OUTDOOR EDUCATION 4 ALL

# Guidelines for ECEC Teachers

## *WORK PACKAGE 2*

2024

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Guidelines Video tutorials:
https://www.outdoor4mi.eu/outputs/
https://www.youtube.com/@outodoor4mi

Table of abbreviations and acronyms

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| OE | Outdoor Education |
| UD | Universal Design |
| ECEC | Early Childhood Education Care |
| MI | Movement Impairments |

# PART 1: Introduction

## Purpose

The purpose of this report is to provide a practical guide with a concise theoretical framework and practical recommendations for Early Childhood Education and Care (ECEC) educators working with children aged 3-5 (including those with mobility impairments) on how to prepare and implement outdoor activities that also address the needs of all children. These guidelines have been developed for the purposes of the Erasmus+ funded project Outdoor4mi (project number: 2023-1-IT02-KA220-SCH-000165552), with contributions from seven partners in Italy, Cyprus, Malta, Spain, Romania and Portugal. The report presents Work Package 2: Outdoor4mi Guidelines for ECEC Educators, aiming to provide ECEC educators working with children aged 3-5 years with a theoretical background and practical advice on how to prepare the educational setting to facilitate Outdoor Education (OE) activities in kindergartens, also focusing on the accessibility of the setting for pupils with mobility impairments (MI). Recognising the central role of qualified and experienced educators in children's learning processes and in "personalising learning so that it is authentic and relevant" (UNESCO, 2021), the main objective of the project is to increase the awareness and competence of ECEC educators in integrating OE activities for children in this age group. We aim to contribute to the Erasmus+ priorities of environment and inclusion by providing ECEC educators

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with guidance on designing inclusive outdoor spaces and activities to meet the needs of children aged 3-5, including those with MI. We also hope to strengthen educators' expertise in implementing OE activities by suggesting ways to overcome barriers and difficulties, so that all children can enjoy the benefits of this approach. The guiding principles, key ideas and practical suggestions presented in this report are not a rigid curriculum, but a flexible resource of educational practices for implementing OE activities. They are intended to inspire and support early childhood and education practitioners in adapting outdoor environments safely and accessibly. These guidelines can be adapted to implement outdoor activities for children aged 3-5 in a way that best suits their specific context and school culture.

The development of the Outdoor4mi guidelines was based on the outcome of research work based on (a) key findings from a literature review of recent publications on inclusive OE in early childhood, and (b) ideas and themes that emerged from the analysis of interview data from ECEC educators/stakeholders working with children aged 3-5, including those with mobility impairments, and parents. More specifically, after reviewing the literature on inclusive OE in ECEC settings, the framework for organizing and implementing OE activities was developed based on thematic analysis of focus group interviews with ECEC educators working with children aged 3-5 years and individual interviews with parents of children with mobility impairments. Specifically, each partner country conducted: a) two focus groups with at least four participating educators; and b) four individual interviews with parents. In total, 56 educators and 28 parents were involved in the data collection at the European level.

This report is divided into three parts. The first part, based on recent literature, briefly discusses the concept and benefits of OE, the theoretical framework of OE in early childhood contexts, and the methodological and pedagogical considerations that accompany OE activities. It also highlights the importance of OE and describes the partners' context for implementing it. The second part documents guiding principles and provide advice on designing and using safe and inclusive OE activities tailored to

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the specific learning needs of children aged 3-5, including those with mobility impairments. The third part discusses designing an effective classroom environment to promote continuity between indoor and outdoor education, including health and safety issues. Parts two and three are based on data collected from focus groups and individual interviews.

## Outdoor Education in Early Childhood

Outdoor education is an innovative approach to teaching that is gaining prominence and bringing many benefits to children, particularly in early childhood education. It involves activities that take place outside the classroom and in parallel with the formal education programme, supporting the learning process. According to Murillo, et al. (2018), OE involves learning through the body and senses, interacting with others, and reflecting on experiences in a particular place. Stavrianos and Pratt-Adams (2022) classify OE as a non-formal education approach that covers a wide range of subjects and takes place outside the classroom. Vladescu (2022) states that OE combines all three forms of education - formal, informal and non-formal - to enhance the holistic development of a child. In OE the focus is primarily on the environment in which learning takes place.

According to Roji-Ramos, et al. (2021), OE originated in the United States of America, with California being the first to develop such a programme. Bortolotti (2019) states that the roots of OE can be traced back to Anglo-Saxon culture. Over time, Asia and Europe joined the movement, and OE programmes have now become popular worldwide.

In recent years, OE has gained significant interest in the education sector globally. It is seen as an opportunity to promote active learning and transversal skills in both national and international contexts. Outdoor education offers excellent tools to stimulate children's curiosity and interest, transforming their education from passive to active through interactive activities in the natural environment (Lattarulo & Vandelli, 2021). This approach enhances critical thinking, human-nature relationships and connection to the

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world. It also provides children with essential 21st century skills and competencies that traditional classroom education cannot provide, such as learning and innovation skills, life and career skills, information, media, and technology (Özgem, 2022).

The concept of OE is used in various ways, such as nature education, environmental education, outdoor education, out-of-classroom education, experiential learning, adventure education, place-based learning or real-life learning. In early childhood education contexts, outdoor activities are typically associated with free play, which is highly beneficial for young children as it encourages them to interact with people, the environment and objects, and to explore, experiment and make sense of the world around them. Outdoor play is an integral part of the daily routine in kindergartens around the world and is usually organised as a recurring event (Birkeland, 2019). While

outdoor play is important, it can also be an excellent setting for more structured activities that help children learn and develop a wide range of skills in subjects such as math, history, geology, art, music, and communication. In addition, outdoor experiences can be used as learning tools in indoor settings, potentially sparking new questions for exploration. This ongoing cycle of experience and reflection is fundamental to OE

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(DEHORS Project 2021). As a result, there has been a significant increase in the importance of outdoor activities in kindergartens worldwide (Waller, et al., 2017).

## Outdoor education activities: Benefits

Outdoor activities and experiences are extremely beneficial for young children in many ways. This is why there is a long tradition of including the outdoors as part of play and learning in early childhood education. Playing and learning outdoors provides a unique opportunity for children to explore, create, discover and thrive while challenging themselves through active engagement with nature. Children are born to explore, so being in natural outdoor spaces provides them with many opportunities to learn, develop their senses and explore movement.

However, in today's urbanised world, there has been a decline in the availability of quality outdoor spaces and an increase in safety and health concerns among educators and parents, which has had a negative impact on the implementation of outdoor activities. Children no longer have the same access to playgrounds as before, and several studies have shown that the widespread use of technology and digital games has led to a decrease in physical activity and outdoor play, as well as a lack of normal physical development (Fischetti et al., 2020). Other barriers to incorporating outdoor activities include administrative policies, misconceptions about the value of OE, fear and lack of training among early childhood educators, and lack of facilities.

A recent review (Kiviranta et al., 2023) examined 20 studies from 10 countries on outdoor learning in early childhood education. The aim was to identify and describe the benefits and challenges of implementing outdoor learning. Six categories emerged from the review, including the impact of outdoor learning on children's holistic development, health and well-being, hands-on learning opportunities, experiences in nature, the role of educators as facilitators, and the importance of carefully organising outdoor learning. According to Gray (2018), outdoor learning has four dimensions: skills and knowledge, human-nature relationships, conservation and sustainability, and health and

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well-being. Wattchow (2021) explains that OE can provide 'opportunities to engage with a place sensually, cognitively, symbolically, empathically and even spiritually' (p. 106).

Outdoor education has gained recognition as a valuable approach to embodied learning, where knowledge is built through physical interaction with the environment and sensory experiences, supported by extensive research. Recent developments in the field have led to an understanding that OE should be a regular part of the curriculum, with

activities taking place outside the classroom. Such activities range from field trips to outdoor learning environments designed to engage children in hands-on, experiential learning (Dettweiler & Mygid, 2020). Incorporating outdoor activities and play into ECEC settings promotes motivation and interest in schoolwork, provides enjoyment and satisfaction, increases children's enthusiasm and willingness to communicate, builds self-esteem and develops new skills (Haraga, 2023). It is suggested that classrooms should be regularly swapped for the outdoor environment and that all subjects should be taught outdoors.

