OUTDOOR EDUCATION 4 ALL

Teacher Training Curriculum

WorkPackage 3

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Table of abbreviation and acronyms

OE	Educação ao ar livre
UD	Universal Design
UDL	Universal Design for Learning
ECEC	Early Childhood Education Care
MI	Movement Impairments
STEAM	Science, Technology, Engineering, Arts and Mathematics
SGD	Sustainable Development Goals
AT	Innovative Assistive Technologies
ICT	Information Communication Technology
AAC	Augmentative and Alternative Communication
CRC	The Convention on the Rights of the Child
CRPD	Convention on the Rights of the Persons with Disabilities
UNCRPD	United Nation Convention on the Rights of the Persons with Disabilities

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Introduction

This Teacher Training Curriculum is one of the results of the Erasmus+ funded project Outdoor4mi. This material has been designed to equip Early Childhood Education and Care (ECEC) teachers with the skills, knowledge, and tools necessary to implement inclusive outdoor education (OE) activities for children aged 3-5. The goal is to ensure that all children, including those with mobility impairments, can actively participate in and benefit from outdoor learning experiences, both inside and outside the classroom.

The curriculum is structured around five comprehensive modules, each focusing on key areas essential for successfully implementing outdoor education. Over the course of 24-30 hours, the ECEC educators will explore topics such as environmental sustainability, inclusive strategies, digital skills, interdisciplinary approaches like STEAM, and effective communication with families.

The ECEC educators will also develop strategies to communicate the value of OE to families, addressing concerns and highlighting its benefits for children's social and motor development. The skills gained will enable the ECEC educators to create enriching, inclusive learning experiences that connect children to nature, regardless of their physical abilities.

The TTC is closely connected to other project results, that together form a complete training program It builds on the theoretical insights (Outdoor4mi Guidelines) and is supported by practical tools - Toolbox. This integration ensures that educators can effectively apply inclusive OE practices in real-world settings, combining theory with hands-on resources to make outdoor learning both sustainable and inclusive.

The flexibility of the training material allows users to decide whether to adapt it for group training or to deliver it as an individual learning experience, depending on their specific needs and context. This curriculum is designed with a dual aspect approach that combines the best of both self-learning and group activities, offering a hybrid shape that fosters individual growth and collaborative learning.

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Self-Learning: The self-learning aspect provides learners with the autonomy to explore concepts at their own pace. When the training material is delivered individually, learners have the freedom to progress at their own pace, absorbing content according to their personal schedules and learning styles. This self-paced approach is ideal for those who prefer to work independently, need flexibility due to time constraints, or wish to focus on areas where they require more depth. Learners can revisit content, pause and reflect, and absorb material in a way that suits their personal learning style.

Group Activities: In contrast, the group activities emphasize collaboration, communication, and collective problem-solving. These activities allow learners to come together to discuss ideas, tackle challenges, and share insights. Working in groups encourages diverse perspectives and builds teamwork skills that are crucial in many professional settings. It also provides an opportunity for learners to test and refine their understanding by explaining concepts to others, debating ideas, and learning from peer feedback. The social interaction involved in group activities can boost motivation and foster a sense of community, creating a richer learning experience.

This training supports the EU's goals for sustainability and inclusivity, empowering you to inspire the next generation while ensuring that all children can engage in outdoor education. We encourage the ECEC educators to apply this knowledge in their classroom and outdoor settings, making OE an integral part of early childhood education.

Overview of Modules:

M1 - Awareness on Environmental Sustainability:

This module provides an in-depth understanding of how outdoor education can promote sustainability knowledge, skills, and attitudes. You will explore how to foster a connection with nature and environmental responsibility in young children, which is in line with the EU's Learning for Environmental Sustainability recommendation.

M2 - Use of Inclusive Strategies:

Inclusive pedagogy is at the core of this module. You will learn how to engage children with mobility impairments in outdoor activities, ensuring that every child, regardless of their physical abilities, can connect with nature and benefit from outdoor learning experiences.

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M3 - Digital Skills:

Discover how to effectively integrate digital tools into your teaching, enabling children to explore the outdoors even if they cannot physically access it. This module will show you how to bridge the indoor and outdoor worlds using technology, providing all children with engaging and enriching learning opportunities.

M4 - Application of Interdisciplinary Approaches (STEAM):

Outdoor education offers a unique opportunity to incorporate interdisciplinary learning. In this module, you'll learn how to integrate STEAM (Science, Technology, Engineering, Arts, and Mathematics) into your OE activities, fostering creativity and critical thinking in your students.

M5 - Communication with Families/Stakeholders:

Communicating the benefits of outdoor education is essential for gaining support from families and the community. This module will equip you with the skills to clearly explain the value of outdoor learning, particularly for children's social and motor development, helping you to build strong relationships with parents and other stakeholders.

For more information about the project, visit our web page https://www.outdoor4mi.eu/

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Module 1: Awareness on environmental sustainability

Developed by Co&So

Module overview

«Awareness on Environmental Sustainability: Development of knowledge, skills and attitudes of sustainability through Outdoor Education, as outlined in the EU recommendation 'Learning for Environmental Sustainability».

Duration/Expected time for completion

It is expected that the completion of this module is approximately 4 hours.

Objectives

The main goal of this module is to:

- Understand the key concepts of environmental sustainability and their importance in early childhood education;
- Know the learning principles for environmental sustainability recommended by the EU;
- Integrate environmental sustainability into daily classroom routines and activities;
- Plan and execute outdoor activities that promote sustainability awareness among children;

Expected learning outcomes

Upon completion of this module, ECEC educators should:

- Have understood the key concepts of environmental sustainability
- Have understood the importance of environmental sustainability education in early childhood
- Know the learning principles for environmental sustainability recommended by the EU
- Be able to plan interventions that promote awareness of environmental sustainability in activities, daily classroom routines and outdoor activities

Training methodology

Theory lectures, practical exercises, online research, small group work and workshops

Training requirements

Personal computer, video projector, internet connection, PowerPoint and material for practical workshop activities

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Introduction

1. Key concepts of environmental sustainability

What is sustainability?

The official definition of sustainability dates back to 1987 (Brundtland Report 'Our common future') when sustainability was first identified as the condition of development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'. The concept of sustainability has a different meaning according to ideologies, values and philosophies, and has undergone a deep evolution: starting from a vision centred mainly on ecological aspects, it has come to a global meaning, which brings together environmental, economic and social dimensions. Sustainability thus implies environmental, social and economic well-being and at the same time the prospect of leaving future generations a quality of life as the present one.

The Sustainable Development Goals

The evolution of the concept of sustainability and the growing awareness of limited natural resources have contributed to the creation of the holistic approach that lies at the heart of the 2030 Agenda for Sustainable Development, where the focus is the fundamental interconnection between environment, development and social and economic well-being. At the core of the Agenda, which was endorsed on 25/09/2015 by the UN General Assembly, are the 17 Sustainable Development Goals, which comprise 169 separate targets concerning all countries and all individuals. The Sustainable Development Goals focus on addressing a wide variety of economic and social development issues, and includes:

1. No poverty
2. Zero hunger
3. Good health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reduced inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Climate action
14. Life below water

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15. Life and land
16. Peace, justice and strong institutions
17. Partnerships for the goals

Indicators covering different aspects of environmental, social and economic performance have been developed to measure progress towards sustainable development goals..

Activity 1

This activity is suitable for a group setting

Description of the objectives: To enhance understanding and awareness of the United Nations' 17 Sustainable Development Goals (SDGs) and their interconnected nature. In this way ECEC educators will be enabled to actively contribute to global efforts toward sustainable development, by promoting education, awareness campaigns, and practical applications of SDG principles in the primary education sector.

Materials: PC, internet connection to access the official website page of SDGs.

Instructions:

Group work and reflection session (45 min)
ECEC educators divide into small groups (possibly 2-3 educators per group) and choose 2 specific SDGs to explore. Each group should answer the following questions after 10 minutes of internal briefing and online research:

- Why are these SDGs important globally and locally?
- How do these SDGs relate to education?
- Can you provide a few real-world examples of how different SDGs are applied in education and society?
- How could you integrate these SDGs into your subject area or teaching practice?
- What activities or projects could help children understand and take action on these goals?

Then all groups reflect together about the information and the thoughts emerged from each discussion (5 minutes).

NOTE: To make the experience more engaging, one can make use of the digital support of the Mentimeter platform (https://www.mentimeter.com/pt-BR).

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Closing: By the end of the activity, ECEC educators will have a deeper understanding of the SDGs and practical strategies to integrate global sustainability goals into their teaching practices.

Seguimento: This activity encourages educators to set a personal or school-wide goal to incorporate at least one SDG into their teaching over the following years.

2. Environmental sustainability and circular economy

The contemporary concept of environmental sustainability looks beyond recycling, reuse and biodegradability, towards a more general idea of contraction and remodelling of consumption that for decades the market has promoted through the creation of superfluous and endless needs. The traditional production and consumption model is in fact based on the principle of the Linear Economy and was successful in the last century thanks to a high accessibility to large quantities of resources and energy. However, society is increasingly realising that we live in a world where resources are finite. A possible alternative may therefore be the Circular Economy, a new paradigm that decouples economic growth from resource consumption. by rethinking production and consumption models with a view to reducing waste and reusing materials.

The circular economy envisages the development of a model based on minimising waste, marked by reuse and recycling, and creating a real-life cycle of materials, which does not end with their abandonment in landfills. The European Union has established a precise hierarchy in waste treatment, an order of priorities to be followed to minimise environmental impact and promote the circular economy.

1. Prevention: The first and most important priority is the prevention of waste generation. This means taking measures to minimise the amount of waste generated, such as:

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- Reduce consumption of goods and services, buy only what is really needed and choose durable and repairable products
- Use bulk products, avoid products with excessive packaging and opt for reusable alternatives

2. Reuse: When prevention is not possible, the second priority is to reduce the amount of waste generated. This can be achieved through different strategies, such as:
    - Reuse of used items instead of throwing them away
    - Repair of broken items instead of buying new ones
3. Recycling: Transforming materials from waste into new products, thus saving natural resources, reducing pollution and reducing the amount of waste to landfill
4. Energy recovery: Recovery consists of recuperating energy from non-recyclable waste. This can be done through incineration or other technologies that produce energy or heat
5. Disposal: Last and least desirable option for waste management is to send non-recyclable or non-recoverable waste to landfill or other disposal facilities

Activity 2

Description of the objectives: To develop the capacity to design and implement practical, hands-on activities that integrate the principles of sustainable development, promoting in the school environment principles on economic sustainability and sustainable development.

Materials: PC, internet connection, paper, pens, and "Pills of Sustainability" measures, by ARPAT (see link).

Instructions:

Personal reflection (30 min)

1. Read carefully the sustainability pills by ARPAT, taking notes and comparing online different methods original to your country.
2. Try to think about a daily and common activity and try to think about incorporating good sustainability practices into it. It could be small changes, or small details that help you make the action more sustainable.

Closing: By reflecting on routine tasks, you can better understand the potential to

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introduce sustainable practices into your life and consequently in the classrooms in a practical and relatable way. These practices empower children from an early age to become more conscious about sustainability.

Follow up: After this personal reflection, you should consider daily activities in the classroom that you can transform in a more sustainable way involving also children.

3. EU Council Recommendations on Learning for Green Transition and Sustainable Development

Recommendations to stimulate learning for green transition and sustainable development: In June 2022, the Council of the European Union adopted a Recommendation for Member States to support policies and programmes on learning for green transition and sustainable development. This is essential to ensure that students of all ages acquire the knowledge to live more sustainably and obtain the skills necessary to act for a sustainable future.

In particular, it calls on Member States to:

- Consider learning for the green transition and sustainable development a priority of education, training policies and programmes;
- Provide opportunities for all students to learn more about climate emergency and sustainability issues in formal and non-formal education;
- Mobilise national and European funds to invest in green and sustainable equipment, resources and infrastructure;
- Help educators develop their knowledge and teaching skills to address climate emergency and sustainability issues;
- Create learning contexts conducive to sustainability, involving all school activities and actions;
- Actively involve students and school staff, local authorities and youth organisations in sustainability education.

NOTE: full document available here.

The GreenComp: Together with the adoption of the proposed **"Recommendations on learning for the green transition and sustainable development"**, the Joint Research Centre of the European Commission published the GreenComp study defining the European framework of competences for sustainability.

The GreenComp outlines a set of sustainability competences in order to address the growing need for people to improve and develop knowledge, skills and

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attitudes to think, plan and act with empathy, responsibility and care for the planet and thus to live, work and behave sustainably. GreenComp is thus a non-statutory framework for sustainability competences that provides common ground for learners (regardless of their age and level of education, in formal, non-formal and informal learning contexts) and guidance for educators.

Specifically, in the field of education, it provides a conceptual model that all those involved in lifelong learning can use with different objectives, such as:

- Raising awareness about the importance of learning for environmental sustainability;
- Designing learning opportunities aimed at developing competencies in sustainability;
- Assessing one's own situation regarding support for learners in developing sustainability-related skills.

NOTE: To see how GreenComp is structured, download it here.

Activity 3

Description of the objectives: To enhance knowledge and understanding of the European Union's recommended principles of learning for environmental sustainability, enabling you to incorporate these principles into teaching practices that promote environmental literacy, critical thinking, and active participation in sustainability initiatives among children, fostering a culture of environmental responsibility within educational settings from an early age.

Materials: PC, internet connection, printed copy of the Council Recommendations.

Instructions:

1. **Self-learning (15 min)**

Take some moments and focus on the general structure of the EU Council Recommendations, which you can consult both on a printed copy and online.

2. **Keyword Reflection Activity (15 min)**

After understanding the general framework of the document, choose one section or one theme from the Recommendations. Try to focus on the following questions:

- What are the primary objectives outlined in this section of the EU Council Recommendation, and how do they relate to the broader goals of the Recommendation?

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- How can the guidelines in this section be implemented in your specific field or professional practice?
- What potential challenges or barriers could arise when trying to apply the principles of this section, and how might these be addressed effectively?

As a final exercise identify one keyword that best summarizes the essence of that section. For example, for a section on green competences, you might choose "skills" or "innovation".

Closing: By summarizing the EU Council Recommendations into impactful keywords, you will gain a clearer understanding of the key principles of learning for environmental sustainability. The reflective questions and the identifying of one keyword encourage you to demonstrate your understanding, consider practical applications, critically evaluate the content, and connect it to your professional and personal contexts.

Follow-up: After this activity you should be able to translate these principles into actionable strategies for your classrooms, fostering a more integrated approach to green education. However, it is important for you to reflect on your answers and identify any areas where you feel you need further clarification or deeper understanding—what steps will you take to address these gaps? Then share one insight from this exercise with a colleague or peer, and discuss how the principles in the EU Council Recommendation could impact your shared work.

