*need for continuous professional development and training, in particular for classroom assistants, to improve the quality of adult interaction and involvement in the children's play and to promote and sustain high quality learning*" (ETI, 2021, p.2)

Whilst the ETI (2021) report focused on success at pre-school and foundation stage in relation to outdoor learning, wider global and local evidence outlined in the current report demonstrates that this can be replicated for all learners, of all ages and needs.

With specific reference to inclusive education and the newly formed Specialist Provision in Mainstream Schools (SPiMS), NICCY (2025, p.9) published a briefing report which specifically mentioned appropriate outdoor space as:

> *"hugely important for children's inclusion and some schools had made modifications to school grounds, including playgrounds, to ensure that children with more complex needs had a safe and enclosed place to play. Several stakeholders highlighted the importance of this to support children's emotional regulation and their broader wellbeing."*

The policy documentation outlined thus far are in line with the evidence presented in the current report and continuous professional development is a key area of recommendation in all data sources (literature, teacher interviews).

As 2026 enters Spring, **environmental** policy has also seen change and movement during the current devolved Government's time in office. Outdoor learning is the answer to many policy directives including building knowledge, skills and capabilities for young people as a key part of The Climate Act (Northern Ireland) (2022). However, whilst the Draft Climate Action Plan (2025) references the important of education at all levels, the proposed Climate Action Plan Development structure does not include the Department of Education as one of the departments with "*responsibilities for policies and proposals*" [Department of Agriculture,

Environment and Rural Affairs (DAERA), 2025, p.33]. In the summary of how the devolved NI Government will enable the transition to net zero actions, the following is cited:

> *"DE has commissioned the Council for the Curriculum, Examinations and Assessment (CCEA) to greater embed sustainability and climate change education into the curriculum. During 2025, a progression framework and resource hub will be published, drawing together up-to-date resources and sources of support for teachers, pupils and young people in green growth and climate change knowledge, skills and understanding"* (DAERA, 2025, p. 249)

This work did take place and led to the publication of the following website: https://ccea.org.uk/learning-resources/sustainable-futures and associated Big Ideas of Education for Sustainability - Progression Framework which makes several, specific references to outdoor learning:

> *"Learning about nature by spending time outdoors helps us see these connections more clearly, building appreciation, respect and a sense of responsibility for the living world around us."* (CCEA, 2025, p.11)

> *"When we play outside, we see nature and how special it is. Everything is connected: people, plants, animals, water, air and land all need each other. The things we do can help or hurt nature. So, it's important to be kind to our world and take care of it. When we care for nature, we're caring for ourselves too. When we learn outside, we can understand nature even better."* (CCEA, 2025, p.12)

The Northern Ireland Environmental Improvement Plan [Northern Ireland Executive (NIE), 2026, p29, 35] was agreed by all NI political parties and includes specific actions and targets for the 'Next Generation' under "*Strategic Environmental Outcome 2: Healthy & accessible environment & landscapes everyone can connect with & enjoy*". These are outlined in Figure 3, below.

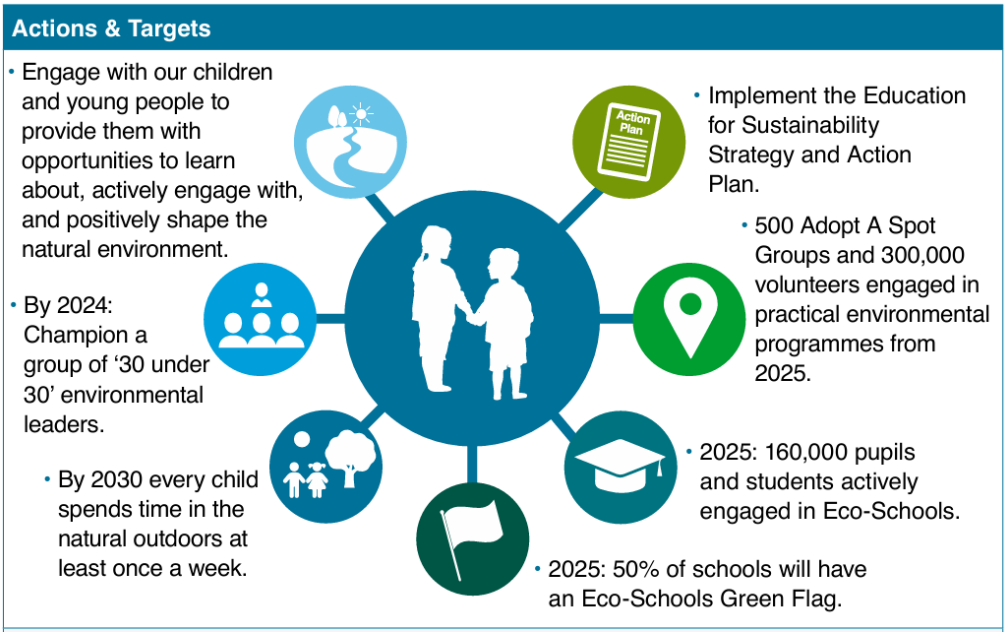


**Figure 3: The Actions and Targets for the 'Next Generation' under 'Strategic Environmental Outcome 2. Taken from NIE (2026, p. 35).**

