

# School Readiness in Forest Kindergartens





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# INTRODUCTION

The natural environment is believed to be the healthiest and most stimulating environment for children to spend their childhood in. This experience has been proven by a large body of research: staying in a natural environment has a positive effect on physical health, builds psychological resilience, brings appropriate challenges, supports brain development, and reduces the risk of obesity and allergies. Also, in the context of global change and other threats associated with the natural environment, we perceive the importance of environmental awareness. It is increasingly apparent that more than information is needed. We need to build (not only) children's ability to perceive and sensitively approach nature, its resources, and values. Establishing a relationship with nature indoors is impossible. It is a process that must take place directly in nature, that is, in forests, meadows, by rivers, and at beaches. It is a process full of exploration, free play, and possibilities. It is believed that forest kindergartens offer just such a childhood to children.

The representatives of forest kindergartens from all over Europe met at an international conference in Prague in 2017. Lots of partnerships continued in the following years and developed into useful and enriching collaborations. This partnership also stands on these foundations. Sharing the experience and best practices when working with children is beneficial and valuable. It is also a well-known fact that there is a need to learn and improve work constantly. The project is, therefore, a synthesis of these two ideas: education covered by experts and sharing experiences from practice. The project focuses on the topic of strengthening the competencies of preschool children.

It is a concern of many parents before their children start school. Will children from forest kindergartens be ready for such transition? Will they have the necessary skills and competencies?

The project looks closely at five areas of competence: psychomotor, cognitive, learning, intrapersonal, and social. This set of competencies is considered the backbone of child development and can be provided very efficiently in the context of experiential, play-based nature preschools. One training for each area which consisted of a professional lecture, discussions, and sharing of experiences has been completed. This way, selected teachers from forest kindergartens from the partner organizations could improve their knowledge of working with preschoolers. To expand the acquired knowledge further, this textbook that summarizes the findings about individual competencies has been collaborated. It is a set of professional contributions from the lecturers who provided the training sessions. We believe that, along with specific activities, it will be helpful for practitioners working with preschoolers in forest kindergartens.

The first chapter offers an insight into psychomotor competencies, defined in the text as "primarily movement tasks (involving fine and gross motor abilities) that require both cognitive and motor processes." It is a well-known fact that traditional playgrounds do not promote active play and motor development challenges well enough among young children. The authors discuss the importance of physical activity for adequate cognitive development, supported by current evidence. The idea of

physical literacy as a precursor for other forms of literacy and health is explained. Some ideas for the stimulation of early psychomotor skills are provided, as well.

Cognitive competencies, defined by the authors as “brain-based skills which are needed in acquisition of knowledge, manipulation of information and reasoning,” are discussed in the second chapter. A brief historical background of the research on these skills is provided, focusing on attention, memory, language, and problem-solving as relevant abilities within this competence. Different pedagogical approaches to experiential and play-based learning are analyzed, including the work of scholars such as Montessori and Hejny, and practical examples are provided for each.

Following suit, the third chapter is finally devoted to learning competencies and discusses the role of the brain and its functions in the process. The author discusses learning styles and alternative education systems and provides abundant practical advice on increasing learning processes.

The fourth part discusses intrapersonal competencies, also known as socioemotional intelligence. It aims at attaining self-knowledge, development, esteem, efficacy, and regulation, essential skills for developing social relations and ultimately leading to personal well-being and happiness. The authors review several conceptual models on the topic and relate these skills to the connection with nature. The chapter then provides practical advice on developing intrapersonal skills in the context of nature schools.

Mirroring the previous latter, the fifth chapter is devoted to interpersonal competencies. Social skills, also known as soft skills, are fundamental to success in school readiness and essential to living and thriving in society and for psychological well-being. These include understanding others’ needs and feelings, articulating one’s ideas and needs, adjusting behavior to meet a variety of social

situations, and creating and keeping significant relationships with others. The text provides evidence of how these competencies are acquired in the context of nature preschools and offers detailed guidance on how to apply them in practice.

Please note that the contributors to this book may use slightly different terminology for similar concepts (e.g., nature, outdoor, or forest for the setting and kindergarten, preschool, or nursery for the educational stage). This is due to regional, administrative, and cultural differences that define early years education and care in the open air in each country and context. All texts are accompanied by images from the settings involved in the project that represent the situations described in the five competencies analyzed. The texts also provide references for those readers interested in expanding their knowledge on a given topic.