4. Routine activities and OE in early childhood education to promote environmental sustainability

Sustainability in Early Childhood: Teaching respect for the environment from a young age is crucial to raising responsible, informed citizens who adopt sustainable lifestyles. By empowering children with knowledge and values, they can grow with better consumption habits than previous generations, helping to protect an environment damaged by human activity. It's important to foster environmental awareness early, starting from familiar, local surroundings, as this encourages practical action. While slogans like "Save the pandas!" have raised ecological awareness, they often fail to promote concrete actions. Focusing on familiar environments helps answer the question, "What can I do?" and fosters a more personal, mindful relationship with nature, challenging the mindset of nature as an inexhaustible resource. Teaching sustainability early builds a cognitive foundation for lifelong learning and promotes behaviours that can positively impact the environment. This approach allows children to see that small, everyday

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actions can make a difference.

Sustainability in Early Childhood Education: Educational services for young children are key to fostering environmental protection, promoting positive attitudes toward sustainability from an early age. Sustainability education should begin in early childhood, incorporating playful and routine activities that encourage curiosity, respect, and ecological behaviour. Outdoor education is particularly effective, offering direct experiences with nature that help children develop ecological sensitivity. However, direct contact with nature alone is not enough to build a full environmental consciousness. It is also essential to combine outdoor activities with structured environmental education, where children learn about the characteristics, functions, and risks to the environment. By integrating hands-on projects and workshops with nature-based experiences, early education can cultivate a deep, lasting connection with the environment, helping children grow into responsible, environmentally aware citizens. This holistic approach ensures that sustainable attitudes become part of daily routines.

Some examples of activities in kindergarten: Involving young children in everyday activities and gestures is the key to training good sustainability practices. Even the choice to buy "less" in quantitative terms and instead prefer more natural materials is part of that larger ecological change that will be able to change people's lifestyles. Even the creation of do-it-yourself projects with recycled materials, activities in collaboration with associations concerned with the environment, and opportunities to engage with other expert figures dedicated to "green" issues will foster a closer link between society and the environment in order to include more and more people to embrace this lifestyle. Just for illustrative purposes, we report some examples of experiences, activities, workshops, and small gestures to be introduced into daily routines that can be proposed in kindergarten.

Kindergarten courtyard: Creating an organic garden at kindergarten connects children with nature, fostering skills in observation, care, and hands-on work. It promotes cooperation with peers and educators, while achieving key goals like increasing awareness of the local environment, building a positive relationship with nature, recognizing seasonal vegetable growth, and understanding the role of fruits and vegetables in nutrition. It also encourages active learning, water conservation, and appreciation of the earth's resources.

Planting a tree: Planting a tree together with children is an incredibly significant and educational activity that can have a lasting impact on their relationship with nature and the environment. First, it should be explained why all this is crucial for

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the Planet, teaching the importance of trees to provide oxygen, improve air quality, create habitats for wildlife and combat climate change. In this way, the youngest children can learn to respect and appreciate the beauty of nature, understanding the need for ecosystem protection.

Visiting an educational farm: In order to convey the importance of sustainable agriculture and natural habitats, educators can organise trips to visit agricultural realities that often offer activities specifically designed for children. Educational Farms are in fact farms that welcome kindergartens and families, and offer places of growth and learning about the life of animals, the origin of food products and more generally about the agricultural environment, thus passing on the knowledge that characterise an agricultural and food heritage of health, tradition and culture, dealing in a practical way with issues such as food waste, sustainability, seasonality and respect for animals and plants.

Outside is inside: Kindergartens should integrate indoor and outdoor spaces to create continuous learning opportunities. Indoors, areas can be designed with plants, hydroponic systems, and mini greenhouses, fostering children's care and observation skills. Animal life, like an insectarium, can offer further exploration. Tools like digital microscopes allow deeper study of natural elements. Picture books and stories on nature, sustainability, and recycling can inspire activities and discussions, both inside and outside, year-round.

Sustainable travel: The World Health Organization (WHO), calls air pollution the "silent killer," largely caused by human activities like power plants, industries, and traffic. Dropping children off at school contributes significantly to rush-hour traffic and pollution, affecting not only schools but entire cities. Sustainable travel methods, like walking, biking, or using public transport, can reduce pollution. Initiatives like the Pedibus, where children walk to school with an adult, promote sustainable habits, reduce traffic, and encourage environmental responsibility.

Activity 4

This activity is suitable for a group setting.

Description of the objectives: To ensure that ECEC educators possess a foundational bibliography of age-appropriate and engaging children's literature on environmental sustainability, equipping them with the necessary resources to introduce and explore sustainable practices, ecological awareness, and environmental stewardship in early childhood education.

Materials: Bibliography sample, picture books on environmental sustainability for

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preschoolers.

NOTE: Bibliography brief examples: 1. La natura (E. Adbage); 2. Il piccolo giardiniere (E. Hughes) ; 3. L'albero magico (C. Matheson) ; 4. Il riciclo (L. Freytag) ; 5. La protesta (E. Lima) ; 6. La libertà del polpo (M. Meloy e F. Sala); 7. La bambina che piantava gli alberi (C. Hart e A. Suvorova); 8. Un solo mondo (M. Foreman); 9. Amico albero (S. Donati); 10. Natura dentro (A. Papini).

Instructions:

1. **Introduction (20 min)**
   After an introduction about routine activities and OE in early childhood education to promote environmental sustainability, ECEC educators focus on the relation between illustrated books for children and environmental sustainability learning. The group explores the importance of illustrated books as a learning tool in early childhood, focusing on the possibility of coupling activities related to environmental sustainability and the reading of nature-related narrative works for children.
2. **Bibliography building (10 min)**
   ECEC educators will be provided with a well-rounded list of basic, accessible books and resources on environmental sustainability, tailored to the cognitive and emotional development of preschool children. Educators quickly read the sample bibliography and share titles of books they know about or search online to expand the bibliography.
   Note: If the activity will take place in a kindergarten environment, it is recommended to use the resources in the common library.
3. **Animated Reading (20 min)**
   ECEC educators divide into small groups and elaborate an animated reading of a chosen book, then they present it to the whole class. After each has finished its presentation, the class thinks about two possible activities on the theme of environmental sustainability to do with the children based on the proposed books.

Closing: The combination of readings and sustainable activities will foster early understanding of concepts such as recycling, nature conservation, respect for natural resources, through interactive, engaging stories and illustrations suitable for children. In this way ECEC educators will be able to integrate environmental sustainability themes into daily lessons, discussions, and activities, using the selected books to build awareness and positive habits in an age-appropriate manner.

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Follow-up: ECEC educators share possible practical experiences to be implemented in the future.

5. Recycling and creativity in early childhood education

The Pyramid of Waste

Following the hierarchy in the treatment of waste proposed by the European Union, it will be the task of teaching staff to set a good example to children and try to prevent waste by making sure to buy only what is really necessary and can have a lasting life or at least can be repaired, and try to limit products with a lot of packaging. It is possible to organise activities based on The Pyramid of Waste, aimed at:

- Reusing: an object that is longer used. This object can still be useful to someone else and therefore, educators can, for example, organise market days, in which children give new life to games, books, clothing that they no longer use by exchanging them.
- Repairing: broken objects by organising real Repair Workshops in which competent adults (parents, grandparents, experts...), can be called upon to participate and explain to children through practical activities on how to fix their own worn-out objects.
- Recycling: i.e., turning potential waste materials into new products so as to teach children not to waste anything: in addition to small daily attentions (such as using the back of paper to make notepads and the remains of meals eaten at school to make compost for the school garden...), it is possible to organise Creative Recycling Workshops, in which children can indulge and use their imagination to give a second chance to discarded materials by bringing other objects to life.
- Waste Disposal: children can be involved in waste separation at school, as a routine practice, learning from an early age about how to sort waste correctly.

Activity 5

Description of the objectives: To foster ECEC educators' ability to develop individual creativity through the use of reclaimed materials in children's workshops, enabling them to design engaging, hands-on activities that encourage imaginative expression and environmental consciousness.

Materials: reclaimed materials, which depends on what kind of workshop to be

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implemented.

Instructions:

Recycling Workshop for Creating Products from Waste Materials (30 min)
Find some waste materials according to availability and the type of workshop you want to carry out in your class, then try to create a product from it.
Some possible ideas are:

- A toy (e.g., cardboard car)
- A storage box from reclaimed cardboard
- Jewellery (e.g., paper beads or bottle cap necklaces)
- Planters from bottles or cans

Closing: Using your creativity to transform waste materials into a new product, you have demonstrated the power of upcycling. As educators, the skills and perspectives you have applied can inspire children to think critically about sustainability, innovation, and problem-solving in their own daily classroom activity, learning that every material has the potential for reinvention.

Follow-up: After collecting thoughts and ideas ECEC educators can implement these kinds of activities with children, considering also possible barriers, problems, availability of materials etc.

Summary

Environmental sustainability education is crucial for children, as it helps them develop an understanding of how human actions impact the planet and equips them with the knowledge and values to make sustainable choices. By learning about concepts like conservation, recycling, and renewable energy early on, children grow up with a sense of responsibility toward the environment. Outdoor education strengthens this by providing hands-on experiences, allowing children to connect with nature, observe ecosystems, and develop a deeper appreciation for the environment. The combination of both approaches fosters critical thinking, problem-solving, and a lifelong commitment to environmental stewardship.

Assessment

Carry out the design of a routine or OE activity for kindergarten on the theme of environmental sustainability.

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Additional Relevant Resources

https://www.arpat.toscana.it/documentazione/brochure/pillole-di-sostenibilita

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Module 2:
Use of inclusive strategies

Developed by European University Cyprus

Module overview

This Module discusses how disability is constructed around various philosophical and theoretical assumptions and the way these constructions are linked to identification of barriers in education and outdoor education. In addition, it presents the basic principles of inclusive pedagogical strategies, referring mainly to universal design, differentiation and universal design for learning, as well as collaboration.

In this module ECEC educators can find an overview of (1) Disability constructions and Outdoor Education (OE), (2) Accessibility and Universal Design: Identify barriers and solutions, (3) Inclusive Pedagogies for OE and (4) Learning Design for inclusive OE. After the theoretical analysis, ECEC educators will be given three activities to reinforce the principles of the module and two assessment tools to evaluate the use of inclusive strategies to engage children with mobility impairments in the implementation of OE activities.

Duration/Expected time for completion

It is expected that the completion of this module is approximately 6 hours.

Objectives

The main goal of this module is to:

- Familiarize participants with the theoretical background of disability conceptualizations, focusing on mobility impairments and physical barriers;
- Introduce the basic principles of inclusive learning and OE, built around the concepts of accessibility and universal design.

Expected learning outcomes

Upon completion of this module, ECEC educators should:

- Identify barriers to participation in OE for children with mobility impairments and ways to overcome them;
- Have knowledge about various inclusive pedagogical strategies and their applications in OE;
- Utilise inclusive tools and resources to support the participation of all children in outdoor activities;
- Create an inclusive learning environment that respects and values diversity.

Training methodology

Personal experience learning, scenario-based learning (videos), observation-based learning

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Training requirements
Printed Handouts: GuideLines Outdoor4MI and the Teacher Training Curriculum.
Laptop, Internet connection, handouts, paper and pen

Assessment methods/Tools
Quizzes, observation and self-reflection

Introduction

It is important for ECEC educators to recognise that the way we think about and approach disability is influenced by different philosophical and theoretical frameworks. In order to create a more inclusive learning environment for all children, this module explores the concept of disability and its construction, to identify the barriers in education, particularly in outdoor environments, and to use inclusive pedagogical strategies, focusing on approaches such as Universal Design, Differentiation and Universal Design for Learning (UDL).
It emphasises that implementing inclusive practices in outdoor education will ensure that every child can meaningfully participate in these experiences.

1. Disability Construction and Outdoor Education

The belief that every child has the right to a quality education that promotes dignity and optimal development is central to international frameworks such as The Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disability (CRPD). These values are endorsed by global, regional, and national bodies and are reflected in various educational policies. However, significant barriers still exist that prevent equal access to education for all children, especially those with disabilities.

Different disability models play a critical role in shaping educational strategies for learners with disabilities. These models guide the development of approaches that aim to provide equal opportunities and create inclusive learning environments, both in classrooms and outdoor education settings. The models are:

- The medical model sees disability as a personal issue requiring medical treatment.
- The charity model views disability as a personal tragedy, relying on charity and care.
- The social model focuses on disability as a result of social barriers and calls

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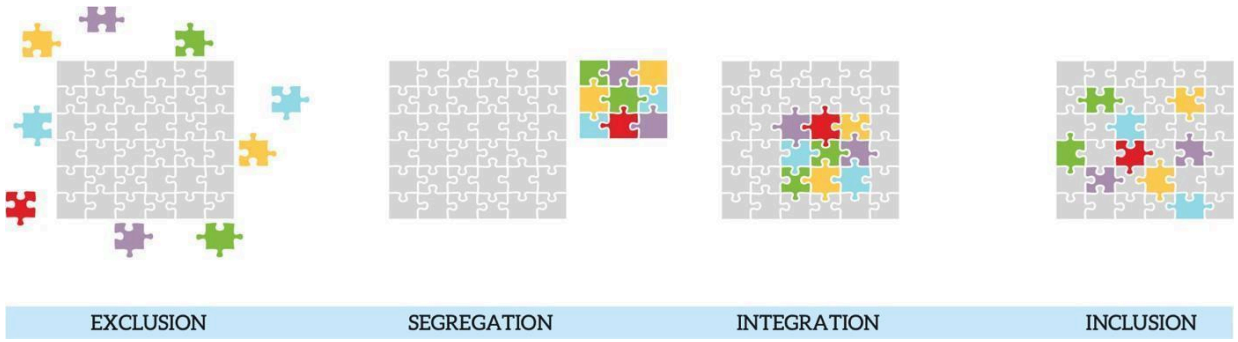
for removing these through social action.

- The human rights model demands collective responsibility for equality, emphasizing social and political action to ensure human rights.

The different models of disability shape how we approach education for children with disabilities. The approaches mainly found in educational settings are **exclusion**, **segregation**, **integration** and **inclusion**. For example, special education often aligns with the medical model, focusing on fixing the "problems" within the child. Integration places children in mainstream settings but may overlook the quality of their educational experience. In contrast, inclusive education adopts the social and human rights model, advocating for educational settings to remove barriers and provide equal opportunities for all children to access and succeed, reflecting a transformative approach rooted in human rights.



Activity 1: Reflection Activity - Identify disability constructions and stereotypes in educational practices

Description of the objectives: This activity encourages you to reflect on educational practices, discourses and examples of attitudes in school settings, focusing on how these may reflect the different disability models and educational approaches. This activity will help you understand how an everyday practice and attitude in education may actually be shaped by underlying stereotypes and perceptions of disability, to foster a deeper understanding of inclusive education as a transformative approach rooted in human rights and social justice.