The benefits of outdoor learning and play for children's development vary according to context and subject (Bentsen & Eeby-Ernst, 2020). Below we list and describe key benefits:

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1. Independent, active learning

By engaging in hands-on learning experiences using all their senses, children satisfy their curiosity and become independent learners, developing cognitive skills such as imagination, creativity, critical thinking, concentration and reflection. The opportunity to make decisions and direct their learning in outdoor activities promotes autonomy and self-confidence. Outdoor environments have the potential to nurture children's natural curiosity and to introduce a degree of risk into learning activities. Allowing children to take reasonable and calculated risks through trial and error, working with their peers, and being guided by an adult who is able to avoid dangerous situations, promotes the development of skills useful for facing and overcoming difficulties (Cortecci et al., 2021). These opportunities are particularly valuable in the context of a society that tends to overprotect children, as avoiding risks does not teach them how to face and manage them. However, this requires a balanced approach between risks and benefits, and safety and learning opportunities, based on the recognition that risk is subjective and that the right conditions must be created to ensure safety (Bento & Sandseter 2020; Gori et al. 2023). Active participation in the outdoors increases children's engagement and ownership of their learning (Mann et al., 2022). It provides children with a wide range of multimodal situations and challenges to overcome, testing their limits. It also promotes hands-on learning opportunities that support children's well-rounded development (Kiviranta et al., 2023). The green, calm and quiet outdoor context enhances learning by promoting engagement, attention, self-discipline and reduced stress (Kuo et al., 2019).

2. Communication and social skills

Diverse learning environments increase children's motivation and support social interaction (Mygind, 2020). Outdoor activities provide a context for sharing and interacting with peers. In addition, the unpredictability of outdoor spaces and the need for individuals to adapt to them provide numerous opportunities for

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problem solving, risk management and the use of different personal resources, including those that are not immediately apparent, such as working with peers. As a result, individuals can later reflect on their outdoor experiences with an enhanced sense of self-efficacy, strength and self-awareness (Giunti et al., 2023). While playing or learning outdoors, they have numerous opportunities for physical proximity and social interaction. They engage in cooperative exchanges, take on different roles and relate to others in creative and enjoyable ways.

3. Developing a sense of identity: individual and cultural

Children can learn a lot about themselves through playful outdoor activities and develop a sense of personal/individual and cultural identity. Through active engagement in outdoor activities and self-exploration, they make choices about their preferences, build awareness of their abilities, strengths and weaknesses, and nurture their emotions. Research shows that the outdoor environment can be seen as an arena for cultural formation. Outdoor spaces, ranging from urban areas to forests, vary within cultures and countries. Therefore, access to outdoor environments and activities allows children to promote cultural understanding and identity. Children understand our social conditions, social behaviours, traditions, customs and belief systems and become co-constructors and reconstructors of culture. They can gain first-hand experience and construct meanings about reality (Mussini et al., 2020). Through OE they develop a sense of belonging, responsibility, appreciation and love for their environment. The outdoor environment provides opportunities for children to build and construct their learning. They act as protagonists in the learning process, improving their self-esteem and communication skills (Bento & Costa, 2018).

4. Physical skills, wellbeing and health

Outdoor activities have the potential to reduce stress and improve children's physical and emotional state. As noted by Bento and Sandseter (2020), playing

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in an outdoor environment can increase physical activity and well-being. Outdoor activities provide enjoyment and satisfaction for young children, thus promoting their well-being and health. Daily interaction with nature strengthens the immune system and provides opportunities for exercise and physical activity. Being active outdoors can have a positive impact on children's physical development, including body awareness, balance, coordination and strength. They can master movements such as jumping, climbing and running. According to Mann et al (2022), spending time in open and natural spaces can have a positive impact on physical, cognitive and mental health.

5. Environmental awareness and connection to nature

Outdoor activities, including play, play a crucial role in developing children's sensitivity, respect and love for nature. By introducing them to the qualities and natural properties of the environment, we foster their connection to nature and their environmental awareness. Onida (2021), discussing the importance of experiencing soil at an early age, emphasised that soil is much more than a material, it is the "fabric" that enables all forms of life on our planet. Therefore, exploring, touching and experiencing soil plays a crucial role in sensitising children from an early age to love and respect the earth and to understand its qualities and properties. Playing with and on a natural environment can also foster emotional connections between children and nature. Interacting with nature can increase their understanding of how natural and biological processes occur and facilitate positive attitudes towards issues such as environmental sustainability, climate change, recycling, etc. In a recent study (Barrable & Booth, 2020), which aimed to investigate the role of nature nurseries in promoting connections to nature compared to traditional nurseries, it was found that predictors of children's connections to nature were parental connections to nature and total time spent

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in an outdoor nursery. This suggests a dose-response relationship between attendance in nature and connection to nature.

## Outdoor activities and children with movement impairments

Everyone should have access to participate in outdoor activities so that everyone can benefit from taking part. However, children with mobility impairments may face access restrictions or other barriers and limitations that can limit their participation in terms of quality and time. An inclusive outdoor space should firstly be accessible to all children, including those with MI, meaning that it should be easily accessible and equipped with appropriate facilities. More importantly, it should be designed in an inclusive way that

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meets the diverse needs of all children, including those with MI, to maximise their participation, comfort and enjoyment (Everyone Can Play, 2023). Recognising the benefits of OE for all children, we should work to remove barriers and create accessible and inclusive outdoor environments to ensure that children can participate equally in the learning process. Children with MI should feel welcome to participate in outdoor activities and minimise the stigma of not belonging in the outdoor environment. We aim to provide guidelines for educators to facilitate the design and implementation of outdoor activities to provide children aged 3-5 years, including those with MI, with inclusive and accessible spaces to experience a variety of activities to learn in, about and through OE.

# Methodological and pedagogical approach

## The child as active agent in learning

The theoretical framework for OE begins with Vygotsky' s (2016) and Dewey' s (1963) understanding of the child as an active agent at the core of learning and cultural formation. Dewey (1963) can be seen as an important thinker for OE, as his progressive pedagogy asserts that children should learn through practical, real-life experiences. His learning by doing corresponds to the theoretical framework of OE. Children are identified as active participants in their everyday lives through physical interrelationships with their parents, educators, objects and nature that provide opportunities for a range of activities in line with their increasing abilities. Hedegaard (2020) argues that children's learning and cultural formation is contextualised, mediated and embedded in their given cultural context. He emphasises that children's development and cultural formation do not occur in a fixed, sequential mode, but are dynamic processes that require children's active engagement and opportunities to engage dialectically with societal conditions. In defining the proximal processes of human development, Bronfenbrenner (2001) noted that place, people, time and processes play a key role in an individual's development, especially in the early stages.

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He emphasised the importance of the interaction between the actively developing biopsychological human organism and the people, objects and symbols in its immediate environment. Consequently, where children learn and grow appears to be crucial for their holistic development, and therefore education outside the classroom provides a unique learning environment (Güdelhöfer, 2016). Bortolotti (2019) emphasises that place is a fundamental component of the process in OE. Place-based learning describes a pedagogy that focuses on the role and importance of place in the learning process, recognising that each place opens up different possibilities and unique opportunities for the learner to construct meaning through their interaction with the place.

## Outdoor inclusive pedagogy and universal design for outdoor spaces

Inclusion recognises the diversity of people and aims to use these differences as assets. It has highlighted the need for changes within the education sector that support inclusion and allow all children to participate at their level. Research (see Bortolloti et al., 2020) confirms the existence of a significant link between OE practices and inclusion. Specific characteristics of outdoor spaces, such as dimensions, lack of structure and open materials, are considered favourable to the possibility of finding answers to one's own needs and pursuing personal and social interests and projects. Indicatively:

- The external environment allows groups and individuals to manipulate objects, acquire knowledge, build paths, observe the surroundings, mark their presence, hide, etc., more or less intentionally.
- When the external environment is natural, imagination and affordances multiply and are enriched with new meanings, creating personalised, active and meaningful use.
- The relational space is highly engaging and encourages children to find both time and space for themselves, while also activating cooperative dynamics to achieve common goals.