We hope this textbook sows the seeds of a deeper understanding of nature-based education and its relevance in the context of the current social and environmental challenges, as well as invites other projects (leaders) and researchers to engage in similar projects to strengthen the professional development of teachers.

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# PSYCHOMOTOR COMPETENCIES

## **Tentative title: Tools and Methods to Support Development of Psychomotor Competencies in Preschool Aged Children in Outdoor Education**

Recommendations for the development of psychomotor competencies of young preschool children, as a complementary methodological material for teaching in nature

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Entry into school marks an important and sensitive phase in a child’s and his family’s life. Different challenges in various areas related to physical, social, and emotional well-being may be of their concern. This chapter shall focus on contexts related to motion as one of the essential domains of competence development.

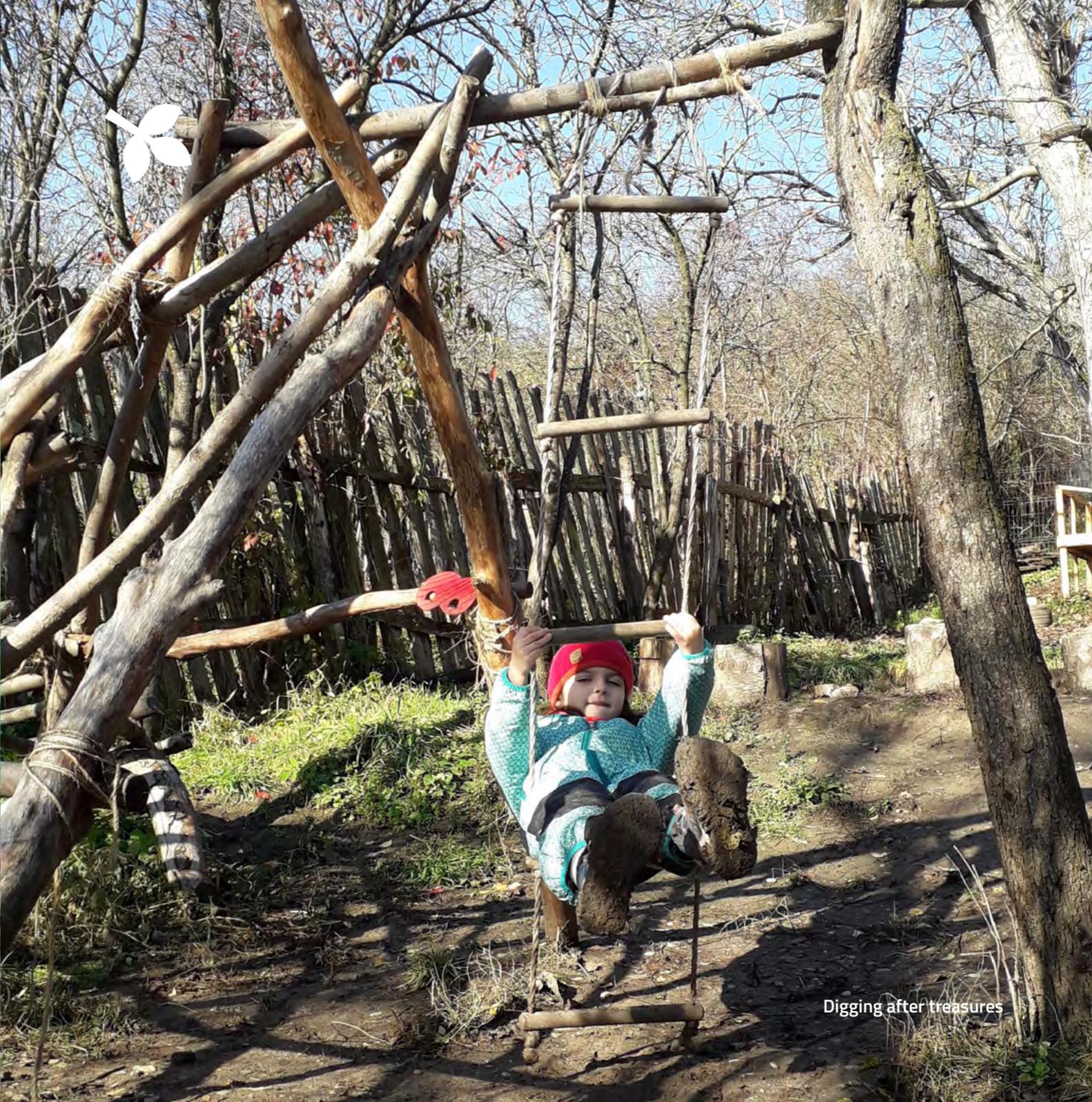
Psychomotor skills are primarily movement tasks (involving fine and gross motor abilities) that require both cognitive and motor processes, and that lead individuals to learn about their environments, making them able to manipulate (in) an environment that is around them. The psychomotor skills can be acquired not only at an early age, but throughout the whole lifespan. Every individual progresses through three stages as they learn them: (1) the cognitive stage, characterized by “awkward movement”; (2) the associative stage, in which the movements are more automatic for individuals, but they are not yet permanent; and (3) the autonomic stage, in which the refinement through practice occurs. To achieve the autonomous stage may take days, weeks, months, or even years to complete, depending on the skill, be it learning how to write one’s name or how to hit a baseball off a tee.