Whilst many of these actions and targets will promote and support the championing of outdoor learning, one specific target is particularly relevant in the context of this report, that "*By 2023, every child spends time in the natural outdoors at least once a week*" (NIE, 2025, p.35). This mirrors the Ulster Wildlife Youth Manifesto for Nature and the Environment (2022) which asks Government to ensure:

> *"more time is spent learning in and about nature in schools, with guidance issued to schools on a minimum recommended time spent learning outdoors per week"*
> *"funding to improve the outdoor spaces and overall sustainability in schools and provide training to facilitate learning more outdoors, particularly for those in lower socio-economic areas."*
> (Ulster Wildlife Youth Forum, 2022, p.2)

In addition, the Education for Sustainability Strategy and Action Plan [Northern Ireland Environment Link (NIEL), 2021, p.153] is one of the targets. This strategy and action plan makes specific reference to curriculum provision and states:

> *Children and young people have opportunities to;*
> ● *connect with nature through outdoor learning related to education for sustainable development.*
> ● *engage with the natural environment for creative expression*
> ● *utilise nature for supporting their physical and mental well being*

In a more recent published Manifesto, NIEL (2026, p.9) outline a key ask for education which makes specific reference to outdoor learning:

> *"Embed Education for Sustainable Development (ESD), including outdoor learning, within national education policies, curricula, teacher education and student assessment"*

Interlinking policy directives on **health** are also relevant for education and environment. For example, the Children & Young People's Emotional Health and Well-being in Education Framework (DENI, 2021, p. 14) poses the question *What is "A Mentally Healthy School/Education Setting?".* This framework responds to the question by stating that schools provide "*an emotionally secure and safe environment that encourages and instils a sense of self-esteem, self-regulation, skill development and overall resilience"* and calls for *"the integration of emotional health and wellbeing in all policies and practice, and throughout all areas of the curriculum."* It also specifically mentions *"teacher-pupil relationships" as mediating wellbeing and academic outcomes"* (DENI, 2021, p.14). As evidenced through analyses of all the literature and data considered in this report, outdoor learning achieves all these aims.

In addition, and with specific reference to education as well as health outcomes, The Northern Ireland Executive's (2021, p.75) Children and Young People's Strategy 2020 – 2023 states that we must support the rights and improve the well-being of all our children and young people, including environmental well-being and that the NI Government will:

> *"seek to build on the interest that children and young people already have in the environment and provide opportunities for them to access and interact with the natural environment at home, in school and in daily activities; and work to improve and enhance the quality of the environments in which they live, learn and play"*

This strategic priority includes specific reference to interacting with the natural environment in school.

## 3.4 Opportunity and urgency in the direction of NI education policy

This section presents various opportunities for the NI devolved government, within various departments and portfolios, to address educational outcomes for children and young people in NI through outdoor learning. The transfer of positive outcomes for health and environmental strategies strengthens the opportunities and highlights the urgency. Through the harnessing of existing frameworks, guidance, strategies and action plans the Northern Ireland Executive can achieve myriad benefits for pupils in our education system at present and those who will join it in coming years. For example, outdoor learning and related resourcing as a specific strand of current, ongoing curriculum reform, alongside Education for Sustainability. Implementation of a clear strategy and action plan for outdoor learning, utilising the existing expertise in NI, is the best place to start.

# Teacher interviews - findings

## 4.1 Overview

In the interviews, the teachers were asked several questions designed to encourage them to reflect on and evaluate their experience of outdoor learning in NI schools. They were asked about their previous and current experiences of teaching in Northern Ireland, as well as specific experiences of teaching outdoors. Teachers were also asked about their perceptions of the benefits and drawbacks, facilitators and challenges to outdoor learning, for all involved (pupils, teachers, leadership, schools). A copy of the semi-structured interview schedule is given in Appendix 1.

Overall, analyses of the interview data were overwhelming positive in favour of outdoor learning. The frequency of codes/phrases relating to the benefits of outdoor learning for everyone far surpassed the frequency of codes/phrases related to the challenges. Several barriers were outlined by participants, and these were very similar regardless of the school type/level in which the teachers work or have worked in the past. Interviewees were generally very positive about how these barriers have and can be overcome and share a clear vision for education in general, and outdoor learning in particular, for all children in Northern Ireland.