Materials: Pen and paper

Instructions:

1. Take a few moments and reflect on the content of each statement found in the handout entitled, “Disability constructions and stereotypes”. (Appendix 1).

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Then identify:

- Which models of disability does each statement represent?
- Which educational approaches does each statement represent?

Closing: Reflecting and understanding these aspects, you can be in a better position to seek ways to promote equal opportunities, freedom of choice, and competence development, focusing on systemic rather than individual adjustments.

Follow-up: As you reflect on the statements provided, think about your own similar (if any) experiences and examples from current educational environments, or even different and contradictory examples, and consider the perspectives in terms of disability constructions and approaches.

2. Accessibility and Universal Design: Identify Barriers and Solutions

Outdoor activities offer valuable learning experiences for young children, but barriers to participation can arise, especially for children with disabilities. To create truly inclusive outdoor learning environments, ECEC educators must recognize these barriers and implement strategies and resources to address them. Identifying common barriers and exploring how technology and innovative resources can help remove them. To this end ECEC educators should recognize that the most common barriers to Outdoor Learning are:

- **Physical Barriers:** Uneven terrain, narrow pathways, or lack of accessible outdoor equipment can prevent children with mobility challenges from fully participating.
- **Lack of Adaptable Equipment:** Standard outdoor equipment often does not cater to children with diverse physical needs, limiting participation.
- **Social Barriers:** Children with communication challenges may struggle to engage with peers during outdoor activities, leading to exclusion.
- **Attitudinal Barriers:** Misconceptions about children's abilities can limit the types of activities offered, resulting in reduced opportunities for children with disabilities to participate meaningfully.
- **Curricular Barriers:** Outdoor learning activities may not always be designed with flexibility, which can exclude children with varying learning needs and abilities.
- **Insufficient Planning for Diverse Needs:** Outdoor spaces and activities are often designed without considering the wide range of abilities, limiting

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inclusivity.

In order to identify and design solutions for responding to the various barriers, specifically addressing the needs of children with mobility impairments as well as any child with diverse profiles, interests and expectations, approach involving accessibility, ECEC educators should consider the implementation of the fundamental principle of accessibility and the universal design principles.

Accessibility is a fundamental principle that ensures equal access for all individuals, particularly those with disabilities[1]. To achieve full inclusion, societies must address various barriers hindering persons with disabilities from accessing facilities, products and services.

Universal Design is a broader concept that is defined by The Center for Universal Design at North Carolina State University as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design." It holds seven important principles that aim to ensure that the built environment, technology, services and products are usable and accessible by the widest possible audience without the need for specialised adaptations or retrofits[2]. In brief these are:

1. **Equitable use:** The design is useful and marketable to people with diverse abilities.
2. **Flexibility in use:** The design accommodates a wide range of individual preferences and abilities.
3. **Simple and intuitive use:** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
4. **Perceptible information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
5. **Tolerance for error**: The design minimizes hazards and the adverse consequences of accidental or unintended actions.
6. **Low physical effort:** The design can be used efficiently and comfortably and with a minimum of fatigue.
7. **Size and space for approach and use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

[1] United Nations: UN Enable - Accessibility (2007), https://www.un.org/esa/socdev/enable/disacc.htm. Last accessed 1 Nov 2023

[2] The Centre for Excellence in Universal Design (CEUD). Ireland: https://universaldesign.ie/

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Universal Design and Accessibility are interconnected, as the second is about developing solutions to achieve universal design, as a concept that embraces the core values of human diversity, social inclusion, and equality, fostering a barrier free and inclusive environment. Both universal design and accessibility cannot be viewed in disparity to technology[3]. Thus, some technological and innovative Solutions for universally designed environments are:

- **Innovative Assistive Technologies (AT):** Adaptive technologies like all-terrain wheelchairs or devices that enhance mobility on uneven outdoor surfaces, portable ramps, and mobility aids can enable children with physical impairments to explore outdoor environments more freely and allow children to participate in nature-based activities. Furthermore, virtual reality (VR) technology could simulate outdoor experiences, enhancing sensory engagement when physical limitations exist.
- **Accessible Play Spaces:** The Universal Design principles advocate for creating environments accessible to all, regardless of ability. For example, outdoor spaces can be equipped with ramps, smooth paths, and play equipment designed for diverse users, such as wheelchair-accessible swings and sensory play areas.
- **Augmentative and Alternative Communication (AAC) Tools:** For children with communication challenges, using voice output devices with output enhancers for outdoor use, or picture-based communication boards during outdoor play can support their interaction with peers and educators.
- **Interactive Learning Apps and Tools:** Technology that enhances outdoor exploration, such as tablet-based nature identification apps, magnification devices, or digital cameras, can be used to make outdoor activities more engaging and accessible for all children.

Activity 2: Observation Activity - Identify Barriers and Solutions

Description of the objectives: This activity encourages ECEC educators to observe outdoor learning spaces and identify common barriers to participation in outdoor activities for young children with disabilities, particularly those with mobility impairments, including physical, social, and environmental challenges. By critically reflecting on the principles of universal design educators will be able to create accessible outdoor environments for children and develop an inclusive mindset.

[3] You can read more in Outdoor4mi Module 3, Digital skills

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Materials: Pen, printed handout entitled: "Universal Design Observation Handout" (Appendix 2)

Instructions:

1. Take a walk in the outdoor space of your kindergarten, or neighbourhood (at a park, or other outdoor space nearby) that is used for children's learning and recreation and observe the setting as well as children's activities.
2. Use the "Universal Design Observation Handout" and reflect on accessibility based on the principles of universal design.
3. Make notes on issues identified, justifying your observation.
4. In case that a place is not easily accessible or the weather does not allow you to walk, watch a relevant video, such as: Video 1: Outdoor learning with young children, ou Video 2: Playgrounds to Outdoor Learning Environments, or any other video, that is contextualized to the local setting, and engage in the activity in the same way.

Closing: Having the principles of universal design in mind, you can easily identify key challenges, such as physical, social, and environmental obstacles that hinder participation of all children in outdoor activities. By applying Universal Design principles, we can create inclusive outdoor environments that are accessible to all children.

Follow-up: Fostering outdoor activities that accommodate the diverse mobility and other physical, sensory, learning needs of children, will encourage a more equitable learning experience grounded in accessibility and social justice.

3. Inclusive Pedagogies for OE

Once ECEC educators have nurtured an inclusive mindset, they should focus on the various pedagogical practices and strategies that cherish specific key elements in creating an environment where every student, regardless of disability, gender, cultural background, or personal preferences, can succeed. These elements include choices and options, individual support, flexibility adaptability, reasonable accommodations and respect to individuality:

To embody these principles, we leverage frameworks such as Universal Design for Learning (UDL), Differentiated Instruction, and Collaborative Teaching, which guide the design and implementation of inclusive educational practices. In brief:

Universal Design for Learning aims to make learning accessible and transformative for everyone by considering every possible learner from the outset,

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ensuring that instructional goals, methods, materials, and assessments can be customized to meet diverse needs while being available to all. Universal design for learning holds three main principles:

- Design Multiple Means of Engagement, i.e. providing options for learners to be motivated and get meaningfully engaged in the learning process
- Design Multiple Means of Representation, i.e. providing options and different types of presenting information
- Design Multiple Means of Action & Expression, i.e. providing options and different means for communication, physical and other activity upon learning.

Each UDL principle has a set of guidelines and checkpoints that can be found at the website of the CAST organisation who introduced UDL.

Differentiated Instruction, rooted in Carol Tomlinson's (2000) work, adopts a flexible approach that acknowledges and responds to the diverse interests, readiness, and learning profiles of students, which is aligned with UDL. This strategy involves adjusting learning content, processes, outcomes, and environments to cater to individual students' needs, promoting a democratic education based on equal opportunities and social justice.

Collaborative Teaching is an approach broadly applied for successful inclusive education. It emphasizes a shared vision, values, and responsibility among educators, who work together in designing and implementing the learning process. This approach supports a more inclusive education system, where coordinated actions and trust between educators contribute to a holistic and supportive learning environment.

Activity 3: Planning an Outdoor activity based on UDL

This activity is suitable for a group setting.

Description of the objectives: This collaborative activity engages ECEC educators in the construction of an outdoor activity based on the principles of UDL. By identifying the main elements of universal design for learning, differentiation of instruction and collaborative teaching, ECEC educators will be in a position to adopt these as principles while deciding on the structure and content of outdoor education activities.

Materials: A digital device with access to the internet for the Universal Design for Learning Guidelines and a paper and pan.

Instructions:

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1. Take some time and explore Universal Design for Learning Guidelines
2. Then, discuss in your group on how to implement these guidelines in the design of an outdoor activity. Examine in your group aspects such as learning objectives, materials, methodology of the activity and assessment.
3. Design an outdoor activity in your group and identify collaboratively how you met the principles of the UDL.

Closing: The activity promotes collaboration between ECEC educators, a key element in inclusive pedagogies. Principles such as choice, flexibility, individual support, and respect for diversity, are fundamental in promoting inclusion.

Follow-up: As a follow-up, ECEC educators can reflect in a group discussion on the challenges they faced when trying to design an activity based on UDL. They can consider aspects such as the role of the educator, the design of the outdoor space, the involvement of families[4], the resources needed, etc.

4. Learning Design for Inclusive OE

In an effort to deepen further into issues of disability, accessibility and specific principles of UDL, the three pillars of learning design identified here are suggested as complementary. Inclusive learning design with the use of accessibility, technology and other resources and tools is framed around three main elements (as adapted by Mavrou, 2023 – UNICEF Guide on the use of AT in Education):

Design: which should be learner centred and follows the principles of UDL and inclusive pedagogies
Technology/Tools: that hold an added value for promoting accessibility and inclusion in the redefinition of the learning tasks & experiences for all learners
Participation: which is promoted through implementing differentiation strategies in educational activities to provide equal opportunities for interaction and engagement.

Considering these three elements will foster the process of employing the principles of UDL, and other inclusive pedagogical strategies (differentiation and collaborative teaching), for designing meaningful learning experiences that will provide opportunities for participation, engagement and interaction for all children, and especially those with mobility impairments that are often excluded from activities that require physical.

[4] You can read more in Outdoor4mi Module 5 Communication with families and stakeholders

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Summary

This module emphasises on the principles of inclusive learning design, offering ECEC educators the opportunity to deepen their understanding of disability and inclusive practices, especially in OE.

The key takeaways for this module include:

- Disability should be perceived as collective responsibility for equality, emphasizing social and political action to ensure human rights
- Universal Design provides a framework for removing barriers and supporting accessibility and inclusive outdoor learning.
- Inclusive pedagogies, such as UDL, Differentiation and Collaborative Teaching, make outdoor education an accessible and engaging activity that promotes inclusion and equity.
- The elements of Design, Technology/Tools and Participation provide a framework for creating flexible, supportive outdoor activities that cater to diverse abilities, based on inclusive education principles.

ECEC educators can now apply the above takeaways to:

- Identify aspects of accessibility and universal design in physical, social, attitudinal aspects of an outdoor learning environment
- Use the principles of Universal Design to overcome barriers in outdoor learning spaces and ensure accessibility and active engagement of all children in the outdoor activities
- Adopt the principles of Universal Design for Learning and Differentiation, in designing learning experiences that enable every child to engage fully in outdoor education

Assessment

To validate and consolidate the newly developed mindsets, the module offers two assessment tools, each designed to address a specific objective: (1) **understanding the main principles of UDL** (2) **critically reflect on activities they design for outdoor education**.

a) Take a short Universal Design for Learning Quiz for your self-evaluation of the understanding of the main principles and guidelines of UDL.
b) Use the handout entitled "*Self-Reflection Handout*" and critically reflect on

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your own practice and the outdoor activities you have designed. You can also use a video presenting an outdoor activity. Commit to improving your practice by meeting the criteria in the rubric.

Additional Relevant Resources

- Convention on the Rights of Persons with Disabilities (CRPD))
- The Convention on the Rights of the Child (CRC)
- Booklet and information on inclusive playground model in Israel: Friendship Park An Accessible & Inclusive Playground
- Inclusive Play Design Guide
- Read: Encarnação, P., Ray-Kaeser, S. e Bianquin, N. (Eds.) Guidelines for Supporting Children with Disabilities' Play: Methodologies, Tools, and Contexts.
- Tomlinson, C. A. (2000). The Differentiated Classroom: Responding to the Needs of all Learners. Alexandria: Association for the Supervision and Curriculum Development.
- The Centre for Universal Design Resources (Ireland)
- UNICEF Guide (2021). Good Practice Guide on Building an Inclusive Playground
- UNICEF Guide (2023) The use of Assistive Technology in Education: A guide for Teachers and Schools
- Universal Design Guidelines for Built Environment in Ireland

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Annex

Activity 1: Matching Quiz

Why is understanding construction of disability important for education? Match the approach and disability model corresponding to each statement:

Question 1:

Statement: In my school students with mobility impairments are withdrawn from class during PE that is three times a week to receive one-to-one support as they cannot participate in physical education (gymnastics).

Question 2:

Statement: During school excursions parents are requested to bring their children with disabilities themselves if they wish to participate, as school-bus won't take the responsibility of transportation.

Question 3:

Statement: To raise disability awareness, my school organises an outdoor fair for collecting money for buying a wheelchair for one of the children with disabilities attending the school.

Question 4:

Statement: The classroom teacher has organised a nature exploration walk in an outdoor space with smooth and wide paths, but she also brought along a portable platform for wheelchair users.

Activity 1: Matching quiz - Answers

Why is understanding constructions of disability important for education? Match the approach and disability model corresponding to each statement:

Question 1:

Statement: In my school students with mobility impairments are withdrawn from class during PE that is three times a week to receive one-to-one support as they cannot participate in physical education (gymnastics).

Model - approach: Medical - Segregation: impairment as a personal deficit, and approaches focus on rehabilitation and special education.

Question 2:

Statement: During school excursions parents are requested to bring their children with disabilities themselves if they wish to participate, as school-bus won't take the responsibility of transportation.

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Model - approach: Medical - Exclusion: impairment as a personal deficit, and approaches focus on rehabilitation and special education.

Question 3:

Statement: To raise disability awareness, my school organises an outdoor fair for collecting money for buying a wheelchair for one of the children with disabilities attending the school..

Model - approach: Charity Model - Segregation: disability is a personal tragedy and approaches often lead to dependency on segregated activities and relationships of power.

Questão 4:

Statement: The classroom teacher has organised a nature exploration walk in an outdoor space with smooth and wide paths, but she also brought along a portable platform for wheelchair users.