The training of basic motor skills has been neglected in early childhood, and traditional playgrounds may not be challenging enough to promote physically active play and motor development in young children (Storli & Hagen, 2010). There is a need to improve the fundamental movement skills – i.e. building blocks for basic movement such as balance, locomotor (e.g. run, jump, hop, skip), non-locomotor (e.g. twist, spin, bend, lift, swinging), and object control (e.g. throw, catch, kick); as well as the perceptual motor development – i.e. hand-eye coordination (e.g. hitting a baseball), spatial awareness (e.g. moving high, low, forward, backward), brain to body connection (e.g. right hand touches left knee), and speed (fast vs slow) (Lindsay & Byington, 2020).

The Finnish “Joy in Motion” (published in 2015) is a nationwide physical activity and well-being programme aimed at early childhood education and care (ECEC). The purpose of the programme was to enable every child to be physically active and enjoy physical activity every day. Research results have shown that child-oriented and playful physical activity supports the child’s holistic growth and development. The results indicate what kind of physical activity adults in different roles can use to



Digging after treasures



Digging after treasures



Climbing up logs.  
The forest always offers opportunities for motor development if free and spontaneous play is allowed.

support children's well-being. Basic motor skills develop with the help of physically active games and everyday motion (these include walking, running, jumping, and throwing). Poor basic skills make individuals vulnerable to accidents and lead to avoid independent movement, meaning physical activity in general. On the other hand, early acquisition of good basic motor skills predicts the amount of physical activity and a physically active lifestyle. The better these basic skills are, the easier it is to learn to be active in all types of environments at different times of year. Skills developed in early childhood form the foundation for a physically active lifestyle. It is noted that already at the age of three, children begin to establish their normal patterns of behavior and living. After 3 years of age, individual differences increase gradually, meaning that a physically active (therefore physically fit, healthier) child will more likely grow into a physically active (and fit) adult, and vice versa – a physically passive (therefore insufficiently fit) child will become a physically passive (unfit and unhealthy) adult.

Scientists explore whether preschool children's physical activity and fitness predicts conceptual, verbal, and perceptual skills at school. In a recent study, Reisberg et al. (2021) aimed to investigate the longitudinal relationships of objectively measured physical activity, sedentary behavior and physical fitness to cognitive performance of children in the transition from kindergarten to school. Boys and girls (n=147) in the final year of kindergarten were recruited from 13 randomly chosen kindergartens in the city of Tartu and nearby regions in Estonia. When they entered the first grade in school, the same participants were contacted, and asked to take part in the study again. The results revealed that the greater physical activity (at all intensity levels – i.e. light, moderate, vigorous, moderate-to-vigorous, and total amount) in kindergarten was associated with better conceptual skills at school one year later, after adjustments for child's sex, age, maternal education and child's attendance to sports clubs. Another important outcome of the study shows associations of greater sedentary behavior at the age of

6.6 with lower test scores for conceptual skills at the age of 7.6 after an adjustment for confounders. The study also highlights the relevance of physical activity in kindergartens in predicting the later conceptual abilities at school, while sedentary behavior has the opposite effect among preschool children.