## 4.2 Theme 1: The benefits of outdoor learning

*Theme 1a: Learning, skills and capabilities within and across domains*

All of the interviewees reported that outdoor learning enhances pupils' learning, in various ways. The most common discussion point was how children "learn without knowing" [they are learning] in the outdoors. They also talked about the importance of the "context" and how children learn because the context is different, allows for building on and connections between learning areas. Two teachers emphasised the kinaesthetic element of outdoor learning, that the learning "changes" for the better. One teacher also reflected on how "easy" it is to see learning happen outdoors with another talking about assessing learning through observation and that it is suitable all ages. Some indicative quotations from the data, in line with this subtheme, are outlined below:

> *"…that's outdoor learning as well…you're not out digging up soil, but you're taking the learning outdoors. You're putting it in a different context. And that, to me, is making better connections with what they're learning in the classroom because they tell you another thing.* [Participant 1]

> *They learn more. It's still I mean self-learning, they're learning, they don't even realise they're learning…the trees…measuring the height of them and you were holding up your stick…the stealth learning is, is brilliant. It piques their interest in the outdoors, which is massively important.* [Participant 3]

> *"they were so much better focused because they had had that outdoor time because it felt to them like a fun learning environment. It doesn't feel like learning when you're outside."* [Participant 4]

> *"Don't do that. Sit down. Use a quiet voice. Don't be running. You don't have to do that so much outside. You can really observe. I think observations are brilliant outside."* [Participant 5]

> *"I might not have numbers like written anywhere…but she's just counted how many steps she's took up to get to the slide, or they've actually took all of them stones and they've lined them up and they've just come and told me that these two stones look the same, but that one looks different."* [Participant 6]

Four out of six of the interviewees specifically mentioned the development of literacy and language that outdoor learning affords the children (see quotes below). Teachers drew on examples of how outdoor learning can deliver a wide range of subject areas from across the curriculum to include numeracy, science, history, engineering with one teacher talking about the efficiency of outdoor learning as it covers the entire curriculum. Another commented on how outdoor learning allows for the "revisiting of learning", something which they do not have time for indoors.

> *"I'm thinking of numeracy and literacy. You know, you get somebody talking about the outdoors…the new language, the new words. You know, the language of the outdoors and maths, numeracy, maths trails. They're brilliant. The children are up and moving. They have a clipboard. See if you hand a child a clipboard. Oh my gosh, it can be life changing. Unbelievable. Like, you know, they some of them take on this persona. So, you know, going around the school grounds during a maths trail."* [Participant 1]

> *"I've had a reasonably good success trying to get the English department out because they will do creative writing…BlackBerry picking. They'll go out. And do you know BlackBerry picking and then they will read the poem. And so we've had a wee degree of success there… We have had some history, battle reenactments, outdoors, things like that."* [Participant 3]

> *"science is just born to be taken outside and do all your science experiments and stuff."* [Participant 5]

> *"…actually, even you know, revisit learning that doesn't always happen because we don't have time in the classroom in an indoor setting. So, I think outdoor learning would really does that."* [Participant 6]

The development of skills and capabilities were mentioned by all teachers. The most frequently mentioned areas were curiosity, investigation, creativity, imagination and communication. This was closely followed by the development of teamwork and camaraderie, as outlined in the exemplar quotes below:

> *"Playing and they're making up games. They're being creative. They're being part of a team. They're being creative, they're working together as a team. They're communicating, they're making decisions. You know, that will have a knock-on effect. Sure, that's all the that's, that's in that big picture. If you take that whole learning.*
> *You, you put them outside, you could give them one task, and they could hit all of those learning things through one task, going to look for bugs on paper. You're going really, but they're investigating. They're taking the time.*

> *They're listening. They're communicating. They are decision making. They are using those higher thinking skills of. Is that a bug? Is that a spider? Is that a harvest man? Well, we don't know. We need to look at it more closely. You know, they're deciding that they're looking at pictures. They're trying to discuss and decide. What is it?"* [Participant 1]

> *"I've had children who are non-verbal and when you take them out of the classroom, they suddenly start communicating better. Children who are scared of everything. It's literally once you take the walls away, they're not in school anymore. They're free."* [Participant 2]

> *It really is giving children hands on experiences as much as possible and being in nature is a huge part of that.* [Participant 5]

> *"there was definitely creativity"* [Participant 6]

The interviewees made reference to several other areas which children develop whilst learning outdoors to include, how to risk assess for themselves, motor skill development, higher order thinking, problem solving, leadership and conflict resolution. For example:

> *"And how do you make a fire? There's skills, there's skills that are being lost because we aren't taking them outside…For things like using your fine motor skills can be improved working with your dexterity and your fine motor skills like the sampling in secondary school that we're getting our special needs children to go out and draw make a line with bits of paper."* [Participant 4]

> *"Experience because you see their confidence, their physical skills, just their…play is so much deeper."* [Participant 5]

It is interesting to note that the data for the subtheme of learning, skills and capabilities was evidenced from teachers across the age and stage of education in Northern Ireland.