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- The less structured nature of the spaces is seen as a valuable educational element of the outdoor environment, allowing individuals involved in such activities to explore and understand themselves better.

As stated in Schenetti and Petrucci (2023), "the outdoor educational space must be recursively conceived, designed and tested to take the form of a well-maintained, clear and rich learning environment, capable of encouraging exploration, research and play, while supporting children's autonomy and stimulating collaboration" (p. 9). Creating a space that is perfect for a child's growth and development is essential. The space should be flexible enough to meet the child's needs and interests. Children love adventurous places that smell of nature, animals and stones. They need plenty of space to move, play and explore. A space that is transformable, rich in natural materials, where they can dig holes, play in the mud, swing and hide in the bushes. This space should be a place of invention where children can experience and explore the world around them. Playgrounds are seen as excellent learning spaces where children can experience play in both risk-taking and structured zones. Research shows (Bento & Sandseter, 2020) that a balance between risk-taking and safe features of playgrounds promotes maximum enjoyment and excitement for children. A mixed environment that incorporates a range of natural and manufactured elements supports different learning styles and meets the diverse needs of children (DEHORS Project, 2021).

Following the framework of inclusion as a process of policies and practices that embrace diversity and build a sense of belonging, rooted in the belief that every person has value and potential and should be respected, we should strive to design outdoor spaces and interventions to meet individual needs and priorities. Inclusive education emphasises that the approaches and tools used in the learning process should primarily address the needs of all children, including those with disabilities. (Schenetti & Petrucci, 2023). Children with mobility difficulties should also have equal access to OE (Morse, 2023), as inclusive education is necessary to ensure accessibility for full participation (Malaguti & Augenti, 2022).

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The quality of OE processes is linked to the quality design of outdoor spaces, which depends on the involvement of all participants who use these spaces. Designing outdoor spaces to promote inclusive participation in different activities that allow children of all abilities to participate, and benefit is crucial for OE. Outdoor spaces designed for children provide a safe and enjoyable environment for active play and can also be tailored to accommodate children with mobility issues. These spaces can include features such as ramps and a variety of play equipment that can be enjoyed by wheelchair users, such as accessible swings, raised mud kitchens and sandpits, teepees and bridges with large entrances. There are also sensory play areas that cater for the needs of all children, such as raised gardens and "plants of different heights, shapes and sizes so that everyone can see, feel and smell" (Everyone can play, 2023, p. 41). Such inclusive designs ensure that children with disabilities can experience the joys of outdoor play in the same way as their non-disabled peers. In addition, these spaces allow children of all abilities to interact with each other, promoting social inclusion and understanding. By creating outdoor environments that are accessible to all children, we can foster a sense of community and belonging where every child feels valued and included. By creating such inclusive outdoor spaces, children of all abilities can enjoy a sense of belonging and participation, significantly enhancing their overall development and well-being. A better understanding of how to support and facilitate children's interaction within play environments is crucial to providing an inclusive experience and extending the benefits of participation in outdoor play.

In order to ensure accessible outdoor spaces that do not marginalise or exclude children with MI and other types of disability, we suggest adopting the concept of Universal Design (UD), which appears to be most closely associated with inclusion (Lynch et al., 2020). The new European standard (EN 17210:2021) has elaborated that beyond the terms 'universal design', 'inclusive design' and 'design for all', which have been used interchangeably in the literature, there is a need to further develop terms such as 'accessible design', 'barrier-free design' and 'intergenerational design' (NSAI Standards,

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2021). Universal design promotes user-centred design that takes into account the diverse needs of all people and ensures that everyone, including future generations, regardless of age, gender, ability or cultural background, can participate in social, economic, cultural and leisure activities with equal opportunities (http://designforall.org/). According to Moore et al. (2023), the aims of UD in relation to play environments are as follows

- Going beyond minimum accessibility to ensure that equal emphasis is placed on maximising diverse play opportunities and supporting social inclusion.
- Create a space where everyone is welcome.
- Providing the same or equivalent experiences and activities (these may need to be provided in different ways for different people).
- Designing a space with accessible, inclusive routes and infrastructure and access to relevant ground and raised level activities.

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In many cases, the use of user-centred assistive products will support efforts to implement UD in outdoor educational activities for children with mobility impairments.

## Learning through play

Play is a vital activity during childhood as it plays an important role in children's learning and development. Children's brains are wired to learn through play, and it is through play that they acquire new knowledge and skills. Play helps children explore their environment, discover new things and satisfy their curiosity. Through play, children make sense of the world around them and understand complex concepts in a meaningful and interesting way.

In the second half of the last century there has been a shift in thinking about childhood. Constructivist and active approaches to pedagogy and psychology emerged, which saw children as resilient and active participants in their development. They were recognised as having rights, as social beings with an innate desire to learn and solve problems. This

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view is reflected in the 'Reggio Emilia approach', which encourages children to explore different types of play to discover their interests and develop their skills. Play allows children to be active participants in the learning process. It encourages them to ask questions, experiment with different ideas and make connections between different concepts, developing their critical thinking, problem solving and creativity skills. Through play, children also learn important social skills such as sharing, taking turns and working with others.

Incorporating play into early childhood education has given rise to a new methodology involving the development of innovative materials, tools and working strategies. This approach has made learning more fun, engaging and filled with moments of surprise and joy. Playful activities have now become a valuable tool for proposing learning activities in various educational settings, including schools, homes and even rehabilitation centres for children with disabilities. By using play-based activities, educators can make educational experiences more engaging and relevant to children's interests.

Play provides a safe and supportive environment for children to learn and grow. It allows them to develop at their own pace and to explore their interests and passions. Therefore, we need to recognise the importance of play in children's lives and provide opportunities for them to play and learn in ways that are engaging, meaningful and fun. Outdoor spaces provide an excellent context for children to play, explore and learn.

When children play outdoors, whether the play is child-led or adult-led, teachers and educators should 'co-construct, facilitate and monitor the processes without imposing rigidly fixed structures', instead adopting an attitude of pedagogical trust towards children's play and their desire to learn (Bortolotti 2019, p. 146). This flexibility is particularly important in the outdoors, where experiences cannot be fully predetermined but simply unfold, inviting both children and adults to engage with the unexpected and cultivate the ability to "dwell in unpredictability and change" (Schenetti, 2021, p. 125).

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However, "although many researchers emphasise the importance of children's free play and learning, there is an increasing focus on academic learning in ECEC curricula in many countries" (DEHORS Project 2021, p. 7). It is therefore particularly important to use effective interpretative tools, tailored to each national context, to identify and describe how play can facilitate the acquisition and strengthening of desired skills. In this way, educators can better appreciate and harness the value of play in early childhood education and ensure that it is integrated into curricula in a way that supports both academic and developmental outcomes.

## Digital technology for inclusive and student-centred outdoor education

In today's world, digital technology has become an integral part of our daily lives, including early childhood. Technology has become an indispensable tool for outdoor and physical education activities, as many devices are now easily accessible to children. Digital technology offers new opportunities and challenges for both educators and children; it has been described as a double-edged sword that can have both positive and negative impacts on OE. With the increasing use of mobile learning, children can use portable electronic devices such as smartphones, tablets and laptops to access curricular, pedagogical and social resources in different locations, including outdoors. It can be used intentionally to enhance learning by enabling more focused observation of nature, recording experiences for later reflection, ensuring safety through location services (e.g., google maps), and improving communication. However, it is important to recognise that digital technology can also have unintended consequences that educators do not anticipate, such as distraction. It is therefore necessary to strike a balance and use digital technology to enhance, rather than detract from, OE programmes (Hills et al., 2023).