Model - approach: Social and Human Rights model- Inclusion: a way to remove barrier, respect diversity and provide equal opportunities is to integrate approaches of accessibility and universal design for all learners

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Activity 2: Universal Design: Evaluate accessibility and inclusivity of an outdoor education space based on the 7 Principles of Universal Design

Space observed

	Principle	Guidelines	Observations and Comments
1	**Equitable use**	Provide the same means of use for all, avoid segregating or stigmatising, provide for privacy, security, and safety and make the design appealing to all.	
2	**Flexibility in use**	Provide choice in methods of use, facilitate the user's accuracy and precision, provide adaptability to the user's pace.	
3	**SImple and Intuitive use**	Eliminate unnecessary complexity, be consistent with user expectations and intuition, accommodate a wide range of literacy and language skills, arrange information consistent with its importance, provide effective prompting and feedback during and after task completion.	
4	**Perceptible information**	Use different modes (pictorial, verbal, tactile) for presentation of essential information, provide adequate contrast between essential information and its surrounding, differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions), and provide compatibility with equipment or devices used by people.	
5	**Tolerance for error**	Arrange elements to minimise hazards and errors, provide warnings of hazards and errors and fail safe features, discourage unconscious	

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		action in tasks that require vigilance.	
6	**Low physical effort**	Allow users to maintain a neutral body position, use reasonable operating forces, minimise repetitive actions and minimise sustained physical effort.	
7	**Size and space for approach and use**	Provide a clear line of sight to important elements for any seated or standing user, make reach to all components comfortable for any seated or standing user, accommodate variations in hand and grip size, provide adequate space for the use of assistive devices or personal assistance.	

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Final Assessment Activity

Observe a video or a real class/group outdoor activity or self-reflect on an activity designed in your own practice as an educator and make your own notes on whether the criteria are met or not. If not, make suggestions for the implementation.

Criteria	Notes
1. Provision of challenges and opportunities for enthusiasm	
1.1. Opportunities for intense emotions such as excitement 1.2. Opportunities for a sense of achievement, overcoming a challenge 1.3. The physical environment provides a combination of natural materials and equipment 1.4. The physical environment offers a variety of landscape shapes 1.5. The environment provides balanced opportunities for risk	
2. Provision of opportunities for creativity and modification	
2.1. Opportunities for modifying, shaping the environment, and expressing imagination 2.2. Opportunities for exploration and discovering new spaces 2.3. Opportunities for a sense of creation and self-confidence 2.4. The space includes materials that can be moved, modified, combined 2.5. The space provides the opportunity to engage in different types of play	
3. Experience of inclusion and equal opportunities	
3.1. Opportunities for interaction, participation in groups, and a	

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sense of belonging for everyone 3.2. Opportunities for equal experiences for children of different ages, body types, and skills 3.3. The space provides equal opportunities for play for children with (physical, intellectual, sensory, medical, learning, undiagnosed needs, multiple disabilities, or without disabilities) 3.4. The equipment (swings, slides, pathways, etc.) is safe and accessible to all	
4. Welcoming, accessible environment	
4.1. The space is easily accessible to everyone 4.2. The space is near a residential area and easy to reach 4.3. The space and equipment are well-maintained 4.4. The space provides a sense of safety 4.5. The space offers access to a toilet suitable for everyone 4.6. The space has sufficient parking spots 4.7. The space has benches or tables, family-friendly	
5. Variety of spaces	
5.1. There are enough areas for different uses, such as active or quiet play 5.2. There are large enough spaces that provide opportunities for physical activity for many children, such as running 5.3. There are small, "hidden" spaces with fewer people, offering calmness and privacy	

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5.4. The areas are made of friendly materials 5.5. The spaces are large enough for the movement of children with disabilities	
6. Variety of materials	
6.1. There is a variety of equipment, natural materials (soil, water, etc.) and surfaces 6.2. The space provides opportunities for children of different ages, builds, and abilities to participate in the same activities 6.3. The equipment can be used by many and diverse children	

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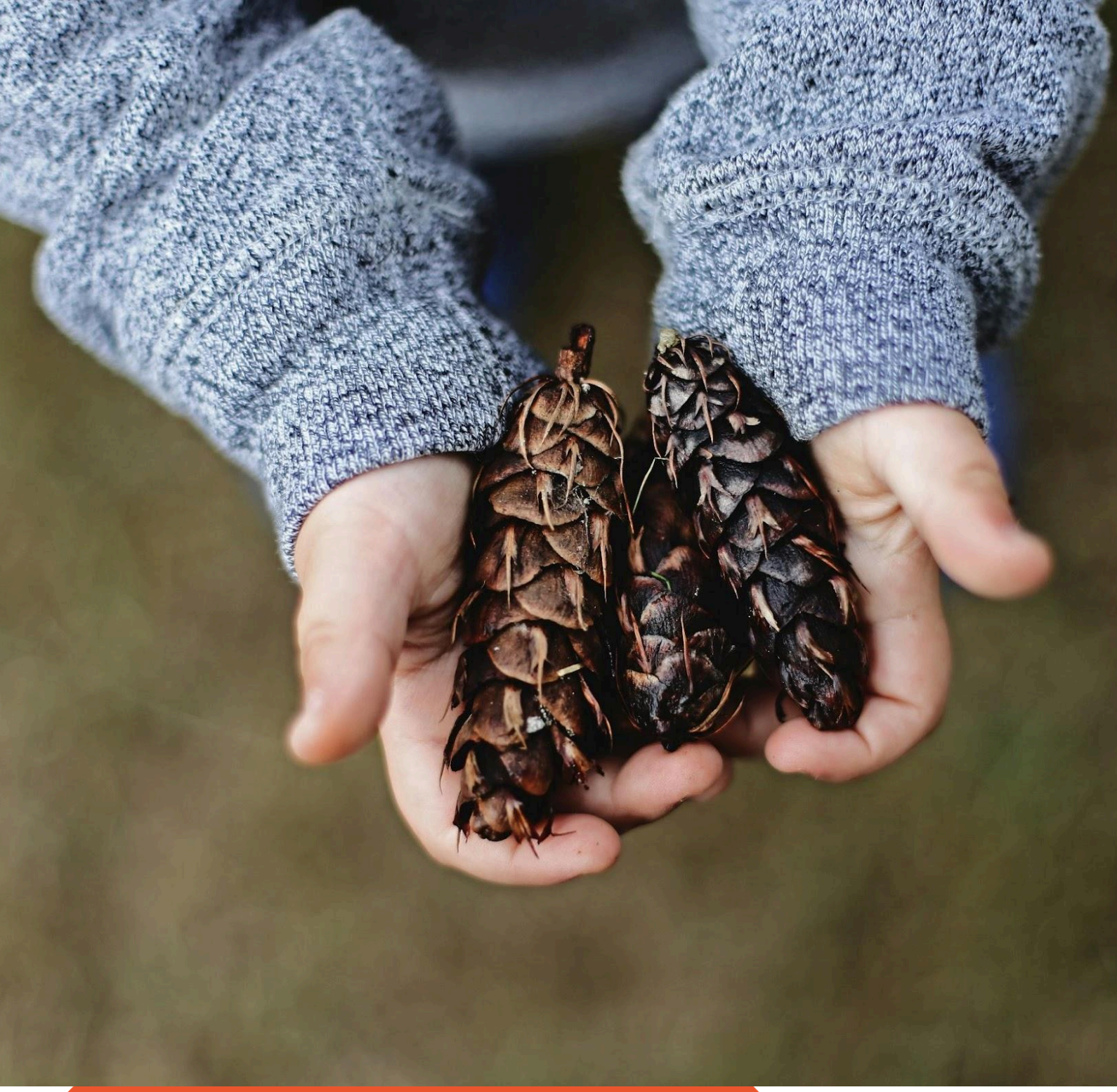

Module 3: Integrating digital tools in outdoor learning

Developed by Newark School Malta

Module overview

The purpose of this module is to train teachers on how to introduce young children to early childhood digital literacy, emphasising core digital skills in a developmentally appropriate manner. This section equips teachers with the skills to use digital tools to facilitate children's exploration of the physical world, both outdoors and in the classroom, in a creative and safe manner. It emphasises developing fundamental skills such as identifying and using basic digital devices, understanding safe digital practices, and fostering creativity through technology. As the use of digital tools becomes increasingly essential in education, it is crucial for teachers to guide children in confidently using these technologies to expand their knowledge of both the natural and digital environments. Moreover, collaboration between educators and parents is vital to reinforcing safe digital practices at school and home, ensuring that outdoor experiences can be extended and explored through digital means.

Duration/Expected time for completion

It is expected that the completion of this module is approximately 6 - 8 hours.

Objectives

The main goal of this module is to:

- Provide ECEC educators with knowledge on the integration of digital tools into early childhood education.
- Understand the benefits of incorporating technology in early childhood education, involving outdoor learning.
- Equip ECEC educators with knowledge on how to use ICT tools in a way that is beneficial to kindergarten children.
- Reflect on strategies to prevent potential risks associated with technology use within outdoor education settings.

Expected learning outcomes

Upon completion of this module, ECEC educators should:

- Understand the role and benefits of digital tools in early childhood education.
- Be able to name various digital tools and technologies that can enhance outdoor and indoor learning experiences.
- Present digital skills and literacy relevant to early childhood education.
- Integrate digital tools to bring outdoor experiences into the classroom, for

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children who cannot physically participate.

Training methodology
Inquiry-based learning including reading, visual tools, auditory and kinesthetic.

Training requirements
Electronic device to take the test and conduct online research related to key words and links to sources indicated in the module outline. Additionally, a device or pen and paper to write the reflective journal.

Assessment methods/Tools
Reflection journal, checklist and online multiple-choice assessment.

Introduction

The theme of this module focuses on the integration of digital tools into outdoor learning environments specifically designed for young children, including those with motor impairments. By leveraging technology in natural settings, educators can create inclusive, engaging, and enriching learning experiences that cater to the diverse needs of all children.

This module is essential in today's educational landscape, where technology increasingly intersects with learning. Outdoor learning provides critical benefits for young children, promoting physical, social, and cognitive development. For children with motor impairments, these benefits may be diminished without appropriate adaptations and supports. Digital tools can bridge these gaps by enhancing accessibility, enabling participation, and fostering collaborative learning experiences. Research indicates that integrating technology into outdoor learning can improve engagement and enhance educational outcomes for all children, including those with disabilities (Herodotou, 2018; Kuo et al., 2019).

This module ultimately aims to empower early childhood educators to create inclusive, technology-enhanced outdoor learning experiences that support the diverse needs of all children, fostering an environment where every child can thrive.

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1. Inclusive Education and the Role of Digital Tools in Outdoor Learning

Inclusive education aims to ensure that every child, regardless of their abilities or needs, has access to meaningful and equitable learning opportunities. For young children, this involves creating environments where they can explore, engage, and grow while feeling valued and supported. Outdoor learning, with its multisensory and dynamic nature, offers a powerful platform for fostering inclusion. Digital tools can complement these experiences by breaking down barriers, enhancing accessibility, and encouraging active participation for all children, including those with disabilities.

Digital literacy is an essential skill in today's technology-driven world, and its development should begin in early childhood through age-appropriate and engaging methods. Digital tools, such as interactive nature apps or adaptive devices, can be seamlessly integrated into outdoor learning environments to promote hands-on exploration and discovery.

It highlighted the complementary roles of technology and outdoor learning in early childhood education. While outdoor, nature-based experiences promote physical, social, emotional, and cognitive development, appropriately used technology can enhance cognitive skills, social-emotional growth, and academic learning. However, the benefits of technology depend on factors such as adult support, content quality, and usage limits, particularly given the risks it poses, especially for children under three.

Activity 1: Using Digital Skills for Inclusive Outdoor Learning for All Children (Taking the indoor classroom outdoors)

This activity is suitable for group settings

Description of the objectives: This activity encourages educators to independently explore, test, and implement digital tools that promote inclusive outdoor learning, emphasizing continuous reflection and adaptation. This activity

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moreover supports early years educators in developing digital skills to create inclusive, accessible outdoor learning experiences for children with motor impairments. Through self-reflection, exploration of digital tools, and design, educators learn to use technology to support engagement with nature.

Materials:

- Tablets ou smartphones with nature exploration apps (e.g.,, Seek by iNaturalist Seek by iNaturalist App Tour - Identify Plants and Animals!, Merlin Bird ID Explore Merlin Bird ID App - eBird Essentials).

- Adjustable tablet stands or holders.

- Bluetooth headsets or portable speakers for audio instructions or nature sounds.

- Audio recording apps (e.g., Sound Recorder, Easy Voice Recorder).

- Reflective journals or digital documentation tools.

Instructions:

1. Take a few moments and reflect on the question: "How can digital tools enhance outdoor learning for children irrespective of diverse needs?"
2. Research digital tools or apps used in outdoor education (e.g., nature ID apps, digital magnifiers, or sound recording apps). Reflect on how these tools could support accessibility and engagement in nature.
3. Explore the apps listed, testing how each might enhance an outdoor learning experience. For example:
    - Seek by iNaturalist: Allows children to identify plants, animals, and insects by pointing a camera at them. Adjust the tablet stand to make the app accessible to children in wheelchairs.
    - Sound Recorder: Use the app to record bird calls or other natural sounds, encouraging auditory engagement without needing hands-on involvement.
4. Reflect on each tool's accessibility features, considering how it could support children with motor impairments. Note your observations.
5. Create a simple, accessible nature exploration activity using the digital tools.
    - Example Activity: Digital Nature Scavenger Hunt - How to Do a Nature Scavenger Hunt

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- Objective: Children identify items from nature (e.g., leaves, insects) using the Seek app.
- Steps:
    a) Split the educators into small groups of 3-4 persons.
    b) Guide them in using the app to identify specific items from a list.
    c) For children with mobility impairments, set up a tablet on a stand and place it in areas where items are accessible..
    d) Incorporate an audio component using Sound Recorder to capture nature sounds or observations.
    e) Reflection: Document your planning process and reflect on ways to make this activity accessible for all abilities. How did the digital tools aid in creating an inclusive experience?

6. Record simple instructions or prompts using an audio recording app. Think about how audio guides can support children who might not be able to read or hold a tablet.

7. Play back the recordings, experimenting with volume and clarity. Reflect on how these could support children with different needs.

Closing: Reflect on your experience with the digital tools and their impact on creating inclusive outdoor learning opportunities. Consider how these tools supported accessibility and engagement for all children, especially those with motor impairments. Evaluate which techniques or strategies were most effective in fostering participation and meaningful interactions. By continuously adapting and refining your approach, you can ensure that digital tools become a powerful ally in promoting inclusion, accessibility, and the joy of learning in outdoor environments.

Follow-up: Try implementing the digital nature scavenger hunt or a similar activity in an outdoor setting. Observe children's responses and engagement, paying close attention to accessibility challenges. Gather feedback from colleagues or observe the children's responses, noting areas for improvement. Plan to revisit this activity, refining it with each use based on feedback and observations. Document any new insights, successful modifications, or ideas for using other digital tools to create inclusive outdoor learning experiences.