### *Theme 1b: Learning for all – health, inclusion, socioemotional and attitude development*

The benefits and effectiveness of outdoor learning for all children, to include those with Special Educational Needs was cited by five of the interviewees. They spoke about how inclusive an outdoor learning environment it and how it facilitates regulation for many children. More specifically, those teachers who work with children with SENs referred to the calming effect of learning outdoors. Some indicative quotes in relation to inclusion are outlined below:

> *"Together, you know, and it doesn't matter where they're from and their background. You know, we're standing in a field together. You know that that can be massive for some children who are on the fringes or on the edges, you know, just being, you know, in the lashing rain together. You know, we're all the same, so it can be a good leveller."* [Participant 1]

> *"[It] would change so much and…all sorts of education, but definitely special needs. And I think you'd have a lot less difficulties in mainstream with children with special needs if they had that you could just go outside and sit and listen."* [Participant 2]

> *"Once they see that it's so calm, like, generally speaking, your children with additional needs don't stand out outdoors…productive outdoor play. And then when they come in again, they're more settled… And I suppose it's, it's bigger outside, so if you don't like loud noises or, you know you don't, you don't like the wind, you don't like the sound of things, there's you can. It's absorbed*

> *more outside… if children have specific sensory needs about dirt and noise, again it can be gradually lessened."* [Participant 5]

> *"If the children have extra needs or emotional behavioural needs or sensory regulation, they're nearly masked in the outdoor area."* [Participant 6]

Social, emotional and (inter and intra) personal development was also mentioned several times. This included positive changes in behaviour, engagement and the development of resilience, teacher-pupil relationships and confidence. A pre-school teacher talked about how much easier it is for children to leave their parents/guardians in the morning as they are outdoors and distracted and others specifically mentioned how it facilitates child led learning and the enthusiasm to try new things and not care about what others (their peers) think. Two teachers also said it allows children to find out that they might not be suited to working outdoors, and that is beneficial too!

> *"Teachers get to know their children in a different way because they're not sitting in rows or in desks in front of them. They are outside and they get to chat…"*
> *…and they're not worried about what anybody thinks of them. They're not worried about, you know. Making a fool of themselves, or ever because they see everybody else doing the same thing, you know, they are just completely relaxed."* [Participant 1]

> *"A reduction in challenging behaviours…They're just more engaged, they're more relaxed and they're more free to do what they want, and it's not that our expectations different. It's something about the classroom environment."* [Participant 2]

> *"…they're really good in the forest. Or, you know, I've taken them out and they're much, much better because a lot of those kids have different difficulties. And whatever else that means, it's very difficult for them to sit still in a classroom. So they are badly behaved and the second you take them outside and they get to run around for 10 minutes, they're 100%...*
> *…you're building relationships with them as well and that has helped me in the past before certainly whenever I was ahead of year, building those relationships outside the classroom is priceless. As far as your relationships with the kids are concerned.*
> *You know that's so helpful, so helpful."* [Participant 3]

Fun and enjoyment outdoors were also cited as important contributing factors for learning, and how much they love getting wet and dirty. Several teachers commented on how children (and teachers) are much more positive about learning outdoors after they have tried it and two teachers reported improvements to children's family life as a result of outdoor learning during school. For example:

> *"They love being out in the rain because they're never allowed out in the rain. I had a bunch of teenagers, and it was really bad weather and we built a snowman….16-year-olds. We built a load of snowmen and then we gave a prize for the best snowman…And they loved that. No, they wouldn't have done that at all. And they absolutely loved it."* [Participant 1]

> *"…you have to kind of explain to them, you are going to get dirty. It's OK. You know you will fall. It's going to be messy. Just wash your hands. Clean them off. We'll be all right. So, generally speaking, most children can actually progress through that…a month, two months. You know, they don't even question it. They know they're going to be outside for the first hour…and a lot of our parents would say that they find that the children are happy enough to go outside now all the*

> *time, you know, even when they go home from school, they're saying just get their coats on and off they go and or looking to go out at the weekends and stuff, go for a walk."* [Participant 5]

Improved mental and physical health was a common theme throughout the interviews and this was often related to a connection to nature, mitigation of screen time and, as outline above, reductions in anxiety and pressure to include less noise as the outdoor environment is more open.

> *"I would say it as vitally important for the mental well-being and the physical well-being of our children…this is one of the main strategies to improve mental health."* [Participant 4]

> *"…children before would have been walking to school and walking home from school and parents just don't have time for that sort of thing anymore. And so that's lovely to see their confidence grow and their physical skills grow. The children are the children for their own mental health and well-being need this time outside. Everybody, staff and children."* [Participant 5]

> *"I actually want to say that it's possibly the environment that has the biggest impact on a child in the outdoors, because what we will find in early years is once we go outside children, the noise is reduced. Children are not feeling as if they're being watched, and the pressure's kind of lifted off them. But don't get me wrong, it's not that they're not being watched. It's just it's not recognisable for them, it's not as an enclosed space."* [Participant 6]

*Theme 1c: The drawbacks are few and far between*

Three interviews cited "time" as a drawback, in terms of the challenges of making time in a busy schedule to plan and deliver outdoor learning as it is often seen as an "add on". However, this was caveated by one teacher as being no more than what would be needed for a "usual practical lesson". Only one teacher specifically mentioned cost, and another mentioned the weather.

> *"You've got to be a wee bit more organised, but no more than usual. A usual practical lesson, you know? No more than, than anything like that. It's not massively time consuming. So no, I don't take [that as] good reason for not doing it."* [Participant 3]

One teacher talked about the difficulty with getting children to go back inside when outdoor learning was finished, which is actually a positive. A secondary level teacher talked about the challenges with "measuring" outdoor learning in terms of test scores and outcomes, and how leaders are more positive about "lower ability" children engaging in outdoor learning, which they cited as a system level issue for teachers, other than a drawback for children in particular.