With its potential to enhance participation, equity, communication and learning, the use of digital tools in early childhood education has been recognised in Finland. The National Core Curriculum for Early Childhood Education and Care (2019) emphasises the use of

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digital tools for play, environmental exploration, physical activity, and artistic experience and production. In Finland, digital tools are now being integrated into kindergarten pedagogical practice in carefully designed activities to increase children's participation in everyday activities.

The Municipality of Florence proposes an ecological vision of media education in outdoor activities, combining play and exploration activities with documentation. In this view, digital technologies serve as "a memory tool accessible to children, capable of capturing the traces and impressions of experiences, thus giving meaning and significance to outings on the terrace, in the garden or in the courtyard" (Cortecci et al., 2021, p. 78). To this end, sets of analogue and digital tools are provided from which children can choose to actively interact with elements of the garden. Indoors, digital photos and videos can be used to create immersive environments using a video projector (Cortecci et al., 2021).

Recent findings (Brink et al., 2023) have compared and categorised children's most common activities in this regard, which include taking photographs, making videos,

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exploring and discussing visual material, playing with technology, playing games and playing. Two core categories of activities emerged: (1) playful interaction with technology and tangible artefacts, and (2) visual documentation and reflection. Virtual technologies offer an excellent opportunity to raise children's awareness of global and local environmental issues and to encourage outdoor excursions close to school. In particular, Virtual Reality (VR) and Augmented Reality (AR) are transformative when children can experience environmental processes that would otherwise be invisible to them because of their scale or the timescales over which changes occur. AR can effectively combine different multimedia and information sources about environmental processes. When considering the use of technology in OE, it is important to recognise its role in preparing children for the challenges of today. Educators, as the key players in this process, have a critical role in empowering children as stewards by discovering new ways to incorporate emerging technologies into environmental education (Jerowsky & Borda, 2022). Their role is not just important, but integral to the success of this approach. Furthermore, using technology to engage children in documenting their outdoor experiences can help them express their voices and ensure they are heard. As Luini (2023) states:

> Allowing children to play an active role in the creation of documentation can make their reality and preferences visible from a different perspective [...] and provide opportunities for a deeper understanding of what children do and prefer to do when they are outdoors. (Luini, 2023, p. 6)

An effective way to do this is to use photography as a means of expression and communication. Two standout methods are the PhotoVoice approach and the Mosaic approach.

Pozzo and Alastra (2021) discuss the PhotoVoice approach. This participatory research and action methodology involves participants sharing images they have produced with other group members, followed by collective reflection on the stories these images

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convey. Secondly, Villa (2021) refers to the Mosaic Approach. This methodology integrates different tools; in addition to taking photographs, children are invited to create maps or take guided tours. The photographs taken by the children are then used as the basis for interviews and conversations.

The strong focus on the language of images makes both the PhotoVoice and Mosaic approaches particularly well suited to children. In addition, by allowing for the collection of perspectives from all participants, these methods have the potential to be inclusive, ensuring that each child's point of view is recognised and valued. Overall, technology has revolutionised the way we teach and learn in the outdoors. With various devices and tools available, educators can create engaging and immersive learning experiences that help children connect with nature and learn new skills.

## Partner countries' context for implementing OE activities with MI children

The data analysis of this project revealed that educators in all partner countries tend to implement outdoor activities in early childhood education and care settings. With the common understanding that outdoor learning is an integral part of children's lives in early childhood and that OE is crucial for children's development, educators in all seven partner countries promote outdoor activities to the best of their ability. From the analysis of the focus group interviews, the key benefits of OE for children identified by educators were:

- Improving physical health and body awareness
- Improving emotional state and well-being
- Promoting social interaction and developing social skills
- Satisfaction of discovery and exploration
- Connecting with nature and increasing environmental awareness

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- Encouraging multi-sensory real-life learning experiences
- Developing personal responsibility

The findings are consistent with the theoretical framework of OE discussed in Part 1 of this document.

Educators addressed the various barriers they face in designing and implementing OE activities for ECEC children, including those with MI, in terms of their lack of training, inadequate human resources, insufficient facilities and suitable outdoor spaces, and limited support from local communities, including funding and policies. They also highlight safety concerns, parental apprehensions, climate conditions and unexpected incidents. Many participating educators mentioned that a lack of knowledge and skills on how to deliver OE activities forced them to adapt intuitive teaching methods to meet the individual needs of each child and class. Very few educators attended training sessions on the use of digital tools for indoor and outdoor activities, including study visits and sharing of experiences.

Findings from interviews with parents' support educators' perspectives on OE. Educators and parents share a common understanding of OE and its benefits for young children, including those with MI. Parents in all partner countries broadly support OE as an effective means of enhancing their children's learning experiences and overall wellbeing. Many of them expressed their enthusiasm for providing outdoor experiences for their children in the afternoons or at weekends, recognising that the outdoor environment offers unique opportunities for exploration, discovery and active engagement that are particularly conducive to the development of young children. Most parents stated that immersing children in nature stimulates curiosity, fosters a sense of wonder and develops a lifelong affinity with the natural world. They emphasised the therapeutic effects of nature on children's mental health, highlighting its importance in reducing stress and anxiety and promoting emotional well-being. Parents stated that

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through hands-on experiences and sensory activities, children gain a deeper understanding of ecological principles, sustainable practices and their interdependence with the environment.

Parents of children with mobility impairments recognise the benefits of outdoor learning experiences for their children. They emphasise that the outdoors provides children with freedom, opportunities for movement, exploration and social interaction. Despite concerns about the safety of their children, parents are positive about the implementation of OE. For example, a mother who has a daughter with a severe mobility impairment stated: "I am always a bit worried and I stay close to the phone on the day of the outdoor activity, but seeing the excitement on her face when they do something out of the ordinary makes it all worthwhile". (Mother interview_Italy)

Some parents raised concerns about the qualifications and skills of educators in designing and delivering inclusive outdoor activities, with particular attention to the management of children in outdoor spaces, safety issues and risks. Several parents emphasised the importance of building trust between educators and parents. According to them, educators should build a strong and trusting relationship between educators and parents, which is essential to reduce fears or concerns about outdoor activities. Crucially, parents emphasised the need to create inclusive learning environments that meet the diverse needs of all children, including those with mobility impairments. Some of them mentioned that in relation to children with mobility impairments, educators should identify the best ways to accommodate them in outdoor activities according to their mobility difficulties. They advocated for accessible outdoor spaces, adaptive equipment and supportive involvement of educators to ensure that children of all abilities can fully participate in OE activities. Through collaboration between educators, parents and accessibility experts, OE can foster empathy, understanding and mutual respect among peers.

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Parents of children with mobility impairments (MI) expressed concerns about physical barriers in outdoor environments that limit mobility and pose safety risks. They emphasised that collaborative efforts between policy makers, urban planners and community stakeholders are essential to prioritise accessibility and remove barriers in outdoor spaces. They mentioned that designing outdoor environments with the specific needs of children with MI in mind is crucial to promote inclusivity and remove barriers to participation. Parents suggested that by working with accessibility experts and incorporating UD principles, the outdoor environment could be transformed into an inclusive space that could meet the diverse needs of all children and allow for full participation in activities. Overall, parents emphasised the importance of good communication between school and family and comprehensive adaptations to outdoor environments that prioritise accessibility features such as ramps, smooth pathways and adaptive equipment, to safeguard the accessibility of every child in OE.

## Overview of countries' contexts

### Italy

Over the past decade, outdoor education in Italy has seen significant growth. Initially developed as a response to the increasing trend of children spending more time indoors, it has since proven to be an educational approach well-suited to the lifestyle changes brought about by the recent pandemic. This approach is being promoted and implemented with the support of municipalities, local authorities, and universities, particularly through the redesign of school outdoor spaces and the establishment of stronger connections with local communities.

Since 1977, the Italian school system has made great progress in fostering inclusion, eliminating segregated classes and encouraging the integration of students with disabilities. However, the universal design of outdoor spaces, including those intended

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for outdoor education, remains in its early stages. There is a growing need to focus on creating accessible and engaging environments that cater to the diverse needs of children with motor disabilities, ensuring that pedagogical practices are seamlessly integrated with the architectural design of school spaces.

