GUIDELINES ON INNOVATIVE LEARNING SPACE

CASE STUDIES

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"Teaching learning spaces competence from early childhood education"

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2018-1-RO01-KA201-049545
Erasmus+ Strategic Partnerships for school education

Project partnership:

Contributor template

The template that follows is for contributions of case studies to the Guidelines on innovative learning space case study

Instructions on writing up the case study

Case studies should be examples of good practices and must be well documented, evidence based and demonstrate success or progress related to implementing measures that enhance learning spaces.

Case studies must provide a sufficient level of detail so that the reader can understand what was done, by whom and potentially be inspired to replicate a similar programme or intervention.

Please, follow the next structure to present your own case study

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Title of your contribution	Outdoor learning and sensorial experience
Typology of learning spaces	Outdoor space
Development domain	*Choose the most relevant domain:* Language and Communication domain; Science field; Human and Society Domain; Aesthetic and Creative Domain and Psychomotricity domain
Area of focus	Environment for independent learning
Terms, acronyms and abbreviations	Outdoor learning, sensorial experience, experiential learning.

Description of the case study	**Aim and objectives of the intervention project**: Aim of this project is to improve outdoor learning space and natural education in preschool settings. **Background and context** In Latvia there are four seasons and children can experience various learning environments and activities according to season. Drawback for this is uninviting weather conditions in autumn when it can be cold and rain heavily for prolonged time periods and in winter when it is too cold to be outside for long periods of time. For this reason, we not only improved outdoor learning space, but also worked on solutions on how to bring outdoor environment and nature into classrooms for days when children need to stay inside during bad weather conditions. To begin the project we evaluated the existing outdoor environment and outdoor learning traditions in our preschool. In Latvia preschool children have planned outdoor time every day in the morning and afternoon. This time is dedicated to structured play, physical activities and free time activities. Preschool teachers have the opportunity to organize outdoor learning, experimental and exploration outdoors. How teachers perceive the natural environment and the benefits of outdoor education are key factors for the implementation of daily outdoor activities with positive effects on child development. Teachers planning appropriate and creative use of the outdoors, in fact, support the promotion of children's well-being and mental health. Children in outdoor education kindergartens seem to significantly take advantage of this educational approach, as they have a greater opportunity, compared to children attending more traditional kindergartens, to experience continuous and multiple outdoor education activities during the school years, with more benefits at least in the short term. (Agostini, Minelli, Mandolesi, 2018). By analysing teaching traditions in our preschool, we concluded that most of the teachers rarely organize dedicated outdoor activities and don't actively use outdoor space for learning purposes. Most of the time children use outdoor space for

organized free play with sport elements. In Autumn and spring preschool teachers visit nearby forests and park with children. In Winter children can explore snow related activities.

Picture 1. Children exploring snow.

By analysing reasons why teachers don't bring learning experience outside of the classroom we come to the conclusion that outdoor space needs to be improved to promote outdoor learning.

To improve outdoor space, we worked on improving sensorial experience, explored opportunities to promote more outdoor activities with families, created better learning spaces outdoors, researched and implemented better ways to bring outdoor and sensorial experience indoors during weather conditions that prohibit prolonged outdoor activities.

Outdoor play and learning activities

To promote longer outdoor activities for children we first worked with teachers to find the best solution to improve outdoor space for learning activities. We categorised outdoor time for children in three categories, with different needs for environment development:

- Sport activities,
- Learning activities,
- Play activities.

To encourage teachers to organise more outdoor **sport activities**, we first analysed the situation in preschool. According to preschool guidance's

sport activities need to be organised every day. If weather conditions permit these activities can be organised outdoors. To promote more organised sport activities outdoors, we worked with our teachers to encourage us to use outdoor sport areas instead of indoor space. Organised outdoor game days for all preschool and parents sport days, to encourage not only children but the whole family to spend more time outdoors.

Picture 2. Celebrating Father's Day.

For outdoor **learning activities** we analysed the learning environment in classroom outdoor play areas and their suitability for learning activities. For active learning time outdoors teachers can use nature as a learning object and integrate experiential learning in the education process. For this, classrooms need to have access to different objects that can be used in experiential learning and nature studies, for example, magnifying glass, waterproof bins in different sizes, variety of plants.

Picture 3. Using the outdoor environment as learning space.

	Best environment for **play activities** are rich in variations of toys and materials for imaginative play. **Exploring plants** One of the most important outdoor elements in preschool is plant life. To encourage children to pay more attention to plants, children need to care for them themselves and teachers need to bring attention to plans in different activities. Plants in preschool can be categorised in three main groups: ● Large perennial plants (Bushes, trees) ● Small perennial plants (Perennial flowers, grass, moss, creeper plans) ● Annual plants (Flowers, vegetables) To promote exploration of plans we created planting boxes where each classroom had the opportunity to plant a variety of flowers, herbs and vegetables to explore sensorial experience. Moreover, Maria Markovic indicated that a positive outlook can encourage more people to participate in the planning and building of the playground. Being a collective society, people are used to gathering and working as a group for the greater good of the community, this is a valuable advantage for this sort of project. Research has shown that when a community projects turn out successfully it elevates confidence in one's ability to make a change and people become more willing to engage in other community projects and continue to develop. (Markovic, 2013). Classrooms chose to plant colourful flowers that were easy to care for to experience visual, touch and smell sensation, herbs and vegetables for taste and touch sensation. All plants are good for sensorial experience. Children can look for different shades of green in leaves. In autumn children can explore colourful leaves. Every plant has a different texture to its leaves and branches, different shape and smell. Children can also experience the changing texture and smell of earth and sand in cold, warm, wet and dry weather. They learn to express themselves and by interaction, they share their views, thoughts and knowledge with other children. This is an opportunity that is limited in the structure of most classrooms around