## 4.3 Theme 2: Barriers are inside and outside school

*Theme 2a: Teachers' fears, experience and development*

Teacher fear and inexperience was cited as a barrier by three of the interviewees. Teacher interest, perceptions and seeing the value of outdoor learning was also mentioned in a few interviews. Three teachers raised the issue of teachers and classroom assistants as being 'risk averse'. Several interviews put these issues down to a lack of professional development and two teachers specifically talked about low staff morale and 'battle weary teachers' as a

current issue. Two of the teachers, with previous/current secondary level experience talked about how colleagues see outdoor learning as the responsibility of biology and geography teachers and how this is not the case.

> *"Because if, if it's not set in stone, a lot of teachers aren't going to maybe make the effort because unfortunately we have a population of teachers who didn't learn the nature table at school. They didn't have outdoor learning themselves*" [Participant 1]

> *"And there's no training. You know, you're not encouraged, you know, nobody's encouraging you to take kids out of school, and it has become such a claim culture as well."* [Participant 3]

> *"…if you have a staff member who is happy for somebody to do one thing but not happy with another. I think it has to be very well let out for the children to make it an easier managed space. They have to know what the boundaries are for safety because whenever we say the word risks taken, I think everyone immediately has this negative perspective. That risk means danger."* [Participant 6]

### *Theme 2b: Resource, policy and curriculum barriers*

Cost, space in school and clothing (cost of) were the most frequently mentioned barriers within this subtheme. A few teachers also talked about time, access to transport and staffing as a barrier, as well as the perception that outdoor learning is a "one off event" as it is not mandatory in the current curriculum.

> *"that [school] support seems to be becoming less and less. I don't know if it's financial. Well, I know a lot of it's financial pressure…Like wellingtons. Like how much your pair of Wellingtons, £15 now they grow out of Wellingtons very quickly. But you know they don't have. And like a lot of parents are struggling…Rain's only bad if they don't have a raincoat, rain's only bad if they're not prepared. But that's the thing that is a barrier. Lots of children don't have access to appropriate clothing.* [Participant 1]

> *"Having that space [to] take the children out, we have six classes share a playground, so if I'm like, I'll take a group out here and we'll do an activity in the corner of the playground, just an outdoor learning, not even a fire skill session. Something like that. You could have five other classes piling on top of you."* [Participant 2]

> *"For me it is my happy place. I would be outdoors all day, every day if I could be. Unfortunately, that's not the case. Not for the one to try and, but as with everything I would say in education, time and resources and that, and that's the main problem…because not everybody is lucky enough to have facilities close by. We all know how expensive it is to take kids places."* [Participant 3]

> *"I suppose the biggest issue in most primary schools is our playgrounds are tarmac. They're sterile…you can offer little pockets of nature to children and even creating it yourself just in, you know, a little space. Fill it with bark chips or something and, and logs and things so that children will find minibeasts and be able to move things about, you know. I mean, tar. I don't know why our playgrounds are all tarmac. Like it's the worst surface in the world where the child falls. You know that when they hit their head and he just, oh, it's the worst sound."* [Participant 5]

> *"…but people at the schools in Finland have been doing an awful lot of outdoor learning, especially under the age of 6, and they say there's no such thing as bad weather, just bad clothes*

*for weather... it's also dependent on the staff who are facilitating outdoor learning as well, and how used to the kids and how they're dressed and all that as well."* [Participant 5]

*"…a budget to then fill the space. So, for us this was a slight drawback because I now had this massive empty space which was now freezing because the wind was coming in…our outdoor area is on is in the middle of our car park. So, it's very open and the wind can just go straight through it now, whereas before it was barricaded with the massive climbing frame. But the budget was non-existent."* [Participant 6]

*"…staff who are not interested don't get an opportunity to understand and see the learning because there isn't time given and there maybe isn't enough courses like currently policy and curriculum [has not] mentioned outdoor learning."* [Participant 6]

Four of the teachers talked about the impact of the Covid-19 pandemic and several mentioned the over emphasis on testing and examinations as a significant barrier:

*"…they're, you know, identifying [that] these are all skills that we're losing, you know…will that be translated into a test? No, it won't. But lifelong learning."* [Participant 1]

*"Because since COVID, there's nothing you could go and do an online course about outdoor learning, ridiculously…"* [Participant 3]

*"In our case, at Key Stage 4 [it] is just not happening. There's too much to do, just too much to. There's too much to get through and for examinations…if I could prove that it made their grades better, that's about the only way."* [Participant 3]

*"…like our curriculum currently, it's [outdoor learning] not technically like statutory…it's an opportunity to take it and do what you please with it. But there was such a big question [after] COVID that now everyone just thinks it's this magical term, but it lacks an understanding in the education profession."* [Participant 6]