### Florence - Tuscany

Early childhood education and care centres in the Florence region of Italy primarily serve children of Italian nationality. In terms of cultural background, the majority of these children come from families with a high level of education, with many parents working in the health sector, and with a good social background.

### Milan - Lombardy

The Lombardy-Milan region in Italy has a diverse and multicultural student population in schools, with urban areas showing a greater mix of cultures than suburban areas. Cultural diversity is perceived by ECEC educators as an essential aspect to be celebrated and embraced, as it brings with it a wide range of experiences, traditions, knowledge and attitudes, including those related to OE. By recognising and valuing these differences, educators can promote a rich learning environment that fosters creativity, tolerance and mutual respect. Since 1977, the Italian school system has abolished special classes and promoted the inclusion of pupils with disabilities, including those with mobility impairments.

### Spain (Madrid)

Spain is a country with a wide range of experiences and lifestyles. Outdoor activities are implemented differently in private and public schools and this implementation is influenced by the location of the school. Typically, rural and private schools offer more outdoor activities. In Spain, government policy on early childhood education (0-6 years) aims to contribute to the development of children's skills and respect for differences. Children are encouraged to explore and observe their family, natural and social

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environments, and to discover and explore their surroundings. This framework facilitates the implementation of outdoor activities in ECEC settings. However, in the 3-5 years age group, one early childhood educator is responsible for each pre-school class, which usually has 20-25 children. Early childhood education in Spain also focuses on specialist subjects such as English, psychomotor skills and music, and OE activities are mainly carried out by the specialist teacher.

### Romania (Harghita Country)

In Romania, Harghita Country children are mostly of Hungarian or Romanian nationality and are generally brought up in traditional families with traditional values. Single-parent and patchwork families are not as prevalent. Parents often encourage their children to take part in sport from an early age, in order to foster a love of physical activity and nature. However, there are differences in attitudes to the environment. A kindergarten classroom in Romania has 15-20 children, supervised by an ECEC trainer, with one assistant managing several groups. Depending on the age of the children, the groups may be homogeneous or heterogeneous. The location (rural or urban) of the kindergarten and the number of children enrolled influence the formation of kindergarten groups.

In specialised institutions, kindergarten groups consist of 6-7 children with two educators. In programmes for children with severe disabilities, kinetic therapists and psychologists work alongside educators to ensure that each child receives the care and attention they need. Romanian schools have introduced outdoor learning as part of extra-curricular activities. However, the design and integration of outdoor activities is left to the discretion of educators. The Romanian National Curriculum for Early Childhood (2019) mentions "outdoor activities" in relation to OE. National programmes such as "School Differently" and "Green Week" have been established in Romania to promote OE. However, the lack of a supporting curriculum that describes, explains and illustrates the content and specifics of OE means that each educator approaches the implementation of OE intuitively.

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Portugal (Norte - Lousada)

The schools in the municipality of Lousada have a diverse student population, considering childrens' nationality. Most families have a stable middle class economic status, although some families do not fit into this category. Education is free in Portugal, which ensures that all children have equal access to educational activities. Parents are generally well educated and supportive of their children's education.

All schools participate in environmental education activities as part of the municipality's "BioSchool" project. The aim of the project is to raise awareness among children and parents about environmental issues and all the flora and fauna present in the community. Many families have applied this knowledge at home, which has had a positive impact on the environment. The BioSchool 360° Challenge encourages schools to participate in environmental education activities and policies, such as reducing their water and gas consumption. It also promotes the practice of recycling by parents and school staff. Schools that commit to these policies and activities receive financial incentives to spend on materials and equipment for the benefit of the children. The schools also encourage manual work by reusing waste or using natural materials. Some schools have a large outdoor area where children can explore gardening and other outdoor activities. However, this is not the reality for all schools in Portugal, as a large number of them lack high-quality outdoor spaces. This outdoor space in schools is particularly important for children who live in flats with limited access to outdoor spaces.

Although there are some families who do not fully embrace environmental awareness, the schools are working to educate and encourage them to participate in the project. The schools are located in semi-rural areas where the support and care of grandparents helps children to develop a connection with nature through activities such as gardening and animal care.

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## Cyprus

Preschools in Cyprus have a diverse student body, with children of different nationalities and cultural backgrounds due to the island's diverse population. The cultural richness of Cyprus is shaped by its history and geography, with the majority of the population being Greek Cypriots, but also including immigrants from countries as diverse as Russia, Ukraine, Romania, Bulgaria, Syria and the Philippines.

The diversity of the student body is remarkable, with children from different communities contributing to the cultural tapestry of Cyprus. In addition, pre-schools in Cyprus emphasise environmental awareness through school and community activities. Children are encouraged to carry out simple tasks such as using reusable water bottles, using the recycling bin and switching off lights when not in use. In addition, the ECEC curriculum in Cyprus promotes OE, but does not provide specific guidelines or practical suggestions for the implementation of OE activities.

## Malta (Floriana)

In Malta, particularly in international and inclusive schools such as Newark School Malta, we have a diverse group of children from different nationalities and cultural backgrounds. Our school community is made up of students from countries such as Malta, Italy, Germany, China, Korea, Russia and many more. The presence of this diversity adds a unique value to our school environment as each student shares their unique traditions, languages and perspectives.

Having a variety of nationalities and cultural backgrounds in our schools enriches our learning environment, broadens our perspectives and prepares us to be global citizens in an increasingly interconnected world. We are proud to be part of such a diverse and inclusive community.

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# PART 2: Designing outdoor activities

## How to design an effective outdoor education environment for children aged 3-5

### Role of the educator

A key element in the design and implementation of OE is ensuring that ECEC educators develop an awareness and understanding of the value of OE for children's education. According to the data analysis of this project, all educators agreed on the importance

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of OE for children of this age, including those with MI. Consequently, they are making reasonable efforts to incorporate outdoor activities to enrich the educational experiences they provide and are striving to overcome the barriers they face. These barriers include the lack of inclusive and appropriately equipped outdoor spaces, insufficient human resources (not enough teachers), inadequate knowledge, skills and management competences for outdoor spaces, and concerns about safety issues. Additionally, they mentioned parental concerns about potential risks to their children, such as accidents or exposure to hazards.

As noted by Thomas (2021), for ECEC educators to feel confident in integrating regular OE activities into the curriculum, they need to acquire essential skills and competences. Educators most shift their pedagogical attitudes towards managing fears of losing control in outdoor spaces and trusting children's sense of responsibility. In OE, educators require a wide range of outdoor leadership skills and a deep understanding of the relevant theories effectively to apply these skills (Thomas, 2021). This necessitates understanding the difference between danger, a situation that poses a direct threat or harm to someone's safety, and risk, which involves uncertainty and requires an assessment of possible outcomes, including potential benefits. Allowing children to take manageable and reasonable risks helps them develop skills to assess uncertain and challenging situations, thereby acquiring the competence to take risks more safely. Indeed, accidents are more likely to have serious consequences for children who are not accustomed to taking risks (Gori et al. 2023; Cortecci et al. 2021).

The findings from the analysis of the interview data support the literature findings that the expertise of educators is fundamental to the design and delivery of OE activities. Participating ECEC educators acknowledged that designing and implementing outdoor activities is a challenging task that needs to be considered. The findings revealed that their hesitance and stress in implementing outdoor activities, especially when involving children with MI, was due to their lack of skills in managing the non-formal learning involved in this learning approach and their concerns about safety and accessibility in

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unpredictable nature of outdoor environments. Parents also stressed that the educator is the key factor in the successful implementation of outdoor activities. They expressed that in order to feel comfortable with their children's involvement in OE activities, they need to be able to rely on the professionalism of the educator, which is even more important when it comes to children with MI.

Many ECEC educators who participated in the project emphasised that professional development opportunities, appropriate guidelines, practical workshops, peer support networks and training could increase their confidence in implementing OE activities, particularly involving children with MI. Therefore, continuous professional development for ECEC educators is essential to ensure high quality outdoor teaching and learning (Passy & Blackwell, 2022). ECEC educators indicated that they need more knowledge about OE and success implementation of outdoor activities. They should take gradual steps to familiarise themselves and their children with the outdoors before planning large-scale activities. Systematic use of outdoor spaces for educational activities helps educators and children adapt to the new learning environment.