Additionally, look into other digital tools and adaptive technology options. Consider accessibility features like voice commands, screen readers, and adjustable settings that may support children with various needs.

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2. Virtual Tools and Strategies for Inclusive Nature-Based Learning

Assistive technology plays a critical role in facilitating participation and learning for children with disabilities, including motor impairments. Research shows that the use of assistive technologies can enhance communication, mobility, and access to educational content (Behrmann, 1998). In outdoor settings, integrating digital tools—such as adaptive devices or mobile applications—can empower children with motor impairments to engage more fully with their environment and peers, thereby fostering inclusion and collaboration. Integrating virtual tools into early childhood education provides an innovative way to make nature-based learning accessible for all students, including those with motor impairments. Platforms like Google Earth and virtual field trip apps offer immersive experiences that allow children to explore ecosystems, wildlife, and landscapes without leaving the classroom.

The theory of embodied cognition posits that cognitive processes are deeply rooted in the body's interactions with the world (Wilson, 2002). In outdoor learning contexts, this theory highlights the importance of physical activity and sensory experiences for cognitive development. Digital tools that promote physical engagement—such as augmented reality applications—can enhance children's understanding of their environment, supporting both learning and motor skill development.

To create truly inclusive virtual learning experiences, educators must adopt strategies that address the diverse abilities of their students. This includes designing activities with multiple modes of engagement, such as incorporating descriptive audio for visually engaging scenes, offering choices for exploration to empower students, and using tactile or sensory elements like sound effects to enhance immersion. Research indicates that outdoor learning environments have profound benefits for young children's development, including improved attention, social skills, and emotional well-being (Kuo et al., 2019). Integrating digital tools into these environments not only enhances engagement but also helps children with motor impairments overcome physical barriers, enabling them to experience the developmental advantages associated with nature-based learning.

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Activity 2: Self-directed activity for educators: Planning Inclusive Outdoor Learning for All Children (Bringing the Outdoors Inside - Using virtual tools for accessible nature learning)

Description of the objectives: This activity guides educators in creating accessible outdoor learning experiences indoors using virtual tools. Educators will start by exploring Google Earth and virtual field trip apps to understand how these tools can support inclusive education, then develop and practice a mini-lesson plan that leverages these resources to engage students in a virtual nature experience. The activity also encourages reflection on adaptations to make the lesson accessible for students with motor impairments and to consider follow-up activities that can deepen student engagement and learning. This activity helps educators create engaging, inclusive learning experiences that allow all students to explore the natural world.

Materials: Device with internet access (computer or tablet), note taking materials, access to Google Earth and virtual field trip app (e.g., National Geographic Kids), Farmers' Camp | Virtual Field Trip | KidVision Pre-K or Kidvision youtube channel. Optionally, you can also use a projector or interactive whiteboard.

Instructions:

1. Reflect on past outdoor activities and consider how virtual tools can create similar, accessible experiences.
2. Open Google Earth and a virtual field trip app. Visit a natural site (e.g., Grand Canyon) and explore its features. Note engaging ways to use these tools.
3. Choose a nature topic (e.g., ecosystems, wildlife). Design virtual tasks and discussion prompts, and identify sensory or visual aids to enhance engagement.
4. Walk through the lesson, considering how to engage students with motor impairments (e.g., using descriptions, letting students choose destinations).
5. Identify challenges for students with motor impairments and brainstorm further adaptations, such as adding tactile materials or sound effects.

Closing: Consider the impact of virtual outdoor learning on fostering inclusivity and engagement for students with motor impairments. Reflect on the following

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questions:

- How does virtual outdoor learning benefit students with motor impairments?
- How can you involve students in choosing virtual destinations?
- Which additional topics would be suitable for virtual exploration?

Follow-up: Ask students to record observations from the virtual trip, If possible, bring in natural elements (e.g., leaves) for a tactile comparison, and encourage students to create artwork inspired by the virtual locations they explored.

Additionally, do virtual tours and 360° experiences. Learn on how to create or navigate 360° panoramic images/videos, using tools like Google Street View, Ricoh Theta, or Insta360 cameras. Use platforms like Matterport to create interactive virtual tours of natural landscapes.

For Augmented Reality (AR) Applications, Use apps like Seek by iNaturalist or PlantSnap to capture real-world flora and fauna and simulate their environments in AR. Develop basic AR projects with tools like Spark AR or Reality Composer.

3. Understanding Digital Literacy and Risk Management in Outdoor Learning

Digital literacy in outdoor learning is about equipping children and educators with the skills to use digital tools to enhance the outdoor learning experience. Digital tools can support observation, documentation, and reflection during outdoor activities. They can also provide access to a broader range of learning resources and help children connect with the natural world in new ways.

Key components of digital literacy in outdoor learning include:

- Using Technology for Observation: Digital cameras, tablets, or smartphones can be used to document children's learning and their interactions with the environment
- Interactive Learning: Digital resources can offer interactive activities that expand on outdoor learning experiences, such as virtual nature walks, environmental data collection, or digital storytelling
- Safety in Digital Use: Teaching children how to use digital devices responsibly while outdoors, ensuring that technology enhances rather than distracts from the learning experience

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- Risk identification:
    - Device safety: Examine a device safety checklist and think about steps for safe device handling outdoors (e.g., using protective cases, keeping devices in shaded areas to reduce screen glare)
    - Privacy and Data Protection: Review basic privacy measures, such as turning off location tracking and limiting the collection of personal data. Reflect on why data privacy is especially crucial in educational settings with young children
    - Balancing Screen Time Consider how screen time can impact children's focus and interaction with nature. Look into best practices for limiting screen use while maximizing engagement in the outdoor environment.

Activity 3 - Self-directed Activity for Educators: Digital Literacy Skills

Description of the objectives: This activity gives a holistic approach to how each digital tool can be used in outdoor learning settings, providing a framework for educators to effectively integrate technology into their teaching.

The digital tools listed offer various ways to enhance outdoor learning for ECEC educators by providing interactive and engaging ways to document, share, and assess children's progress. These tools support children's creativity, promote communication with families, and encourage positive behaviors during outdoor activities.

Materials: For most digital tools, educators need access to a tablet, smartphone, or computer with the specific app installed. Internet access may be required for some tools for real-time communication or resource sharing.

Instructions:

1. Educators need to set up the digital tool and create a class or group profile for their students.
2. Children can use the tool to document their outdoor learning experiences, such as taking photos, recording videos, or participating in interactive activities.
3. Educators should review and provide feedback on the submissions or progress.
4. Parents should be included in the process by receiving updates or

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viewing their child's activities through the tool.

Digital Tools:

1. **Seesaw:** is an interactive digital portfolio tool that enables children to document their learning with photos, videos, and audio recordings. It helps educators capture moments during outdoor learning activities and share them with families in real-time. Seesaw encourages reflective learning and communication between children, educators, and parents.
2. **ClassDojo:** is a classroom management tool that helps educators track behavior and engage with parents. It is especially useful in outdoor learning settings for promoting positive behaviors and providing feedback in real time. ClassDojo also allows for communication with parents, helping them stay informed about their child's progress during outdoor activities.
3. **Padlet:** is a versatile online tool that allows educators to create collaborative boards. It is ideal for documenting children's outdoor learning experiences. Educators and children can share photos, observations, and ideas, fostering group reflection. It's also a great tool for collecting resources, such as safety tips or nature facts, that can be shared with families.
4. **StoryBird:** is a digital tool that lets children create their own stories, adding illustrations and text. After outdoor learning sessions, children can use Storybird to create stories about their experiences in nature, encouraging creativity and language development. It provides an opportunity for children to reflect on what they've learned and share their stories with others.
5. **Tiggly:** is an interactive learning tool that helps children engage with digital apps through physical objects. While outdoor play usually involves physical activity, Tiggly offers a way to bridge digital and physical play by combining tactile learning with digital apps. This is especially useful for encouraging sensory and motor skill development.
6. **LittleBits:** are electronic building blocks that allow children to explore technology and engineering concepts. In outdoor learning, LittleBits can be used to teach children about circuits and basic engineering by creating simple, outdoor-compatible projects like weather stations or light-up nature crafts, merging creativity with STEM learning.
7. **Nature Watch:** is an app that helps children identify plants, animals, and insects during outdoor activities. It promotes environmental literacy and allows children to document their discoveries digitally. It's an excellent way to connect children to nature while fostering curiosity and exploration.
8. **Outdoor Classroom Day:** is an initiative that encourages schools to take

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lessons outdoors. The associated app provides resources and activity ideas for outdoor learning. It's a helpful tool for ECEC educators seeking inspiration and guidance on how to incorporate outdoor learning into their curriculum.

9. **Montessori's 123 Math:** This Montessori-based app helps young children engage with early math concepts using interactive activities. During outdoor play, educators can use this app to reinforce concepts like counting, shapes, or patterns that children may encounter naturally in the environment, such as counting leaves or identifying shapes in nature.

Closing: As outdoor learning comes to an end, educators should reflect on the experiences and progress made by children. Encourage children to continue exploring and documenting their learning, while celebrating the development of both their digital and physical skills.

Follow-up: After the outdoor activities, educators can use the digital tools to assess progress, recognize achievements, and share updates with parents. Follow-up can include setting new learning goals or continuing to explore topics related to outdoor learning. Tools can also be used for future planning, helping educators track growth and learning over time.

Summary

The theoretical foundations for integrating digital tools in outdoor learning for young children, particularly those with motor impairments, are multifaceted, drawing on established educational theories and frameworks. These theories highlight the importance of active engagement, inclusivity, and accessibility in creating effective learning environments that support all children's development.

Why These Tools Are Beneficial for ECEC Educators:

- **Enhance Engagement:** these tools make learning more interactive and engaging, which is critical for young children's attention and development.
- **Support Diverse Learning Styles:** many of these tools offer multimedia content (visual, auditory, kinesthetic) that cater to different learning preferences.
- **Increase Collaboration:** promote collaboration among children and between educators and parents, fostering a community of shared learning.
- **Extend Learning Beyond the Classroom:** these tools help extend learning

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beyond the physical classroom by offering virtual access to resources, activities, and even outdoor learning experiences.
- **Promote Safety and Awareness:** can support safety awareness and encourage positive behavior, which is crucial in outdoor settings.

The module aims to help educators understand how digital tools can enhance outdoor learning and accommodate diverse needs. Participants will explore adaptive strategies, evaluate outdoor activities for inclusivity, and learn about risk management related to technology use.

Assessment

To validate and strengthen the learnings and approaches recently developed, this module offers two evaluation and reflection tools:

a) "What are some potential risks when using technology in outdoor learning?" Consider categories such as physical risks (e.g., tripping hazards, screen glare), data and privacy concerns, and impacts on children's social interaction.
b) Document your thoughts in your reflective journal, identifying any specific concerns you've encountered or anticipate in your own teaching.

Additional Relevant Resources

Books and Journal Articles:

- Herodotou, C. (2018). Young children and tablets: A systematic review of effects on learning and development. Journal of Computer Assisted Learning, 34(1), 1-9.
- Kuo, M., Barnes, M., & Jordan, C. (2019). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. Frontiers in Psychology, 10, 305.
- Behrmann, M. M. (1998). Assistive technology for young children in special education: It makes a difference. Journal of Special Education Technology, 13(2), 47-57.
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- Livingstone, S. (2009). Risks and safety on the internet: The role of parental supervision. Children & Society, 23(4), 314-326.
- Piaget, J. (1970). The science of education and the psychology of the child. Orion Press.
- Plowman, L., & McPake, J. (2013). Seven myths about young children and technology. Childhood Education, 89(1), 27-33.
- Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.
- Wilson, M. (2002). Six views of embodied cognition. Psychonomic Bulletin & Review, 9(4), 625-636.

Apps/Tech tools

- 50 Free Tech Tools for Teachers | 2023 Edition
- Educational Free iPad Apps | Preschool, Kindergarten, First Grade, Second Grade
- Virtual field trips - Unlock a World of Learning with Free Virtual Field Trips! (zoom/teams - connect for live classes on youtube, watch it live or look at past live streams, Class chats)
- "I spy" virtual field trip game - Bing Videos
- Exploring by the live of your pants - Exploring By The Seat Of Your Pants - YouTube
- Wild Earth - watch a sunrise safari live - Wild earth - Safari Live Sunrise
- Wild Earth - recorded - Cattastic Caturday safari - SafariLIVE Sunset - 02 November 2024
- National Geographic - Safari Live - Dia 380 | National Geographic
- South Florida PBS (specifically for younger children) - Virtual field trips - KidVision Pre-K
- Virtual field trips - Virtual field trips for kids - YouTube
- Adventures at the Aquarium | Virtual Field Trip | KidVision Pre- K
- Earth cam - EarthCam - Webcam Network
- World virtual tours - Best virtual tours to explore the world from home- Lonely Planet
- Wonderopolis (anything about the outside world that the students are wondering, put it in the search box and get an answer) Where the Wonders of Learning Never Cease | Wonderopolis
- Educational videos - Happy Learnings

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Youtube videos

- Making Use of Technology in Early Childhood Education
- Educational Free iPad Apps | Preschool, Kindergarten, First Grade, Second Grade
- Children's Screen Time & Use of Digital Technology in Early Childhood Education Recommendations
- Using digital tools to capture, create and share outdoor learning
- Getting Started with Technology in the Early Childhood Classroom
- 5 Educational Technology Trends in 2024 | Future with eLearning | Digital learning in 2024
- The Future of Education: 2035 Trends
- Inclusive Teaching with Digital Technologies
- 9 amazing apps to use in the outdoor classroom - YouTube

Podcasts

- BAM! Radio Podcasts – The Leading Education Podcast Production Resource
- Early Childhood Podcasts for Students and Teachers to Enhance Learning | Education World
- 5 Podcasts for Early Childhood Educators - Best Choice Schools
- Best Early Childhood Education Podcasts [2024] Top Shows - Goodpods
- Early Childhood Podcasts for Early Childhood Educators
- TTS Talking Early Years Podcast Series 1: Outdoor Learning
- The Outdoor Learning Podcast

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Module 4: Interdisciplinary Approaches (STEAM)

Developed by Spazio Aperto Servizi Societa Cooperativa Sociale (SAS)

Module overview

This module integrates STEAM education with outdoor learning for children aged 3-5, emphasising inclusive design, fostering inquiry-based learning, and supporting holistic development in natural settings.

In this module, ECEC educators can find: a STEAM overview: Understanding the benefits of integrating STEAM into outdoor education, an analysis on the educators' role and mindset: Exploring how educators can facilitate STEAM learning outdoors, and finally key tasks for educators: Practical strategies for designing inclusive outdoor environments. After the theoretical analysis, educators will be given three activities to reinforce the principles of the module and two assessment tools to evaluate the development of inquiry-based teaching and the effectiveness of outdoor environments for STEAM learning.