*"…it's this whole thing about what's measurable and what's not. If, if I can't measure it against something, then there's no, no exam for it, no outcome for it. Then it, it just seems to go to the wayside and I'm like, well, you know what you could do well to be getting some of these skills out of your children because they're kind of losing them…"* [Participant 6]

### *Theme 2c: School leadership and parental buy-in as barriers*

Most of the teachers talked about the barriers to outdoor learning coming from leadership teams within schools to include how its value is questioned and having to rely on the individual views of those in leadership, as favourable and supportive of outdoor learning. Several participants also talked about the influence of parental perceptions and worries around outdoor learning. Indicative quotes for this subtheme are outlined below:

*"Them saying we don't want them out in the rain, you know? And you're going look at the country, it rains all the time. You know, you can't teach your child that rains bad…I could tell you stories…about adults squealing because the flies aren't the same at the beaches they are at home and that transferred then onto the children who were squealing because the flies aren't the same at the beaches they are at home. And I can understand why they don't want their children*

*out. Maybe in the muck, because that means extra washing and all of that kind of carry on."* [Participant 1]

*"…not releasing teachers, teachers having to fight for a day to get out the paperwork, and then it's the whole well, this is very costly. Is, is this really needed for these pupils?"* [Participant 1]

*"… primary schools that are brilliant at it but not post primary. I think unless you have somebody who's at least SLT who is keen, it's either a geographer or biology, biology, a biologist. You may forget about it… that's only going to happen if you've got somebody in SLT who's going to fight your corner"* [Participant 3]

*"There's an awful lot of overprotective parents, but they're going to have to be educated…that outdoor is better. And you know, obviously it won't all be outdoor. We have to cater to all the kids…"* [Participant 4]

*"…daycares probably find it harder on private providers because they've got that whole idea of if parents are paying, they don't want the children cold, they don't want the children dirty…they're not going to get ever get that free play even when they get older, they're not going to be out on the street or out in the garden with friends. They're generally quite sheltered so they can get that in school."* [Participant 5]

*"For me, outdoor learning is central to teaching and learning, but it's not always seen as such by leadership…My principal will still question me in everything that I do in the outdoors now. That's good practise. I like to be questioned. I like to make sure that what I'm doing is relevant and that I have a purpose for it and that's safe."* [Participant 6]

## 4.4 Theme 3: The facilitation flip side – barriers are removed by facilitators

*Theme 3a: Teachers' commitment, experience and positive development*

The majority of participants were positive that barriers could be overcome with the correct supports and facilitations in place. These included professional development and supporting teachers to 'gradually' build up outdoor learning as well as careful timetabling and planning.

*"Maybe we [teachers] need to think about more creatively, creatively about what we mean by outdoor learning. I talk about outdoor learning three ways, learning about the outdoors, learning in the outdoors and learning how to behave in the outdoors. That's how I put it in my mind."* [Participant 1]

*"So, we always had a teacher. He was out released, who did sensory support and that didn't work…it's very hard to timetable sensory support because you don't know when someone's going to need it. So, we changed it that…We now have our entire school comes out once a week. I have some children who have daily access to forest schools because that's what they need."* [Participant 2]

*"Got to train teachers, teachers to do it and not just PGCE, you know, not just new teachers. We've got to allow staff that have been at a while the opportunity."* [Participant 3]

*"I remember saying to my assistant, why don't we go outside in the wet, in the rain and the wind, you know? And so we decided then we would start going out every day. And now I think they say*

> *if you try anything for six weeks, it becomes a habit…So we always say pick one day or two days and make that your outdoor day and make sure it's really high quality and it's up to lunchtime, you know, so that your children are getting that long sustained time."* [Participant 5]

Two participants also talked about the importance of helping teachers to develop a will to overcome a fear of nature and 'dirt' and to help them see the value of outdoor learning and reflect on how lessons went:

> *"I think that's what happens with a lot of teachers. You know, they take them out, they scatter, they can't gather them up again, and then you're thinking…when you do a maths lesson and nobody gets it, you don't stop teaching maths…you go back and you reassess. Wait, what went wrong? Wait, what happened?"* [Participant 5]

### *Theme 3b: Basic resourcing as a facilitator*

Basic resourcing was mentioned by several participants, as a way to facilitate outdoor learning. This did not necessarily mean expensive equipment but, instead, was focused on bringing in old clothes/shoes and using what was in the environment around the school.