According to Kiviranda et al. (2023), some steps to motivate educators who are reluctant to incorporate outdoor educational activities include:

- Encouraging educators' outdoor pedagogical mindset, discuss the benefits of risk-taking and convincing them of the value of OE.
- Providing ECEC educators with practical guidance to help them overcome any barriers or fears they may have about organising OE, thereby boosting their confidence.
- Offering educators with guidelines for designing inclusive and safe outdoor spaces.

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- Proving educators with ideas for suitable play activities that can work in outdoor spaces.

As the data showed, addressing specific issues before, during, and after each outdoor activity is essential for the successful implementation of outdoor activities. However, the data showed that the most fundamental factor in implementing OE is the design of the outdoor space. An appropriate, well-structured outdoor space is of paramount importance.

## Health and safety in designing an accessible outdoor environment for children with MI

### Outdoor spaces for learning

Outdoor education can occur in the nursery's outdoor space or in other learning environments such as nature outings (forest, beach, etc.), cultural settings (theatres, museums) or other locations (e.g., educational programmes). The data from the interviews with ECEC educators revealed the use of various outdoor spaces for conducting outdoor activities, ranging from the schoolyard and nearby environments to excursions far from the school.

Kindergarten outdoor spaces, such as gardens or schoolyards could easily be transformed into engaging classrooms capable of stimulating meaningful, playful learning, promoting research strategies and enhancing exploration and observation skills. By creating rooftop gardens, indoor vegetable gardens and small greenhouses, all schools - even those less accessible to the outdoors - can become outdoor teaching laboratories for the youngest children (Lattarulo & Vandelli, 2021). The DEHORS project (2021) suggests that school grounds can be transformed into excellent outdoor spaces offering children multiple opportunities for play and learning. In this context, educators can use school grounds instead of travelling elsewhere to find a safe, inclusive and

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suitable environment for activities. The project proposes several key areas for school grounds, each serving different purposes and enabling different skills among children. These areas of interest include wilderness zones, secret spots, sensory gardens, learning paths, relaxation zones, outdoor studios, meeting places and structured play areas. They are organised, arranged and adapted to support and stimulate the interests of the children observed by the educators. The results of the interviews also underlined the need to structure inclusive, interactive and appropriate areas within school premises that are easily accessible on a regular basis. ECEC educators and parents emphasized the need to enhance schoolyards to provide children with a variety of outdoor learning opportunities.

The process of designing outdoor spaces that can accommodate all children in outdoor activities is demanding and challenging. The UD framework proposed by Ron Mace (1997) provides basic principles for designing environments and products to be usable by all people, wherever possible, without the need for adaptation and specialised design. Drawing on the UD framework concerning play environments (as mentioned on p. 14), Moore et al. (2023) suggested making play spaces inclusive by prioritising diverse play opportunities, ensuring everyone feels welcome, providing equivalent experiences and designing accessible infrastructure. Outdoor spaces should include wheelchair accessible play equipment and provide sufficient space for wheelchair users to navigate comfortably. Activity centres should provide materials and equipment at accessible heights that are easy to use for example, there should be a raised sandbox. Installing several pieces of equipment at different heights is beneficial. For instance, if there are two mud-kitchens, one should be lower to accommodate different needs and to ensure seamless play between children with and without mobility impairments. The tools provided to children, such as gardening equipment, should also be selected with accessibility in mind. Consider opting for tools with extended handles, lightweight materials, and ergonomic grips to ensure they are user-friendly for everyone.

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It's important to understand that each wheelchair user has different needs. Some children may need to remain in their wheelchair, while others may be able to move out to use the equipment. For example, a child may move their wheelchair near to a swing, transfer to the swing, and then return to their wheelchair. To improve inclusivity and promote independence, the transfer process should be as easy and safe as possible. Features such as handrails, transfer platforms or steps can greatly assist in this regard (Landscapes for Learning, 2023).

## Planning and implementing inclusive outdoor education activities

Planning and reflection on all aspects of outdoor activities and experiences are essential to ensure the successful, inclusive and safe delivery of OE for children with MI. "Excellent planning", as mentioned by ECEC educators, is very important. According to Munge & Thomas (2021), organising the chosen environment before the activity, planning appropriate activities that interest and motivate children, and creating situations that naturally lead to interaction between children with and without disabilities are important aspects of planning outdoor activities. Data analysis revealed that the key actions for excellent planning are:

- Organise the nature of the outdoor activity or experience with particular attention to the educational outcomes to be addressed - identified by observing children's play and eliciting their interests and ideas. Also, consider the appropriateness of the outdoor environment to be used, the time frame, the route to the outdoor space and back to the school, and the essential equipment or materials to be used.

- Visit the outdoor space beforehand, check its accessibility, and outline any special features that need to be considered. Assess risks and hazards and identify possible measures to address them, including marking any 'danger zones' or

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'dangerous objects' and finding a way to keep them out of children's reach. Also consider the benefits of risky areas or activities for a balanced approach.

- Decide on the number of colleagues who will accompany the children in your activities and find the appropriate tools/materials (educational or otherwise) to facilitate the activity or experience. (e.g., educators mentioned the need to carry whistles, first aid kits, garbage bags, antiseptics, tissue paper or educational materials such as drawing paper and coloured pencils). Also, consider bringing relevant materials and tools to support children's spontaneous interactions with the environment: magnifying glasses, bug magnifiers, collection bags, portable presses, ropes for making swings, picture books, etc.

- Consider the weather conditions and be aware of weather forecasts to avoid exposing children to extremely high temperatures or bad weather. Take appropriate precautions, such as providing shade, ensuring access to water, the availability of toilets, and dressing children in weather-appropriate clothing to ensure comfort and protect them from potential harm, in collaboration with families.

- Communicate and inform parents about the outdoor activity. Providing an outline including details on the activity's scope, location, timing, appropriate clothing, food considerations, and addressing their concerns. Consider involving families more actively in order to share information, understand their perspective on nature and OE, and find out what they know about the subject. Consider conducting thematic workshops for parents and fostering personalised communication, especially with parents of children with MI, to align their child's engagement framework during the activity. Parents could also be involved in planning or facilitating outdoor activities.

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- Prepare the children before the outdoor activity or experience, highlighting how the proposal relates to their interests to bolster motivation and facilitate cooperation. Describe and explain to the children all the details about the context of the activity or experience, co-construct with them a few essential rules to facilitate the activity or experience and be ready to support their self-regulation empathetically during the experience.

- Select appropriate digital resources to facilitate the activity, such as cameras and sound equipment. Decide beforehand which parts or aspects of the activity you want to document, while remaining open to changes in the process.

The most favoured outdoor activities identified from the interviews with educators and parents include:

- Play for play's sake
- Guided exploration of local fauna and flora (soil exploration)
- Visit to animal farms and animal care experiences
- Planting and gardening (harvesting fruits and vegetables)
- Physical activity in nature settings (walking, climbing, running, canoeing, skiing, swimming, adventure sports)
- Environmental cleanup initiatives
- Collecting natural materials for artistic production
- Nature walks along trails
- Excursions and visits to nearby sites
- Experiencing rain or snow outdoors with appropriate clothing

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- Drawing the natural environment




## Observing and facilitating

Previous research on facilitator training and development underscores the importance of facilitators 'being with' and 'being present' (Thomas, 2019) in any learning process. One of the key aspects of being an effective outdoor educator is paying close attention to the individuals in the group and the complex range of interactions they have with each other. During an OE activity, children's safety and the achievement of desired learning outcomes depend on the ability of leaders and children to be present to each

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other and to the places, including their natural and cultural context. Observing how children engage and interact with the outdoor environment equips educators with insights to understand and respond to their children's different needs, questions and interests. This is particularly important when spending time outdoors, as outdoor environments offer children the opportunity to immerse themselves in complex, rich and flexible environments where they can nurture and expand their curiosity and interests.