The individual's lived experience of physical activity comprises their physical literacy. The consensus around a definition of physical literacy has emerged only recently. A young physically literate child is the one who has the motivation, confidence, knowledge, skills, and fitness necessary to enjoy a physically active lifestyle, and who is committed to healthy habitual movement behaviors, including recommended regular physical activity and limited sedentary behavior (Longmuir & Tremblay, 2016).

The World Health Organisation (2019) provides recommendations on the amount of time per 24-hour day that young children, under 5 years of age, should spend being physically active, or sleeping to be efficient for their health and well-being; and the maximum recommended time the children should spend doing screen-based sedentary activities, or time restrictions. They were developed using the best available evidence, expert consensus and consideration of values and preferences, acceptability, feasibility, equity, and resource implications. The guidelines state that infants (aged less than 1) should be physically active several times a day in a variety of ways, particularly through an interactive floor-based play; more is better. For those not yet mobile, this includes at least 30 minutes in prone position (tummy time) spread throughout the day while awake. Furthermore, children aged 1–2 should spend at least 180 minutes doing a variety of physical activities at any level of intensity, including moderate to vigorous-intensity physical activities, spread throughout the day (more is better). In addition, 3–4 years old children should spend at least 180 minutes doing a variety of physical activities at any intensity level, out of which it takes at least 60 minutes to



Riding a bicycle in the park.  
Riding on natural surfaces allows children not just improve their bicycle riding skills, but due to natural obstacles such as rocks, sticks, roots, sudden turns and etc, they develop their agility, balance and coordination more efficiently.



Cooperative swing.  
It provides the opportunity to facilitate the development of coordination, sensory integration, the vestibular system and balance. This cooperative swing can hold up to 7 children, is very economical and children can help to assemble it themselves.

perform moderate to vigorous-intensity physical activity, spread throughout the day (more is better).

Although it is claimed that from a public health perspective, schools represent an ideal place for modifying harmful behaviors such as unhealthy eating habits and sedentary lifestyle, offering a natural setting to learn, promote and enhance physical activity (Mura et al., 2015), in reality the overall physical activity of boys and girls levels off and turns downward trend at around 7-8 years of age due to a predetermined structure of a school day that generally involves a great deal of sitting and staying in place. One way of preventing it may be the interventions carried out in early childhood education by “activating” the formal and informal teaching/learning time. The concept of outdoor education is found to stand on strong grounds in these circumstances and perspectives, especially considering the nasty experiences of various restrictions due to the coronavirus pandemic. Furthermore, there is evidence that prolonged presence of green space is vital for our mental health.

The healing power of nature is well described by the profound study of Engemann et al. (2019) who mapped the presence of green space around the childhood homes of almost one million Danes based on the satellite data from 1985 to 2013. Their findings indicate that children who grow up with greener surroundings have up to 55 percent lower risk of developing one of 16 different mental disorders later in life, even after adjusting to other known risk factors such as socio-economic status, urbanization, or family history of mental disorders.