> *"Where that provision is made…give us a pair of shoes that they can just get soaked and stay in school or a change of clothes or something they can wear in school to get mucked up that we can keep in school."* [Participant 2]

> *"I don't think it's fair to take them out. So even if I mean we're lucky enough, we've got waterproof suits here for them. But even if you can't, if you say that if you said to parents, right it's Welly Wednesday or it's you know or Freedom Friday that they come in, in their oldest clothes or layered up on, you know, coat, smiley bits, and they're gonna be outside. I mean, even here when we are outside everyday their children come and dressed."* [Participant 5]

### *Theme 3c: School leadership and parental buy-in as facilitators*

School leadership and parental support and buy-in was mentioned as a facilitator, just as frequently as they were mentioned as barriers. The participants were clear that with school leadership and parental support in place, barriers could be removed. For example:

> *The senior leaders that are coming from certain backgrounds within school because there's no question about them letting children out. They're like, yeah, get them out. Away you go. Yeah, off you go. There's no question about outdoor learning. There they are buying in, 100%. Don't worry about the cost those children need to get out. This is for their education.* [Participant 1]

> *And like with a new principal a few years ago, it's known the benefit of outdoor learning to our children and that this is what's very, very important and it's so beneficial to the kids. You're not fighting against that at school level. So as long as we have that support and school leadership is on board, it's OK.* [Participant 2]

> *"I'm lucky in that our principal is also a biologist and loves all of this. So, my life is easy because they will allow me out and they will let me go and do for school. But that was off my own bat of going to ask can I do that? But they supported us. They were very, very happy for us to do that."* [Participant 3]

> *"When the mummy came to pick this sweet girl up, she said to her. Look, I'm really sorry. She's really dirty today and her mummy said I am so glad because she comes home every day the way I send her into school and I'm just delighted that she's she had a really, really fun time today… It's what, 25 years now? We've been going outside every morning, and parents don't question anymore now."* [Participant 5]

> *"There are some primary schools doing fabulous work, you know, but it has to come from above. It has to come from the principal and management."* [Participant 6]

## 4.5 Theme 4: Where now? Recommendations from participants

The participants were unanimous about the need for outdoor learning as a part of the NI education system, for all children, at all levels, within every learning area/subject. The following statements summarise their recommendations and include some verbatim statements as part of these. They are presented in the order of how frequently they appear in the data, from the highest number of participants. The first three, most prevalent recommendations focused on policy and curriculum change. This was followed by resourcing (space, clothing, time) (recommendations 4 and 5), parental awareness and education (recommendation 6) and professional development for teachers (recommendation 7).

1. "[All] *our children have to be afforded these opportunities, and especially even our secondary schools*." [Participant 5] *"Getting them outdoors and their wellies, [in] nursery schools and then having some kind of programme to carry them through"* [Participant 1]
2. *"In every subject…the way we have to evidence our literacy and numeracy, we should have to evidence some proportion of your teaching and learning every single year group must be outside."* [Participant 3] *"That you have to teach outside for so many hours."* [Participant 5]
3. *"But even long term or short term, have an outdoors mentioned in the curriculum. To me, this was a missed opportunity with our new curriculum coming along"* [Participant 5]
4. *"Have a space outside as part of every classroom, a secure fenced off area that your classroom doesn't end at the door. Money to schools, it's now our fav area"* [Participant 2]
5. *"Lots of people given their old wellies into schools, old waterproof coats that they've outgrown because children grow really fast, you know, and have them that way. So the children are prepared whenever they're in school."* [Participant 1]
6. *"Parents been made aware of the good points of being outside…Our children's world has gotten so much smaller because parents are terrified."* [Participant 1]. *"They're going to have to be educated. That outdoor is better."* [Participant 4]
7. *"Given lots of advice and lots of training, so it is getting better, but I think that needs to be mandatory as well."* [Participant 1] *"People who are doing courses, right, but they're just telling us about it, and I'm not sure that anyone's actually getting to see the lived experience of outdoor learning…it needs mentor training."* [Participant 6]

# Key findings and Recommendations

## 5.1 Key findings

This report presents findings from three sources: relevant literature (international, national, local), relevant international and UK/NI policy and interviews with a range of teachers in Northern Ireland. The report used the following definition of outdoor learning:

> *"…outdoor learning pedagogy is defined as a broad range of regular, purposeful planned learning experiences outdoors, ideally in natural places, during formal education, which promote experiential learning and agency for all, enable learning about and connection to the natural world, towards building relationships between people and places"* (Kelly et al., 2025, p. 2).

The main findings from the systematic style literature review centred around the benefits and challenges of outdoor learning, with references to the benefits appearing much more frequently in all literature sources. The key themes and subthemes derived from analysis of the literature were as follows, in order of frequency of the codes and themes:

The benefits of outdoor learning

- Academic outcomes
- Impactful outcomes in the affective domain
- A diversity in learning environments and teaching approaches
- Health, well-being and inclusion

The challenges with outdoor learning

- System and teacher-level considerations
- A suitable outdoor learning environment within the confines of school-based education

The Northern Ireland-focused "grey literature" was also considered, and analysis of this material resulted in the same themes in terms of the benefits and challenges of outdoor learning for children, teachers and schools in Northern Ireland. The benefits were, in order of frequency: Academic learning, The development of skills and capabilities, Development of the affective domain, Improved health and well-being, Benefits for children with SENs and for inclusion, benefits for teachers and educators and families/family life. Similar to the challenges outlined in the wider international and national literature, the NI-specific grey literature cited the following, in order of frequency: Governmental, policy and curriculum challenges, Teacher perceptions and lack of training, Financial concerns, Aligning outdoor learning with the specific needs of some children, Fears around perceived risk and health and safety concerns, School-related challenges and barriers, Parental influence and views/perceptions of the wider community/population.