the world and would be less likely to happen if they spread out in different groups. This also helps them to build up important social and communication skills which will serve them well later in life. (Markovic, 2013).

Children can explore large perennial plants all year and note changes that different seasons bring to plant life. With small perennial plants children can learn how to care for plant life that exist seemingly independent from people but still needs care, grass needs to be watered and if children pull out grass it won't grow back that quickly.

Picture 4. Creating a garden bed.

Bringing nature experience indoors

In the winter period children spend more time inside and it is important to bring sensorial and nature experiences indoors. Including outdoor education in primary (3-6 years of age) classrooms may positively affect the children's behavior regarding motivation and concentration. Outdoor

	education refers to lessons that are given in the outside environment as well as using materials from nature as assets to teach the children. These tools benefit both children and teachers in fostering curiosity about nature, interest in the presentation of lessons, and independent engagement while learning. (Cameron, McGue 2019). One of the ways it can be done is with bringing plant life to indoor space. All preschool classrooms can be equipped with indoor plants of different variations. In everyday activities children can care for plants by watering them and cleaning larger leaves. Plans give visual sensorial experience by bringing green colour variations and different shapes and textures in the classroom and in time of blooming children can explore anatomy of blooms and experience colour. In springtime plans can be brought inside from outdoors and preparations for a plant garden can begin. If branches of different trees and bushes are brought into the classroom children can explore how leaves start to come out on different trees and bushes. It is an opportunity for children to explore colour variations, time that is needed for branches to leaf, anatomy of different leaves, differ plants that first bloom and only after blooming give out leaves.

Picture 5. Bringing outdoor plants inside.

For plant garden preparation children can start planting and seeding intended plans for garden as early as March and April. Some plants, such as pumpkin, tomato, cucumbers and some flowers, need to be seeded indoors and later planted outdoors. When children are seeding plants indoors, they get a sensorial experience of touch - working with seeds and soil, smell – smelling the dry and wet soul before and after planting. During the period when seeds are growing children can care for plants by regularly watering them. In May children together with teachers replant plants in outdoor planting boxes.

	Picture 6. Sowing seeds indoors and outdoors. "Preschooler's play is further enhanced by including nature areas, gardens, and pets in the playground. The social behavior of children closely parallels the quality and richness of their play environments. Barren, boring playgrounds and lack of supportive adults result in children abusing the environment and one another." (Frost, Wortham, Reifel, 2011) To encourage children to care for living beings we bring living animals to preschool. By caring for living animals, children learn responsibility for others and how to behave around animals. We encourage children to feed animals and clean their cages. In exchange children get sensorial experience by touching animal fur, learning how strong the touch to the animal must be and what whey to handle the animal. Children experience the smell of animals and animal food and sounds that animals make. **Main achievements** Main achievements of the intervention project were enriched learning space outdoors and indoors. New additions to learning space allows teachers to work more with experimental learning. Overall the physical environment both indoors and outdoors was improved to enrich children's independent learning. **Key factors** Key factors that facilitated the success of the intervention project was the existing physical environment with sufficient outdoor space for innovative spaces and basic indoor facilities that were improved to achieve better children involvement in the education process and self-learning. **List of useful equipment/resources needed** Outdoor learning materials, outdoor tables.

	Materials for sensorial activities – wood, soil, seeds, plants, branches, stones, pine cones, clay bells, soil, markers for plant names in garden, watering cans and place for taking water for watering. Calm animals, places and things for animal well being. Indoor plants and planters. **Challenges** Challenges for implementation of the intervention project was to develop time tables for using a sensory garden. To achieve optimal usage of a sensorial garden no more than one classroom can use the space at one time. For this reason, it was needed to create a usable time table for classrooms. **Categories of improvements** The intervention project can be improved by: ● expanding the sensory garden to all classroom play areas so that all classrooms have the opportunity to choose various sensory activities every day. ● Including all teachers in the development of sensorial activities. ● Consulting with teachers about care and well-being of animals in preschool and developing lesson plans for activities with animals.