Duration/Expected time for completion

It is expected that the completion of this module is approximately 6 hours.

Objectives

The main goal of this module is to:

- Offer a thorough insight into how STEAM education and outdoor learning complement each other for children aged 3-5
- Reflect on the role of educators in promoting inclusive outdoor STEAM learning, ensuring that all children, including those with motor impairments (MI), can participate and benefit
- Develop strategies for integrating diverse STEAM opportunities within natural outdoor settings to support children's holistic development

Expected learning outcomes

Upon completion of this module, ECEC educators should:

- Understand the principles of STEAM education and its relevance in early childhood education.
- Understand how to incorporate STEAM into OE
- Design and implement activities that encourage critical thinking and problem-solving outdoors
- Promote hands-on and experiential learning by engaging children in STEAM education through outdoor play
- Promote holistic development through the integration of multiple disciplines in OE

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Training methodology
Personal experience learning, inquiry-based learning, scenario-based learning

Training requirements
Printed Handouts: GuideLines Outdoor4MI and the Teacher Training Curriculum.
Materials for the implementations of the activities, such as: pen and paper, water, kettle, jar (heatproof), ice, towel or heat-resistant surface, computer

Assessment methods/Tools
Reflection journal and checklist

Introduction

In today's rapidly evolving world, education must not only teach how to learn but also how to navigate challenges. STEAM education is an approach integrating Science, Technology, Engineering, Arts, and Mathematics within real-world contexts. It aims to nurture critical thinking, creativity, and problem-solving skills, empowering learners to apply knowledge in meaningful ways.

Outdoor Education (OE) offers a unique opportunity to blend STEAM principles with experiential learning. Using the natural world as a classroom, children can explore scientific concepts, engage in creative problem-solving, and develop cognitive and motor skills while fostering a deeper connection with their environment. This approach aligns with children's curiosity and supports their holistic development.

Outdoor settings foster experiential learning, but without careful design, children with motor impairments or disabilities may be excluded. This module equips educators to integrate STEAM into outdoor learning while ensuring all children are included. Using adaptive tools and strategies, educators will create interdisciplinary experiences that meet diverse needs, encourage collaboration, and value diversity.

The module shows how STEAM education and outdoor learning complement each other for children aged 3-5. It highlights educators' role in promoting inclusive outdoor STEAM experiences, ensuring all children, including those with MI, can participate. The module also emphasises fostering an inquiry-based mindset and provides strategies for integrating diverse STEAM opportunities into natural environments.

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1. STEAM and its benefits in outdoor education

STEAM education aims at fostering critical thinking, creativity, and problem-solving, encouraging students to use knowledge from multiple fields to address real-world challenges. It taps into children's innate curiosity, as they spontaneously form and test hypotheses, building knowledge about the physical and social world. OE enriches this learning, offering opportunities for discovery and helping children understand complex ecological systems. Open-ended materials, seasonal changes, and dynamic landscapes provide rich sensory experiences, while also promoting collaboration and social skills.

A recent review on STEAM and OE for children aged 3-5, highlights that common outdoor behaviours that promote STEAM learning encompass observing, investigating, predicting, exploring cause-and-effect relationships, hypothesising, experimenting and constructing. These activities build foundational skills in science, technology, engineering, and maths. Moreover, OE enhances creativity and expression through activities like creating art, playing rhythms, engaging in language and literacy, and learning new signs and symbols (Trina et al. 2024).

Activity 1 - Autobiographical Reflection on Outdoor Play

Description: This activity encourages you to reflect on your own childhood outdoor play experiences, focusing on environmental factors that either facilitated or hindered your play. This reflection will help you gain a deeper understanding of the play opportunities provided by outdoor environments and how environmental design influences children's play in outdoor settings.

Materials: Pen and paper

Instructions:
Use the following guiding questions to structure your reflections as you take notes:

1. Take a few moments to think back to a time in your childhood when you

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played outdoors.

2. Then, use the following guiding questions to structure your reflections as you take notes:
    - What kind of play were you engaged in?
    - How would you describe the environment in which the play took place?
    - What aspects of the environment made the play experience enjoyable or exciting?
    - Were there any elements of the environment that made the play difficult or less fun?
    - If you could have changed something in the environment, what would it have been?

Closing: Reflecting on personal childhood outdoor play experiences can immediately reconnect you with the essence of play. By recalling which environmental elements enhanced or limited these moments, one can gain valuable insights into how intentional design can shape children's interactions with outdoor spaces. Use these observations to evaluate and improve the outdoor environments in your educational setting, if applicable, to create spaces that better support meaningful play experiences.

Follow-up: As you reflect on outdoor play experiences, consider how elements of STEAM are naturally embedded in children's play. For example, in "hide and seek," children engage with mathematical concepts like counting, sequencing, spatial awareness, and estimation. To recognise STEAM learning in play, answer this final question: *Which STEAM concepts are present in your memory of outdoor play?*

2. ECEC educators' role in promoting STEAM education in the outdoors

Educators play a crucial role in fostering STEAM learning. To support this, they must first become familiar with the scientific method so as to create the conditions for children to discover and experiment. This means prioritising the process over the results, enjoying the process of asking questions, tackling challenges, and discovering new problems, while appreciating mistakes as valuable learning opportunities (Robertson 2017, Onida 2022).

To this end, educators should recognise that knowledge-building unfolds in three stages that—in practice—tend to overlaps:

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1. **Observation of facts:** Events occur, and we observe them through all of our senses, including movement. Crucially, we view them from different perspectives.
2. **Representation:** After observing, we represent and describe what we have seen using various forms of expression—mental images, words, photographs, and drawings. Each perspective holds different representations.
3. **Interpretation:** Finally, we interpret our observations, giving them meaning and structure. Through this process, we formulate our understanding of the facts (Onida 2022).

Educators don't need to be experts in every STEAM discipline; instead, their role is to facilitate an inquiry-based learning process. By asking generative questions such as "How does rain form?" or "What happens when it mixes with soil?", they encourage children to describe phenomena, generate hypotheses, and explore ideas. Emphasising this process over immediate answers enhances children's inquiry. Moreover, as educators learn alongside their students, refining their own vocabulary helps children articulate and formalise their understanding of STEAM concepts.

As part of an inquiry-based mindset, educators should improve their sensory perceptions. Engaging the senses and movement helps uncover details about objects, environments, and phenomena that might otherwise be overlooked, providing deeper insights into how the world functions. For example, an object's temperature can vary depending on its surroundings, affecting how it feels to the touch. When educators practise this heightened sensory awareness, they are better equipped to guide children in giving sense to their surroundings (Trina et al. 2024).

Awareness of sensory experiences provides insights into children's preferred learning channels. For instance, some children engage visually, while others respond better to auditory input. Recognising and valuing these differences is crucial for sensing and describing what captures attention. This includes fostering diverse sensory expressions—like drawing, verbal storytelling, and hands-on demonstrations. By appreciating each child's unique perspective, educators enhance the overall learning experience for all (Murawski and Scott 2019).

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Recognising diverse perspectives from different environmental interactions is essential for fostering an inquiry-based mindset. Children's backgrounds, abilities, sensory preferences, and experiences influence their engagement with the world, leading to richer learning opportunities in inclusive settings. For instance, a child in a wheelchair might observe the friction of mud, while a child running through it may focus on its slipperiness. Both these perspectives are useful to understand mud as a non-Newtonian fluid, which behaves like liquids or solids depending on the amount and type of force applied. Valuing these varied insights cultivates a dynamic and collaborative learning environment.

Activity 2 - Problem-solving activity: Creating Fog

This activity is suitable for a group setting.

Description: This activity invites ECEC educators to explore in small groups how the environmental phenomenon of fog is created through hands-on experimentation. This activity enhances understanding of the scientific process, while encouraging reasoning about physical processes related to temperature changes and condensation. While the activity can be conducted individually, Working in small groups allows participants to benefit from collaborative problem-solving and diverse perspectives, fostering discussion and critical thinking.

Materials:

- Water
- Kettle (for boiling water)
- Glass jar
- Ice
- Matchsticks (optional)
- Towel or heat-resistant surface
- Pen and paper

Instructions:

1. The main goal of this activity is for educators to create fog using the provided materials, with no additional instructions. It is important to experiment with different combinations of materials, using trial and error to determine the conditions needed for fog formation. Additionally, it is crucial to resist the temptation to search for solutions online relying on observation, hypotheses, and testing.
2. During the activity, it is important to document the learnings about the

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physical processes involved in temperature changes and condensation.

Closing: This activity emphasises the learning process through experimentation, observation, and adjustment, paralleling the scientific method and fostering an inquiry-based mindset. It is important for educators to reflect on how their own approaches mirror the way children tackle similar tasks. This will provide you with insights to support their discovery journeys, fostering curiosity, autonomy, and resilience in problem-solving.

Follow-up: After the fog creation activity, it is advised to consider how emotional skills such as resilience, patience, and frustration management influenced the problem-solving process. Reflect on strategies to support children in managing emotions during problem-solving in outdoor educational settings.

Activity 3 - Scenario-based learning: Imaging inclusive ways to enjoy muddy puddles

Description: This activity invites you to individually explore and imagine various ways to engage with muddy puddles that accommodate different physical abilities. It aims to foster creativity and inclusivity in outdoor play by considering alternative methods than jumping for experiencing the fun of splashing and interacting with mud.

Materials:
For this activity you need to have a computer and a pen and paper.

Instructions:

1. Visual Exploration: Search online for photos or videos of children jumping in muddy puddles. Then, use words or drawings to describe the sensations and emotions this activity might evoke. Think about how the splashes, textures, and movements might feel, as well as the joy, excitement, or curiosity such play could inspire. You can find examples here: 1, 2, 3.
2. Perspective-taking exercise: Next, imagine interacting with a muddy puddle and experiencing the fun of splashing without jumping. Search for lived experiences of individuals with movement impairments to understand their perspectives on accessibility. You can find videos of children with movement impairments interacting with muddy puddles here: 1, 2, 3.
3. Creative Brainstorming: Finally, list potential activities or adaptations that

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would enable children with movement impairments to engage with muddy puddles and experience the fun of splashing without jumping. Consider tools, modifications, and alternative ways to engage with the mud using all body parts.

Closing: This activity highlights the significance of creating inclusive outdoor play experiences that accommodate diverse physical abilities. It is essential to discuss strategies for incorporating these adaptations into your educational setting.

Follow-up: After the activity, it is necessary to consider how our own perspective on ability and disability can influence the way in which we design outdoor spaces. Reflect on how we often focus on the aids used by disabled individuals, while we tend to overlook the aids used by able-bodied individuals to enhance their abilities. For example, we recognize a wheelchair as an aid but not waterproof boots. Revisit the videos from points 1 and 2, and list the aids used by both able-bodied and disabled individuals to interact with muddy puddles. This exercise helps shift the perspective from viewing disability as a deficit or tragedy to recognizing that all bodies, regardless of ability, engage with their environment using aids and strategies that support and enhance their experiences.

3. ECEC educators' key tasks

Once educators have nurtured an inquiry mindset, they should focus on three key tasks to support STEAM education in outdoor settings, as outlined in the Outdoor4MI' Guidelines[5]:

- **Designing the Environment:** Educators need to establish and arrange an environment that offers plenty of opportunities for exploration while ensuring it is fully inclusive for all children. Grounded in Universal Design principles, the space should feature elements that spark curiosity and support diverse activities. Key actions include setting up accessible centres of interest, offering a variety of loose parts, providing suitable and user-friendly tools to promote spontaneous engagement with the surroundings, making available picture books to encourage explorations and reflect on experiences.

[5] Ver o documento "Orientações para professores de EAPI": https://www.outdoor4mi.eu/wp-content/uploads/2024/11/WP2-FINAL_-PT_GUIDELINES_-OUTDOOR4MI.pdf

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Loose-parts

The concept of loose parts, introduced by architect Simon Nicholson in 1972, refers to versatile, open-ended materials that children can creatively combine in endless ways. These materials encourage discovery, problem-solving, and creativity—essential components of STEAM education. Suitable for outdoor use, loose parts can be sourced from nature or repurposed materials, enhancing the connection between indoor and outdoor learning environments and enriching children's overall educational experience (Gençer and Avci 2017).

- **Encourage Exploration and Autonomy:** Educators play a vital role in providing children with the time, space, and freedom to explore, experiment, and solve problems independently, adopting an attitude of pedagogical trust towards their play and desire to learn. This includes supporting activities that captivate children's interests, whether it's messy play, risk-taking, or creative self-expression. The goal is to create an environment where children feel confident to engage with the natural world on their own terms.

- **Observe, Document, Relaunch and Adapt:** Educators must be attentive observers, documenting how children interact with their surroundings, identifying their recursive actions to gain insights into their interests and learning processes. This documentation should inform relaunches and adjustments to the outdoor space, helping to refine the environment to better stimulate curiosity, guarantee accessibility, and respond to children's evolving needs and interests.

This approach ensures that outdoor STEAM learning environments are inclusive, dynamic, and responsive, providing children with the opportunities and support they need to thrive.

Summary

This module emphasises the synergy between STEAM education and outdoor learning, offering educators insights into how natural environments can enrich children's holistic development. By embracing an inquiry-based mindset, educators learn to guide children through observation, exploration, and experimentation, encouraging them to think critically and solve problems.

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The key takeaways from this module include:

- **STEAM integration**: Merging science, technology, engineering, arts, and mathematics through real-world challenges, fosters holistic development and critical thinking.
- **Outdoor education's value:** Natural environments offer endless opportunities for experiential learning, creativity, and collaboration, supporting all domains of child development.
- **Inclusion:** Thoughtful design of outdoor spaces ensures that children with MI or other disabilities can fully participate, benefiting from the rich learning experiences that outdoor play offers.
- **Educator's role:** Educators should facilitate exploration and creativity, while also observing and documenting children's interactions with their environment to continuously adapt and enhance learning experiences.

Educators can now apply these principles by:

1. Conducting outdoor learning sessions that integrate STEAM concepts, using the natural environment as a resource for inquiry and exploration.
2. Reflecting on and redesigning their outdoor spaces to ensure inclusivity and maximise learning opportunities.
3. Continuing to refine their observation skills and inquiry-based teaching approaches, ensuring their practice evolves with children's interests and needs.

Assessment

To validate and consolidate the newly developed mindsets, the module offers two assessment tools, each designed to address a specific objective: (1) **cultivating an inquiry mindset**, (2) **designing outdoor environments for STEAM learning**.

Cultivating an Inquiry-Mindset

Tool: Reflection Journal
Purpose: Regularly document personal reflections on one's educational practice, focusing on the quality of one's inquiry and research orientation.
Method: At the end of each week, it is important to write a reflection on the following points:

- Questions Asked: How often did I ask open-ended questions during outdoor activities? What types of questions encouraged children to think deeply? In what situations did I ask them?