This report also analysed in-depth interviews with teachers from a variety of school types, who had or are currently working with a range of pupils of all ages and stages. The key findings from analysis of the teacher interviews were as follows, in order of frequency of the codes:

**Theme 1: The benefits of outdoor learning**

1a. *Learning, skills and capabilities within and across domains*
1b. *Learning for all – health, inclusion, socioemotional and attitude development*
1c. *The drawbacks are few and far between*

**Theme 2: Barriers are inside and outside school**

2a. *Teachers' fears, experience and development*
2b. *Resource, policy and curriculum barriers*
2c. *School leadership and parental buy-in as barriers*

**Theme 3: The facilitation flip side: barriers are removed by facilitators**

3a. *Teachers' commitment, experience and positive development*
3b. *Basic resourcing as a facilitator*
3c. *School leadership and parental buy-in as facilitators*

Recommendations were analysed from across all data sources, for the purposes of this report. they are summarised in section 6.2.

## 6.2 Recommendations

Based on the evidence presented from a wide range of sources cited in this report, it is recommended that:

1. A timebound strategy and action plan for outdoor learning for all ages, at all levels, in all school types in Northern Ireland by developed at pace. This must include:
    a. Monitoring, evaluation and review.
    b. A draw on the already existing excellent provision for outdoor learning in Northern Ireland, using a collaborative approach between and within organisations.
2. That an expert steering committee is formed to lead on and be accountable for the implementation of the outdoor learning strategy and action plan.
    c. This should have representatives from the main delivery partners and Governmental and curriculum advisor to include (but not limited to) teachers and leaders from schools, ESDF/NIEL as a membership forum, the Education Authority, the Education Authority (EA), the Council for Curriculum, Examinations and Assessments (CCEA), the Education and Training Inspectorate (ETI)
    d. That a lead partner identified, through a fair process and funded for this role.
3. That outdoor learning is a mandatory part of the new NI curriculum, with every child have a progressive, continuous entitlement to learn outdoors as they move through formal education in NI.

The recommendations outlined above will address various policy agendas across departments to include effective **education** for our young people so that they are prepared for

the future, improved mental and physical **health** and improved care for and guardianship of our **environment** now and in the future, when the current generation of young people will be the decision makers, the law makers and the innovators to ensure the viability of all who share this planet. It is imperative that, through the delivery of the recommendation outlined above, that existing expertise in NI is utilised. Many organisations, to include NIFSA who drove the gathering of dedicated advocates and deliverers of outdoor learning and the work for this report, should work together for a new Northern Ireland where outdoor learning is part of what every learner does.

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# Appendix

*A copy of the semi-structure interview protocol*

GENERAL (BACKGROUND) QUESTIONS:

1) It would be great if you could tell me a bit about your **previous and current experience** of teaching in Northern Ireland?
   *PROMPTS: years qualified, year groups/subjects, number/type of schools, leadership roles.*
2) In general, **what do you think** about learning and teaching outdoors?
   *PROMPTS: Good points/bad points, indifferent*
3) How much **experience** do you have in planning and implementing outdoor teaching and learning with your classes? (in the past/currently)

BENEFITS AND DRAWBACKS

4) Do you think there are any **benefits** to outdoor learning and teaching? If so, what are these? Why?
   *PROMPTS: For pupils, teachers, leadership, schools.*
   *PROMPTS: learning and development (social emotional, cognitive, health and well-being, affective)*
5) Do you think there are any **drawbacks** to outdoor learning and teaching? If so, what are these? Why?
   *PROMPTS: For pupils, teachers, leadership, schools.*
   *PROMPTS: learning and development (social emotional, cognitive, health and well-being, affective)*

FACILITATORS AND CHALLENGES:

6) What do you think **facilitates** outdoor learning and teaching in **Northern Ireland**? Why? How?
   *PROMPTS: policy, curriculum, pupils, parents, teachers/colleagues, leadership, environment, CPD.*
7) What do you think are the **challenges** to effective outdoor learning and teaching in **Northern Ireland**? Why? How?
   *PROMPTS: policy, curriculum, pupils, parents, teachers/colleagues, leadership, environment, CPD.*

TEACHING AND LEARNING OUTDOORS:

8) How did **you feel** about teaching and learning in the outdoors? Why?
9) How do you think **your pupils feel** about teaching and learning in the outdoors? Why?

LONGER TERM:

10) Do you think **children should have the opportunity or not** to learn outdoors? Why?
11) Do you think **every teacher should have to teach in the outdoors**? Why? Why not?
12) Do you think **every school should have to provide** their pupils and teachers with the opportunity to teach and learn in the outdoors? Why? Why not?
13) Do you think outdoor learning and teaching should be/not be a **mandatory requirement** of the NI curriculum? Why? Why not?
14) If you were charged with **improving teaching and learning** for pupils and teachers/schools/communities in Northern Ireland, **what would you change/adapt**? Why? Why not?

SUMMING UP:

15) Is there anything else you want to say?
16) Do you have any questions before we finish? Thank you so much for your time.

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