Characteristics of the innovative spaces for active learning	a. Physical environment needs to be natural with natural textures and elements, preferably outside in a grassed area. Light need to be natural with enough sunlight for plants. *Picture 7. Area for outdoor play.* b. Furniture can be minimal, but it is necessary to have tables and seating areas for experiential learning. c. Working corners/ Interest Areas. In classrooms there needs to be a dedicated area for indoor plants and nature experiments that include nature materials (pine cones, chestnuts, different stones, wood etc.). In Outdoor arie need to be garden beds with flowers and vegetables, gardening tools, different objects for sensory experience (wind bells, sensory path, water and send station etc.) *Picture 8. Indoor place with ample sunlight for plants.* d. Online/Virtual corner/learning space if it is possible virtual learning space can be used for exploring nature and searching for information. e. Materials: ● Wood ● Soil ● Seeds

	• Plants • Branches • Stones • Pine cones • Clay bells • Soil markers for plant names in garden, watering cans and place for taking water for watering • Living spaces for indoor animals

Benefits	**1. Teachers** Teachers working with this innovative space project have the opportunity to carry out more experiments with nature and develop children's independence. **2. Children** Children are learning about processes in nature from experience. When working with plants children get sensory experience that can help them not only experience the world around them, but also develop their senses. Many activities can be created to develop a child's independence. **3. Parents, if it is the case** Parents have the opportunity to work with children to develop healthy habits for sport activities as a family, spending time together and learning about healthy eating habits by eating more vegetables.

Discussions/ Reflection	During this project we created a learning environment that is suitable for exploring nature and gaining sensory experience from natural elements. Children can work in small groups and change activities according to teachers' guidelines. It is important for a new environment to offer many activities that can be changed from time to time. The project includes not only outdoor areas, but also indoor space and children can experience nature all year, in all weather conditions. Teachers can plan activities for sport, learning and play for outdoor areas and bring classrooms outdoors. Each classroom needs to have dedicated time in newly created areas. Each classroom also has one plant bed or part of the plant bed that is solely cared for by that classroom. This practice allows children to learn responsibility for their space and well being of plants. During the project indoor animals also were appointed dedicated corners. Each animal has one or two classrooms that care for animals. Parent involvement increased by each activity where parents took part. Activities with parent's involvement were limited by the time period in early mornings and evenings when parents are free from work to join children in outdoor play and learning. To provide children with the opportunity to explore plants 6 new plant beds were created and old ones were provided with new soil and plant material. Children actively and with joy take part in caring for plans and sowing seeds. When plants had groaned children had the opportunity to discover color variations of plants different smells and textures of plant leaves. During summer time plants need to be watered every day and weeds need to be pulled out once a week. Children took part in both of these activities; the most interest and joy were shown for watering the plants. After harvesting, children had the opportunity to taste self-grown vegetables. To bring nature indoors we provide plans for every group. Children together with teachers could do different experiments with plants, care for plants and grow new plants and herbs. To provide more plant-based

	activities indoors classrooms need more flower pots and a variety of blooming indoor flowers preferably with light scent. Strong scented herbs and flowers can be collected in summer and dried to be put in a container for smelling and exploring in winter. To promote responsibility in children we improved the living conditions of indoor animals and provided easy to care living arrangements for animals so that children can easily care for animals basic needs. By caring for animals children learn characteristics of domesticated animals, how to care for each animal, what food they are eating, how to handle different animals. We acknowledge this project as successful and useful both for children development and for teachers' work, because it provides opportunities to learn in different environments and gain versatile experience.

Future directions/ Next steps	In the future we plan to expand outdoor sensory activities and learning places to each classroom's dedicated play area. Also it is needed to create more activities for outdoor play and learning in winter time.
Success stories and/or quotes (150 words)	During this project children and teachers were able to find ways to learn in nature and improve learning through sensory experience. Children participated in all gardening activities with great joy and dedication. Children started independently caring for plants by removing weeds and watering regularly. In one group children expressed the idea of collecting plant seeds at the end of the season and preparing them for planting next year. By spending time in the sensory garden children enriched the time spent outdoors and teachers together with children were interested to bring elements of sensory garden to their individual playgrounds to recreate the activities.
What are the three key messages from this case study	1. Children need to experience more natural sensory experiences. 2. Children can learn about nature and become more independent and responsible by working with plants and animals. 3. It is important for parents to take part in learning and sport activities together with children.

Citations (full references)	Agostini F., Minelli M., Mandolesi R. (2018). *Outdoor Education in Italian Kindergartens: How Teachers Perceive Child Developmental Trajectories*. Department of Psychology, Università degli Studi di Bologna, Bologna, Italy. Available from: file:///C:/Users/Me/Downloads/fpsyg-09-01911.pdf page 11 [viewed 10.08.2020.]. Cameron M., McGue S. (2019). *Behavioral Effects of Outdoor Learning on Primary Students.* Sophia, St. Catherine University. Available from: https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1296&context=maed [viewed 10.08.2020.]. Frost Joe L., Wortham Sue C., Reifel S. (2011). *Play and child development. Fourth edition*. Available from: http://docshare03.docshare.tips/files/27020/270200789.pdf [viewed 09.08.2020.]. Markovic M. (2013). *Children's place in Samoan schools.* University of Gothenburg. Available from: file:///C:/Users/Me/Downloads/gupea_2077_35476_1.pdf pages 13-15 [viewed 09.08.2020.].