ECEC educators mentioned that they should always be alert during outdoor activities and observe children carefully. They mentioned the need to encourage social interaction during outdoor activities and some reported using digital means such as cameras and sound equipment to facilitate activities. However, it was found that the use of technology was not well established among ECEC educators in the partner countries, due to educators' lack of knowledge and skills on how to use digital means to support their teaching (e.g., Cyprus) and their concern to balance the use of technology in outdoor spaces. Some educators in several countries (e.g., Romania, Portugal) expressed their concerns about the use of technology in OE, as children already use technology extensively in a non-school context and that technology could interrupt children's immersion in nature.

Digital means were found to be helpful in recording and documenting outdoor activities (e.g., using cameras) for further exploration during indoor activities.

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## Reflecting and assessing

Analysing, interpreting and reflecting on the employed outdoor activities is a useful practice to identify strengths and weaknesses in their design and to generate valuable data that could act as parameters for future applications. Questions such as “What worked well and what didn’t” “How did children react during the activity?” “What was interesting?” “What challenges were encountered?” “What were considered 'success stories'?” Can provide a framework for reflection and evaluation of the delivery of the activity. In addition, linking national curriculum, learning outcomes and outdoor activities and experiences is a way of demonstrating the benefits of OE (DEHORS project, 2021).

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# PART3: Bringing outdoor indoors

The continuity between indoor and outdoor spaces is considered very important in early childhood education and care contexts to promote the holistic development of children. As Reggio et al. (2023) argue, there are many ways in which outdoor and indoor education can be integrated to provide children with a holistic educational experience. They suggest that: (1) experiencing school as a sonic landscape by immersing in the sonic elements of bodies, spaces, materials and nature in outdoor activities can be a suitable preparation for reinventing the lived experience in indoor education, promoting skills and knowledge acquisition; (2) rethinking indoor spaces dedicated to motor play after observing outdoor movement that highlighted expressive purposes; and (3) creating an indoor area dedicated to exploring deconstructed materials and natural materials from outside.

Another valuable pedagogical resource for bridging outdoor and indoor learning is the use of picture books, as they can inspire children to explore outdoors while providing access to representations of nature indoors. The training course "Illustrated books and nature, between pictures and images. Methods and tools for promoting outdoor reading', organised by the University of Valle d'Aosta[1], suggests that picture books can serve a wide range of purposes; they can support the observation of the natural environment, activate interdisciplinary skills in the artistic, literary and scientific fields, encourage reflection on representations of real and imaginary nature and promote the building of ecological communities.

Findings from the interviews with ECEC educators revealed that for most educators, indoor and outdoor spaces are seen as a continuum rather than as separate learning

[1] https://www.univda.it/didattica/dipartimento-di-scienze-umane-e-sociali/offerta-formativa/corso-di-perfezionamento-albi-illustrati-e-natura-tra-immagini-e-immaginari-metodologie-e-strumenti-per-la-promozione-della-lettura-allaperto-albi-illustrati-e-natura-tra-immagini-e/

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environments. Most educators tend to bridge outdoor and indoor activities in different ways: either starting an activity indoors and continuing the activity outdoors or starting an activity outdoors and continuing the activity indoors. The principle underlying this continuity, as the findings show, is that the overlap between outdoor and indoor educational activities enhances children's learning experiences and motivates them to participate. Children can make meaningful connections between their indoor and outdoor experiences, and authentic outdoor learning facilitates the understanding of topics and concepts.

## How to design an effective classroom environment to promote continuity between indoor and outdoor education

In order to promote continuity between indoor and OE, educators mentioned the need to structure complementary activities that include experiences from both environments. Organising a continuous and fruitful dialogue between the indoor and outdoor spaces of the school was a priority for many educators who participated in the project. Most of them mentioned that outdoor activities provide authentic experiences for the concepts they discuss in the classroom and that often natural materials (such as leaves, rocks and pieces of wood), other artefacts and documentation of outdoor exploration (such as drawings, photos, video recordings) or even children's memories and lived experiences can work as initiatives for successfully achieving a learning outcome, analysing or extending a concept in depth, discussing a problem faced and critically reflecting on it. Onida (2021) states that natural materials, especially soil, can act as a bridge to connect outdoor and indoor activities. She writes that although soil is outside and children need to go outside to immerse themselves in the natural environment, at the same time soil can easily be brought inside the school, facilitating continuity between outdoor and indoor learning experiences. In order to maximise children's learning

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experiences, educators mentioned the need to wisely and carefully design open-ended activities that link outdoor and indoor educational experiences.

Technology offers excellent opportunities for linking outdoor and indoor experiences. Educators mentioned that digital tools can be used to document and share outdoor experiences, allowing children to reflect on their experiences and connect them to concepts learned in the classroom. Films, videos or VR could bring nature into the classroom, especially when other circumstances or barriers, such as bad weather, lack of transport or during the COVID-19 pandemic, prevent access to the outdoors. In addition, photos or videos can be used to stimulate children's imagination and encourage discussion and reflection.

## Health and safety in designing an accessible and inclusive classroom environment

It is essential to create an accessible and inclusive classroom environment that provides learning experiences tailored to the different needs of children, including those with disabilities. Creating an inclusive environment for all children involves providing accessible facilities, adapted learning materials, supportive teaching methods and fostering a culture of understanding and acceptance. The ultimate aim of such an environment is to ensure that all children, regardless of their educational needs, can acquire knowledge in a positive and nurturing environment. Recognising diversity, adapting differentiated teaching practices, promoting active participation and ensuring equal opportunities for all children are key measures for inclusion.

Universal Design (Ron Mace, 1997) is a fundamental principle of inclusive infrastructure. It emphasises the creation of spaces, products and environments that can be used by people of all abilities without the need for adaptation or specialised design. In the

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context of schools, this means designing classrooms, corridors and common areas to accommodate children with mobility and other disabilities.

### Classroom structure

Consideration of classroom structure is critical to creating a safe and inclusive environment for children, including those with MI. The physical layout of the classroom, accessible entrances and exits, adjustable furniture and classroom space need to be carefully considered. Ramps, lifts, automatic doors and accessible toilets with appropriate grab bars, suitable washbasins and easy to use fixtures will ensure that all children, including those with mobility impairments, can be independently accommodated in the learning environment. A well-designed classroom layout should be comfortable and conducive to learning. It should allow children to move around freely and interact with each other and their teacher. This may include activities such as circle time, large floor activities and other physical activities.

### Educational materials, resources and procedures

In order to create an effective learning experience for children with diverse needs, including those with MI, it is essential to provide a wide range of materials tailored to their specific interests and learning styles. In addition, technology can be an invaluable resource for inclusive learning. Tablets, computers and other digital tools can be used to support learning in a variety of ways, such as providing visual aids, interactive exercises and audio-visual materials. These tools can help make the learning experience more accessible and engaging for children, as well as providing opportunities for them to develop important digital literacy skills. By combining a variety of materials and technology tools, educators can create a learning environment that is inclusive, dynamic and engaging for all children, regardless of their individual needs or abilities. It is important for educators to use a range of teaching techniques and to adapt their pedagogical approaches and assessments to the individual learning preferences of

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their students. This includes using a variety of teaching strategies to ensure that all children, regardless of their preferred learning style, are able to participate equally in the learning process and thus understand and retain the material being taught. By doing so, educators can create an inclusive and supportive learning environment that promotes academic success for all children. This approach can help to ensure that every child has the opportunity to succeed and reach their full potential.

### A supportive and safe learning environment

It is important to create a safe and nurturing environment in ECEC classrooms - both indoors and outdoors - to ensure that children feel valued, safe and secure. A safe and nurturing environment is one in which children's interests are recognised, valued and supported through careful observation and flexible planning. Such an environment allows for an inclusive approach that values the strengths of each child (DEHORS Project, 2021). This can be achieved by promoting mutual respect, both between children and between children and educators. As Hookway (2022) suggests in order to create and maintain such an environment, educators can follow these tips to ensure that all children receive appropriate support and respect:

- Listen to all children and their perspectives, regardless of their backgrounds, disabilities or other factors.
- Set clear expectations and organise the learning environment in a clear and intuitive way. Respond to children's stress-related behaviours with a consistent, empathetic presence, remembering that their actions result from a combination of their emotional development, the acquisition of skills and abilities, and the ongoing support of understanding adults (Carpi, 2024).
- Include classroom activities and discussions that recognise the diversity of the student population.