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- Observation: How well did I listen to children's "theorizations"? What helped me stay engaged in the process without rushing to solutions? What challenges did I face?
- Flexibility: Did I remain flexible and curious myself, allowing exploration rather than focusing on predetermined learning goals?
- Mistakes as Learning: How did I approach mistakes—both my own and the children's? Did I view them as opportunities for learning? What further inquiries were sparked by the mistakes?

Designing outdoor environments for STEAM learning

Tool: Checklist

Purpose: Evaluate the ability to identify and create outdoor environments that support STEAM learning opportunities for all children, with an emphasis on inclusion.

Method: Use of the following checklist to assess outdoor environments based on STEAM principles and inclusivity:

- Science: Did I identify opportunities for children to observe and investigate natural phenomena (e.g., weather patterns, plant growth, animal behaviour)? Are there natural elements that encourage inquiry (e.g., rocks, water, insects)?
- Technology: Are there opportunities for children to explore simple tools (e.g., magnifying glasses, cameras) to interact with and explore the environment? Have I provided materials or equipment that facilitate observation or data collection?
- Engineering: Did I recognise ways for children to engage in building, designing, or problem-solving with natural materials (e.g., constructing bridges, shelters, or pathways)? Are there open-ended materials that encourage experimentation and construction?
- Art: Are there creative outlets for children to express themselves using natural materials (e.g., leaves, rocks, twigs, mud) for drawing, sculpture, or arranging patterns? Have I fostered opportunities for nature-inspired artistic activities (e.g., ephemeral art, land art)?
- Maths: Did I incorporate activities that involve measurement, estimation, or pattern recognition (e.g., counting rocks, measuring the height of a tree, finding symmetry in leaves)? Have I encouraged mathematical thinking by pointing out shapes, sizes, and quantities in the environment?
- Inclusion: Have I ensured that the outdoor environment is accessible to all children, including those with MI? Have I considered the diverse needs of children and provided multiple ways for them to engage with STEAM activities (e.g., adaptive tools, alternative methods for interaction)?

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Additional Relevant Resources

Beckett, A. E., & Fenney, D. Nature Play for Disabled Children–muddy puddles for all?. In *The Lives of Children and Adolescents with Disabilities* (pp. 84-104). Routledge.

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Robertson, J. (2017). *Messy maths: A playful, outdoor approach for early years.* Crown House Publishing.

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Module 5: Communication with families/stakeholders

Developed by Asociación Mundial de Educadores Infantiles (AMEI-WAECE)

Module overview

The purpose of this didactic unit is to increase communication between families and the school. As shown by the bibliographic and field study conducted by the partners with interviews to ECEC educators and parents of children with mobility impairments, and included in the Outdoor4MI' Guidelines[6] (WP2), the fears of parents as well as the trust between ECEC educators and families, is a key factor to increase outdoor education (OE). The previous study also revealed that educators and parents share a common understanding of OE and its benefits for young children, including those with MI.

A meta-analysis of 117 studies[7] found that, when families are invited to participate and collaborate with schools in their children's education, student's mental health and social-emotional outcomes improve.
As a parent, one possesses a unique understanding of their child that no one else can replicate. Similarly, as an ECEC educator, there is a knowledge of the pedagogical principles that guide the educational process and the strategies that enable students to develop their potential to the fullest.
Both roles should be coordinated as they are complementary and necessary. A strong and respectful collaboration with the school and ECEC educators allows information to be shared so that the child gets the most out of his or her education. ECEC educators and parents should work together to promote the child's learning, development and well-being.

This module entitled "Communication with families/stakeholder" provides information to foster mutual trust between the school and families and offers resources and strategies that can be of great use to ECEC educators. The contents are divided into two phases. The first phase is dedicated to creating an optimal climate that favours fluid communication, positive relationships and mutual trust. Once these pillars have been built, it is time to address the main theme of the project: How to best convey families the value of OE for children's social and motor development.

Duration/Expected time for completion

We have estimated that the development of each activity lasts 2 hours, although

[6]https://www.outdoor4mi.eu/wp-content/uploads/2024/10/WP2-FINAL-ENG_GUIDELINES_OUTDOOR4MI.pdf

[7] Sheridan, S. M., Smith, T. E., Moorman Kim, E., Beretvas, S. N., & Park, S. (2019). A Meta-Analysis of Family-School Interventions and Children's Social-Emotional Functioning: Moderators and Components of Efficacy. Review of Educational Research, 89(2), 296-332. https://doi.org/10.3102/0034654318825437

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we have created the activities in a flexible way so that they can be adapted to the needs of each ECEC educator.

Objectives

The main goal of this module is to:

- Learn how to improve the effective relationship with families and children, how to strengthen family bonds and how to integrate families into the school.
- Acquire strategies to enhance communication and mutual trust between the school and families.
- Obtain recommendations on how to master the interpersonal and assertive communication of ECEC educators.
- Acquire resources to convey families the value of OE for children's social and motor development.
- Learn how to effectively communicate the benefits of OE for children, especially to parents of children with MI.

Expected learning outcomes

Upon completion of this module, ECEC educators should:

- Have effective Communication Skills, Building relationships, Advocacy and Support.
- Be able to establish positive relationships with families to support children's learning and development
- Advocate for the importance of OE in early childhood education to families and stakeholders in an effective way.
- Be able to convey the benefits of OE for children's social and motor development.
- Provide resources and support to families to encourage the continuation of OE activities at home.

Training methodology[8]

1. Experiential Learning (Student-Centred): ECEC educators focus on their learning process through application, observation and reflection.
2. Role Plays and Simulations (Student-Centred): Students act out roles or improve scripts, in a realistic and problematic social or interpersonal situation.
3. Group Activities and Cooperative Learning (optional).

Training requirements

[8] https://www.buffalo.edu/catt/teach/develop/design/teaching-methods.html e https://bokcenter.harvard.edu/active-learning . Retrieved on July 2024

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Personal Computer and/or other digital devices connected to the internet to see some recommended videos.
Printed Handouts (it is recommended to print double-sided and recycle in the indicated container after use as a sustainability measure).
Questionnaire for activity one, available at: Communication Skills Test
Infographic for second activity available at: OE Benefits

Assessment Methods/Tools
Self-assessment (diagnostic questionnaires)
Reflection questions for debriefing (open questions)

Introduction[9]

While the family is a child's first context of socialisation, with whom he or she learns to communicate and develops the first affective and emotional bonds, the arrival at school opens a new environment in which, in addition to receiving a formal education, he or she will establish new relationships both with adults and with other children of different ages. Children will build stable affective bonds at school in the same way that they learnt from their relationships at home. These bonds will provide a firm emotional ground for them, building the confidence to move forward in their development and to respond to the challenges of school and lifelong learning education.

The importance of a fluid relationship between families and ECEC educators lies precisely in that trust or feeling of accompaniment that is required in the first steps of intellectual and emotional development. If the connection between ECEC educators and parents is good, it will be easier to detect possible difficulties in a child's development and learning, or adaptation problems.

In order to achieve a good relationship between schools and families, experts recommend establishing a fluid participation between both parties. As with any relationship, it should be based on trust and respect, necessitating ongoing care

[9] Image: https://www.freepik.es/fotos-premium/retrato-generado-ia-nina-discapacitada-silla-ruedas-autentica-alegre-feliz-cae-al-aire-libre_52833037.htm

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and effort, to improve it. Communication will be key, especially when there is a disagreement to be resolved or children with special needs as MI are involved (normally the concerns and safety issues are higher). This communication should go beyond the exchange of information on the academic assessment of students.

The purpose of this module is to create a climate of trust and assertive communication in order ease the concerns that parents of children with MI claim to have regarding OE. The results shown in the Guidelines developed in WP2, show that parents of children with MI are aware of the advantages that this type of education brings to their children, but due to fear or misinformation, they are reluctant to this type of practice. This module tries to reverse this situation by improving the communication skills of ECEC educators, in order to create a mutual trust between educators and children, and provide resources (infographics) to convince the most sceptical.

1. Communication - understand and know how to communicate

What is communication?

Communication is the exchange of information between two or more individuals. It is important to analyse if the different ways of communication have been mastered. These communication skills can be tested.

Researcher Albert Mehrabian broke down the impact of a message into percentages: 7% is verbal, 38% vocal (tone, nuances and other characteristics) and 55% signals and gestures. The verbal component is used to communicate information and the non-verbal component to communicate personal states and attitudes. With this data, it can be concluded that the ways of communicating go far beyond verbal communication.

Non-verbal communication plays a fundamental role in how the message reaches the receiver. For this reason, knowing and taking into account the different forms of nonverbal communication is as important as choosing the most appropriate words at all times. In this sense, within nonverbal communication, the following forms of communication can be distinguished:

Body language: the position of our body when speaking has an important meaning in language. For example, crossing our arms can convey a position of authority, anger, fear or insecurity.

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Movement: the movement of our body also has an influence on the message being sent. For example, if someone keeps pacing back and forth while speaking, this indicates a state of nervousness..

Facial expressions: the way we arch our eyebrows, the position of our mouth or the movement of our facial muscles have a great influence on the interpretation of the message.

Paralanguage: the tone or intonation used when speaking, the speed of the speech, the volume, etc. These are all factors that modify the meaning of what is said.

Gestures: hand gestures also possess their own meanings, which can vary depending on the region or culture in which they are used.

Haptic: the information received through touch, whether from another person or an object, can convey different emotions and sensation (temperature, pressure, softness, etc.).

Space: the space between two people during a conversation is also another way of communicating. In some situations, being very close to the other person may make us feel uncomfortable, while in other cases, we may want to be closer.

How to communicate with families?

"Good communication and collaboration between both parties builds trust, making it possible for the ECEC educator to implement innovative activities, such as OE.".

Communication with families is based on three basic principles::

1. **Bidirectionality** - Communication must be reciprocal. ECEC educator needs to be able to communicate with parents in an accessible way, but also needs to be responsive whenever parents want to communicate. It is important that families feel heard and that their concerns are addressed by the ECEC educators.
2. **Linearity** - Refers to the concept of hierarchy. While the ECEC educator is the one with the necessary training and qualifications to address relevant educational issues, families should not perceive that they are at a lower level, and communication should be peer-to-peer. To this end, the ECEC

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educator will use simple language adapted to the socio-cultural level of the families.

3. **Individuality** - This aspect refers to the need to personalise not only the messages but also the way they are delivered to the families. Since the pandemic, virtual communication channels have gained prominence, but there are families who do not regularly consult e-mail or do not have the necessary digital skills to understand the digital platforms of educational centres.

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To ensure effective and trust-building communications with families over time, the following guidelines should be taken into consideration:

1. **"First impressions are important"**. In the first meeting with the family, educators should choose a pleasant and comfortable environment, in order to foster close relationships in an atmosphere of trust. It is recommended to invite the parents to get to know the school facilities, the natural and urban environment, and the key people who will have contact with the child, instead of just meeting the classroom tutor. In this way, an image of a strong school community will be transmitted.

2. Creation of a questionnaire to **find out the availability of families' schedules** to receive calls or schedule meetings, as well as the possibility

[10] Image : https://www.freepik.es/fotos-premium/personas-burbujas-discurso_6710078.htm

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of travel. In this way, the centre can use that information to redesign meeting spaces, and choose better times for high participation.

3. For effective communication, it is advisable to **organise regular meetings-both individual and group** with parents to discuss children's progress and resolve any concerns.

4. Frequent **phone calls to invite to centre events or activities.** A more personal and closer means of contact, will have a direct binding effect that can progressively enhance other spaces for conversation.

5. Having a **variety of information media makes it easier for the message to reach families in various ways.** To assure this guideline, educators must choose the channel that best suits each family. It is possible to rely on the website, social networks (specific channels), email chains, paper support such as "school agenda", placing posters in different places of the school where parents pass through, such as the entrance to the school. In case of parents who do not speak the local language, messages must be translated. Google translator can help on these occasions; however, it needs to be indicated that the translation has been done with technological and not human means.

6. Short video recordings of different classroom activities, such as exhibitions, presentations and project development, can help to easily **show parents the teaching-learning experience** of what happens in the classroom with their children, while keeping up to date with their homework and identifying ways to help them at home.

7. Preparation of **parent notes or infographics** to support the child's education from within the family, which can be sent frequently throughout the year with topical issues such as career guidance for their children. If a child is going to have a sibling, if a loved one has died, if they have sleep problems, etc., educators can deliver a circular to that parent, if a more personal way is not available, so they can perceive their interest and professionalism of the ECEC educator. Canva website can help produce these.

8. **Workshops for parents** with topics derived from the needs expressed by the parents at the beginning or end of the course. The purpose is to be able to offer them skills or experiences that will help them as parents who guide and accompany.

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9. **Links of trust can be achieved through mutual collaboration.** Parents can be invited to do activities in the classroom, such as telling children stories about the seasons (for example), or talking about the work they do to learn more about the professions: doctor, nurse, dentist, policeman, farmer, gardener, etc. Families can also be a very valid resource for accompanying the children on extracurricular outings, when more adults may or may not be necessary for the development of a visit or outdoor activity.

10. Educators can take advantage of the **centre's open days** and festivals to greet and exchange a few words with parents. Personal communication is the most effective tool for establishing trust. Whenever possible, parents must be informed personally. Trust is built from personal interaction, and educators need a strong bond to be able to move on to the next step: breaking down parents' fears and reluctance to educate their children in open spaces, i.e. outside the safety of the school grounds.

Activity 1 - Building solid relationships

This activity is suitable for a group setting.

Description: The activity is divided into two parts. The first part focuses on enhancing ECEC educator's communication skills, since good communication is key to generate mutual trust. The second part describes ways to establish communication channels between families and the centre and vice versa

Materials:

- Communication skills self-assessment questionnaire
- Youtube video "The 7 - 38 - 55% rule in communication". (Duration: 02:49)
- Youtube video "Forms of Communication" (Duração: 03:51)

Instructions:

See the video "The 7 - 38 - 55% rule in communication". (Duration: 02:49) and the video "Forms of Communication" (Duração: 03:51).

1. Self-assessment of communication skills: communication test.[11]
   Fill out the questionnaire to see your "grade" of communications skills. If you have the opportunity to share the communication test with your colleagues, discuss the evaluations obtained and analyse what aspects

[11] (adapted from Santander Open Academy: https://www.santanderopenacademy.com/es/blog/formas-de-comunicarse.html)

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need to be improved in each of the cases.

2. Reflection to find out what means ECEC educators use to communicate with families. After a self-reflection or dialogue, if you have the opportunity to do this module with other ECEC educators, discuss the basic principles and guidelines of communication shared in the introduction of this activity.