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- Ensure that all children can participate in classroom activities. This may include providing alternative options for children who require special accommodations.
- Build relationships with children based on respect, trust and mutual understanding.
- Set an example for children by speaking and behaving in a respectful and inclusive manner.
- Encourage children to actively respect each other, regardless of their backgrounds and beliefs.
- Be open to children's perspectives and respond respectfully and constructively.

Ensuring that every child, regardless of ability, can learn and grow in a supportive environment is not just a concept, but a commitment to an accessible, inclusive and safe learning environment. Creating learning environments (indoor and outdoor) that cater for all abilities requires collaboration between educators, architects, policy makers and communities. By embracing the principles of flexibility, safety, sensory awareness, UD and collaboration, we can build schools that enable all children to reach their full potential and contribute to a fairer and more inclusive society. In doing so, we demonstrate our belief that education is a right for all, not a privilege for a few.

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# Conclusions and recommendations

The Outdoor4mi Guidelines have been developed on the basis of research that took into account the key findings from a literature review of recent publications on inclusive OE for young children, as well as the ideas and themes that emerged from the analysis of interview data from ECEC practitioners and stakeholders working with 3-5 year old children, including those with MI, and their parents, in the partner countries that contributed to this project. The aim is to contribute to the E+ priorities of environment and inclusion by providing ECEC educators with guidance on how to design inclusive outdoor spaces and activities for children aged 3-5, including those with MI. We also hope to increase educators' expertise in implementing OE activities by suggesting ways to overcome barriers and difficulties so that all children can enjoy the benefits of this approach. It is important to note that while the guidelines, guiding principles, key ideas and practical suggestions presented in this report do not constitute an absolute curriculum, they can serve as a complementary tool to encourage and support ECEC educators to adapt outdoor environments in an accessible and safe way and to implement outdoor activities for children aged 3-5 years.

The key concepts that emerged from this project are:

- The concept of OE is used in different ways, such as nature education, environmental education, out-of-classroom education, experiential learning, adventure education, place-based learning or real-life learning.

- Outdoor education and related learning concepts have gained recognition as an embodied, active and authentic approach to learning that takes place in the natural environment, from the schoolyard and the local area to outings far from school. It includes learning about the natural world, but also extends to engagement with any subject, skill or interest in the natural environment. Examples of places where OE can take place include visits to nature (e.g., forests,

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fields, the beach, lakes, rivers), cultural settings (e.g., museums, theatres, concerts) and other places (e.g., city parks, city streets, educational programmes).

- Participation in outdoor activities can have many benefits for children, especially those with mobility impairments. By participating in these activities, children can gain authentic learning experiences that promote overall well-being and academic success. Outdoor activities can help children develop cognitive and social skills and improve their mental health.

- Although in ECEC contexts the outdoors is typically associated with free play (which is very beneficial for young children), it can also be an excellent setting for more structured activities that help all children, including those with MI, to learn and develop a wide range of skills in subjects such as maths, history, geology, art, music and communication.

- The regular incorporation of outdoor activities in ECEC settings enables the curriculum to be taught and would also be essential for

    - Encouraging independent, active learning
    - Enhancing cognitive development
    - Developing communication and interpersonal skills
    - Building a sense of individual and cultural identity
    - Strengthening physical skills, well-being and health
    - Fostering environmental awareness and a connection with nature.

- The quality of outdoor educational processes is linked to the quality of preparation and design of outdoor spaces, which should ensure accessibility for children with MI. Outdoor spaces for children should be designed to provide a

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safe and enjoyable environment for active play and learning, tailored to the needs of children with MI.

- In order to ensure accessible outdoor spaces that do not marginalise or exclude children with MI and other disabilities, we suggest adopting the concept of UD:
    - Moving beyond minimum accessibility to ensure equal emphasis on maximising diverse play opportunities and supporting social inclusion
    - Creating a space where everyone is welcome
    - Providing the same or equivalent experiences and activities (these may need to be delivered in different ways for different people)
    - Designing a space with accessible, inclusive routes and infrastructure and access to relevant ground and raised level activities.
- The methodological and pedagogical lens through which OE activities are designed recognises the child as an active agent in learning, recognises learning through play as a key concept in ECEC education, and recognises that technology is an indispensable tool that creates revolutionary new opportunities and enables the inclusive, meaningful engagement of all children.
- Planning and reflection on all aspects of outdoor activities is crucial to the successful implementation of OE for all children, including those with MI. Educators have an important role in shaping the OE experience to make it inclusive, accessible and engaging. Their careful planning in the design and delivery of OE activities may include, but is not limited to
    - Identifying appropriate outdoor spaces and organising the environment to ensure accessibility for all children.

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- Designing activities that encourage interaction between children with and without disabilities.
- Communicating with parents to inform them of the details of the outdoor activity, including scope, location, time, appropriate clothing and food.
- Encouraging personal communication with parents of children with MI to ensure mutual understanding of their child's involvement during the activity and to address any concerns they may have.
- Discussing with children the context of the outdoor activity or experience and communicate a few basic rules, better if co-constructed.

- Technology offers excellent opportunities to facilitate outdoor activities and to link outdoor and indoor experiences. Using digital tools to document and share outdoor experiences encourages children to reflect on their experiences and link them to concepts learned in the classroom. Films, videos or VR are powerful tools that can bring nature into the classroom, especially in cases where situations or barriers such as bad weather, lack of transport or during the COVID-19 pandemic limit access to outdoor spaces. In addition, photos or videos can stimulate children's imagination and facilitate discussion and reflection.

- In order to provide children with a more comprehensive learning experience and create links between indoor and OE, educators need to include complementary activities that integrate experiences from both environments. This can be achieved by establishing a continuous dialogue between the indoor and outdoor spaces of the school. This dialogue is essential to ensure that children have access to diverse experiences that enhance their education and prepare them for success in the real world. For example, outdoor activities can provide authentic experiences that reinforce concepts taught in the classroom. In other

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cases, natural materials such as leaves, rocks and pieces of wood, as well as artefacts and documentation of outdoor exploration (such as drawings, photographs and video recordings) can be effective tools for achieving successful learning outcomes in the classroom. In addition, by encouraging children to share their memories and personal experiences of outdoor activities, educators can stimulate discussion, analyse concepts in depth, debate issues and encourage critical reflection.

- Creating an inclusive and safe learning environment for all children, including those with MI, requires the provision of facilities that are easily accessible to children with different needs, as well as the development of learning materials and teaching methods that can be adapted to different learning styles. The ultimate aim of such an environment (outdoor or indoor) is to ensure that every pupil, regardless of their individual learning needs, can access information in a supportive and positive environment. Key actions to achieve this include recognising and celebrating the unique differences between children, implementing teaching strategies that can be tailored to meet the needs of individual children, encouraging active participation and promoting equal opportunities for all.

Creating accessible and inclusive indoor and outdoor learning spaces that cater for all abilities is always a collaboration between educators, policy makers, architects and communities. By embracing the principles of flexibility, safety, sensory considerations, UD and collaboration, learning spaces can be transformed into excellent learning environments that enable all children to reach their full potential and contribute to a more inclusive education. Creating learning environments and designing indoor and outdoor activities that promote active, authentic, playful and experiential learning for all children is essential to a child's holistic development.

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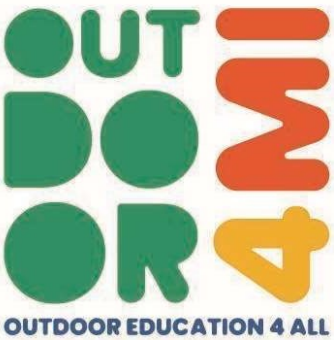
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