Closing: Parents of students should be considered as allies and are an essential part of the child's education. Empathy is necessary, especially with parents who have children with special needs. The amount of time dedicated to parents can vary.
ECEC educators must listen with an open mind and without prejudice; it is important to pay attention and show genuine interest in what parents share. It is not enough to understand their feelings, ECEC educators must also demonstrate that understanding.
ECEC educators should avoid interrupting, while parents are speaking and resist the urge to become an "expert" focused on giving advice, rather than truly listening to their concerns. Instead, strive to empathise and understand what parents are feeling. Fear is a challenging emotion to control, especially when it concerns one's children. Only the trust placed in the ECEC educator will ensure that fear does not become an obstacle, allowing children to share the same experiences as their peers.

Follow-up: A communication plan and an annual schedule for follow-up can be established. Attendees should be given time to create a draft communication plan and then share it with the rest of the participants (see example in the appendices of this module).

2. Benefits of OE for children's social and motor development

A climate of mutual trust has already been created, enabling families -including those with MI- to overcome their fears and encourage participation in OE activities.

The fear that parents have is a natural and necessary emotion that helps human survival. It is activated when a person perceives a potentially dangerous or risky situation and prepares the body to respond to - in this case avoid - that situation. It is at this point that the role of the ECEC educator is of great importance, presenting the situation as it is, with the risks in their real measure.

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Since fear is an emotion, it is possible that no matter how much information is provided to parents about the low risk of the activity, it can be difficult to convince them. In this case, **the trust parents place in the ECEC educator will be the key**. Only emotion will generate another emotion. For that reason, activity number 1 was dedicated to establish a positive emotional bond.

"90% of the things we worry about never happen and yet those thoughts have a direct impact on our health"

Now it's time to lay out the benefits to break false beliefs or unlikely scenarios. Spanish psychiatrist Marian Rojas Estapé states that "90% of the things we worry about never happen and yet those thoughts have a direct impact on our health[12]." "Happiness in the end is nothing more than the ability to connect in a healthy way with my reality, to manage the bad and enjoy the good," says this psychiatrist.

Activity 2 - How to communicate the benefits of OE for children

Description: The main goal of this activity is to convey families the value of OE for children's social and motor development. Reducing parents' fears, concerns and perceived risk is the purpose of this activity.

Materials: Information available here.

Instructions:
It is necessary to work with families, making them understand that reality has been adapted, and that educators are going to manage the bad and let the child enjoy the good. How? By following these 5 tips:

1. When scheduling an outdoor activity, ECEC educators will ask parents for help from the beginning. If **parents are part of the process**, they will see that the risks they perceive are either not real or are minimised as much as possible thanks to ECEC educators' interest and professionalism. In addition, they will know the benefits of OE, as well as the educational objectives for each of the activities.

[12] Quote retrieved from https://www.unav.edu/noticias/-/contents/27/01/2023/marian-rojas-el-90-de-las-cosas-que-nos-preocupan-jamas-suceden-y-sin-embargo-esos-pensamientos-tienen-un-impacto-directo-en-nuestra-salud/content/lovPblW1fC70/43418056 on July 2024.

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2. **Contacting those responsible for the place to visit to know in advance** the possible impediments or difficulties that the child with reduced mobility may encounter. In this way, parents/families can be informed and look for solutions together.
3. Contacting **local associations** that cater to people with motor disabilities. They will be of great help in guiding ECEC educators in choosing and planning the activity and may also be able to help reduce the insecurities or concerns of parents of children with reduced mobility, due to their experience dealing with these situations. ECEC educators can also encourage the family to reach out to other families, to share their experiences through these types of partnerships. **Testimonials are always of great value**.
4. On field trips, ECEC educators may ask for help from "**cooperating parents**" to increase the child/adult ratio, inviting them to join on the day of the activity.
5. This infographic describes the benefits of outdoor activities. This document can be shared with families, along with the plan or itinerary.

Closing:

"When disability enters our lives, all we can do is embrace it and focus on the solutions and not the problems. Acquire new skills that don't allow us to be independent." Diana Cotut, Ángela's mom @caminando_con_angela.[13]"

ECEC children with MI can become depressed when they compare themselves with other classmates or friends. That is why it is very important that ECEC educators raise their **self-esteem** and make them participate in their abilities. **All the children in the classroom have different abilities however, that does not make them better or worse than other children, that makes them unique.**

Follow-up: After each OE activity, ECEC educators must contact the family, to get their opinion about the activity and evaluate it: what went wrong, how to improve it, what did the family and the child think about it? Writing a short report can be of great help. If the activity has been satisfactory, ECEC educators can repeat it next year, improving the possible deficiencies detected.

[13] Quote retrieved from https://www.instagram.com/reel/C9fe4orNu5J/?igsh=MW5pczNmODhxaHZjeg== on July 2024.

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Summary

One of the conclusion of the Guidelines[14], in addition to the literature review and the interviews with ECEC educators and families of children with MI, is that families, despite being aware of the benefits of OE, are fearful and perceive outdoor activities as risky.

For perceived risk to be equal to actual risk, families must trust educators. And only by establishing effective two-way communication can the bond of trust necessary to match both levels of risk be created.

In this module tips and strategies have been provided for creating that necessary bond to convince families of children with mobility impairments not only of the benefits of OE, but also of their children's participation in these activities.

Assessment

- What are the 7 ways we humans communicate?
- What are the 3 principles on which communication with families should be based?
- What strategies can be used to communicate with parents? Mention at least 5 of the 10 suggested in this module.
- Do you remember what the 10 benefits of OE are?
- What 5 tips or suggestions can we give to other ECEC educators when it comes to convincing parents of pupils with mobility impairments to participate in these types of activities?
- Finally, are you the type who worries about things that are highly unlikely to happen? Optimism is contagious. Learn to connect in a healthy way with your reality, manage the bad and enjoy the good.

Additional Relevant Resources

United Nations Convention on the Rights of Persons with Disabilities (https://ec.europa.eu/social/main.jsp?catId=1138&langId=en)

Accessibility standardisation (https://employment-social-affairs.ec.europa.eu/policies-and-activities/social-pr

[14] Guideline for ECEC Educators (WP2) disponíveis em https://www.outdoor4mi.eu/

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otection-social-inclusion/persons-disabilities/accessibility-standardisation_en)

European Disability Forum (https://www.edf-feph.org/)

Pedagogical information for parents (https://www.waece.org/circulares.html)

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Annex

Annex 1: Communication Skills Test [15]

Instructions for taking the test

Before you start answering the questions, follow these instructions to take the communication skills test and interpret the results:

1. Carefully read each of the questions and answers and select the one with which you feel most identified. Try to be honest with yourself and answer in a natural way.
2. Once you have answered these 10 questions, count the number of times each of the letters A, B, C and D is repeated.
3. When you have identified which letter is the most repeated in your answers, go to the end of the test.
4. At the end of the test, you will know what your level of communication is and what points you should strengthen to improve it.

1. During a face-to-face conversation with another person, do you try to...

A. Not to look them in the eye so as not to make them uncomfortable.
B. Never look away so that she knows you are paying attention.
C. Sometimes, you avert your gaze for a few seconds.
D. Always look her in the eye, in a close, non-invasive way.

2. You think the best way to communicate something important to another person is to...

A. Speaking loudly so that he/she can understand what you are saying.
B. Sending a long-written message whenever you can.
C. By sending an audio note or calling on the phone.
D. Speaking in person.

3. When communicating a message, nonverbal communication is...

A. Unimportant: the secret is to choose your words wisely.

[15] Communication Skills Test. source: Santander Open Academy (adaptation)

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B. Somewhat important: it has an effect on the message, but not as much as the words.
C. Quite important: nonverbal communication is on a par with verbal communication.
D. Very important: body language is essential.

4. When another person is talking to you...

A. You try to listen, but sometimes you find it difficult not to interrupt.
B. You listen to what he/she says, even though you are thinking about what you are going to say next.
C. You wait patiently for your turn to come.
D. You try to listen carefully and understand what he is explaining.

5. When it comes to reaching an agreement, the most important thing for you is...

A. Stand up for your ideas and try to see them through.
B. Defend your point of view, although you are flexible.
C. Reach a middle ground, but don't let go of your opinion too much.
D. All parties are satisfied with the proposed solution.

6. When you write an e-mail...

A. You write down everything you want to say and hit the send button.
B. You first organize your ideas mentally and then write.
C. You write and check everything you write several times.
D. You try to use your words efficiently.

7. When you speak with an authoritative profile...

A. You get very nervous and don't know quite what to say.
B. You have a hard time expressing your ideas correctly.
C. You express yourself correctly, but with difficulty.
D. You can express your ideas easily.

8. Public speaking is for you...

A. A challenge for you.
B. Nerves play tricks on you.
C. You can speak in public, but it is difficult.

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D. You love public speaking.

9. When speaking in a group you prefer to…

A. Listen.
B. Participate if you have something to say.
C. Speak actively.
D. Be the center of the conversation.

10. Do you think you have to be careful how you communicate depending on the situation?

A. No, you can always communicate in the same way.
B. Not always, since the situation is important, but not decisive.
C. Yes. In fact, you always try to adapt the way you communicate to the situation.
D. Yes, although you try to communicate in a neutral way that works in any environment.

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Results

Majority of A's:

You need to improve your communication skills. Although your intention is good, you sometimes struggle to know the best way to communicate with others. You should learn to read the situation, listen more, improve your non-verbal communication and not be so driven by your impulses. You should review how you communicate and try to modulate your speech according to the situation, as well as trust yourself more and stop thinking about what people will say.

Maioria B's:

Your communication skills are good, but you need to improve in some aspects. In some situations, you lack self-confidence and you need to let go of the fear of saying the wrong thing. Learn to listen calmly, don't be so rigid with yourself and try to create more interpersonal relationships.

Maioria C's:

Your communication skills are very good. You know how to adapt your message according to the situation, even though it may cause you some difficulties. Sometimes you err on the side of perfection, and sometimes you lack self-confidence. Keep working on the different ways of communicating and don't let anything stop you.

Maioria D's:

Your communication skills are excellent. You are not afraid to make mistakes, you can express your message through any medium and you have great self-confidence, although sometimes you can be overconfident. You are a good listener and know the importance of non-verbal communication. In addition, you have negotiation skills. So, continue to work along the same path as the current one, congratulations.

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Annex 2: Communication plan with families (exemple: to be adapted)

August-September
Initial interviews. Delivery of “newsletter for parents about the adaptation period”.

October
One follow-up phone call per child to see how the student is doing from the parents' point of view (is he/she happy at school, are they worried about something...). Two parents visit the center to read a story and/or workshop on professions. Delivery of a newsletter for parents on a general or specific topic.

November
One parents’ workshop on one of the topics raised in the initial interviews. Between November and December: first trimester face-to-face interview.

December
Christmas Festival (open day). The teacher gives the “emotional notes” to the children. Delivery of newsletter/handout for parents on a general or specific topic.

January
Two parents visit the center to read a story and/or workshop on job description. Group meeting to explain the objectives of the trimester.

February
Carnival party (open day). One follow-up phone call per child to see how the student is doing from the parents' point of view (Is he/she happy at school, are they worried about something, is everything going well...). Delivery of a newsletter for parents on a general or specific topic.

March
Two parents visit the centre to read a story and/or workshop on professions. Personal interviews.

April
Group meeting to explain the objectives of the trimester. Two parents visit the center to read a story and/or job description workshop.

May
One follow-up phone call per child to see how the student is doing from the parents' point of view (Is he/she happy at school, are they worried about something, is

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everything going well...). Delivery of a newsletter for parents on a general or specific topic.

June

End-of-school-course: personal interviews. End of school year festival (open day). Delivery of newsletter/handout for parents on a general or specific topic together with the academic notes.

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Outdoor education activities: Benefits

Outdoor education (OE) activates all the child's senses, exercises the body and mind. 10 reasons why we should encourage OE in children aged 3-5 (including children with mobility impairments) :

1

It allows them to exercise

Playing outdoors allows children to run, jump and move with a freedom that they do not have indoors, where movement is more limited. Playing sports releases endorphins and brings a sense of well-being. Not only will they notice an improvement in their mood, but also an increase in their physical fitness and immunity to disease.

2

Outdoor play counteracts children's sedentary lifestyles

According to statistics, children are spending more time sitting down and playing with electronic devices. Outdoor play helps to combat this data and the health problems associated with lack of movement. In addition, it allows them to absorb more vitamin D, present mainly in the sun they get when outdoors.

3

Encourages learning

It provides a perfect setting to experience the real environment, making learning stick in their memory more easily than in other types of environments. Without excitement there is no learning, as it is an enjoyable time.

4

Teach children the value of respecting nature

"*You only protect what you love. You only love what you know*" Jacques Cousteau. When children spend time outdoors, they are creating a bond with nature; it is how they can learn to respect, love and care for it.

5

Improves children's social skills

By interacting with other children in a different way than if they are in the "rigid structure" of the classroom. When a child goes outside, she faces new situations such as learning how to take care of others when they fall or get hurt, to participate in new games, how to manage frustration when other children win in a game, etc.

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Awakens children's curiosity and creativity

Children's imagination is boosted by the endless possibilities offered by open spaces. In this environment they can be inspired by the smallest things, whether it is playing in the sand, running with friends or inventing a new game. In an open space there are fewer limitations, making children feel freer to test themselves and can explore the possibilities offered by the environment.

Playing outdoors improves children's attention span

Improving the attention span is one of the main benefits of playing outdoors and spending time in nature. Playing outdoors is also known to improve performance in school, since children have to work hard to catch up in outdoor sports, which requires great concentration.

Increases happiness levels

The beauty of nature, sunlight and clean air stimulates the secretion of "happiness" hormones such as endorphins, which act as an analgesic, i.e., decreases physical and mental discomfort, or dopamine, which is a hormone that generates immediate pleasure and positive reactions to physical activity. In fact, if a child is irascible, stressed, frustrated or has a lot of pent-up energy, one of the best medicines is to go outside and play.

Develops fine and gross motor skills

Outdoor play gives children a variety of objects to play with, which helps them develop and improve their fine and gross motor skills. Whether climbing a tree or swing set, building a sand castle in the sandbox, playing hopscotch or racing with friends, the child is developing both fine motor skills (those performed with the hands) and gross motor skills (sense of balance and body control).

Promotes inclusion

When we help a child with MI to be able to manage in open spaces, we are promoting the values of friendship, empathy, solidarity, tolerance, resilience, sensitivity, self-esteem, mutual trust and self-confidence ... which together creates a more open attitude to accept in the group and promote the inclusion of children with some kind of disability.

The main objective of OUTDOOR4MI is to promote Outdoor Education in training a new generation to respect the natural environment from an early age. It will be reached by offering the teachers educational resources aimed at facilitating the implementation of OE activities in kindergartens (children of 3-5 years old), with special regard for those with mobility impairments. More info at https://www.outdoor4mi.eu/

Source: Own elaboration. Images: Freepik

OUTDOOR 4MI
OUTDOOR EDUCATION 4 ALL

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