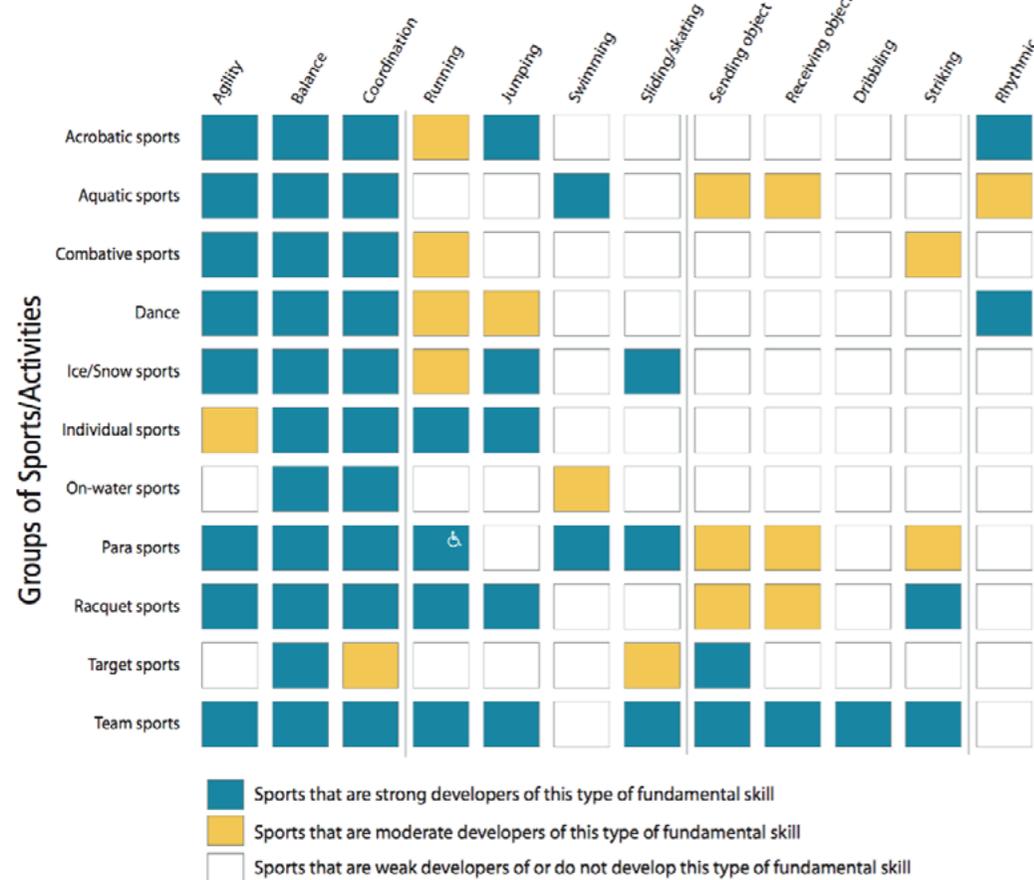
There are a few essential tips for psychomotor competence development in early years based on “Children’s Outdoor Movement Education: Position Statement” (Tortella et al., 2021), “Joy in Motion: A New Physical Activity and Well-being Programme for Early Childhood education” (2015) as well as International Physical Literacy Association (2015):

- Parents and caregivers need to be aware of and have practical examples of the importance of physically active outdoor play. Appropriate information motivates parents to support their child’s development through outdoor activities.
- Organize Outdoor Movement Education trainings for teachers and educators of children ages 0-6 years, targeting: a) observation of the environment and materials for the recognition of affordances; b) study of methodologies of structured activities and free play; c) study of children’s motor development and basic motor skills; d) outdoor clothing guidelines.
- The increase in obesity and related somatic diseases such as diabetes is viewed as being a result of inefficient physical activity.
- Child’s muscles need exercise to grow and get strong. The voluntary physical activity of a child, maintaining balance, and earth’s gravity resistance are all necessary for the ability to move independently.
- Growing bones need the right kind of nutrition, and a sufficient amount of pressure and impacts in the bone growth areas. Therefore, jumping and games that require strength are ideal for advancing this type of growth.
- The natural way for a child to develop respiratory and circulatory systems is to move in small, short spurts such as romping around and playing tag. The number of highly active games is, however, too small in most day-care facilities.
- A child’s nervous system develops when it is trained to process and transfer information (both, outside and within their bodies) with the help of different senses. A living environment that is too safeguarded ultimately reduces the child’s opportunities for sensory experiences.



The children in the photo were in this position for 20 minutes. They alternated moments of dialogue with silence. Body awareness and working with one’s vestibular system are possible in nature if free play and free movement are allowed. Trusting children.

## Types of Fundamental Skills



### Sport groupings

<b>Acrobatic sports</b> *Gymnastics *Rhythmic Gymnastics Freestyle Aerials *Trampoline Sport Parachute *Diving Ski jumping	<b>Aquatic sports</b> *Swimming Synchro Waterpolo	<b>Combative sports</b> Boxing Fencing Judo Karate Taekwondo Wrestling	<b>Target sports</b> Archery Biathlon Shooting Golf Lawn bowls Bowling Curling	<b>Ice/Snow sports</b> *Figure Skating Speed skating Bobsleigh Skeleton Luge Alpine skiing Freestyle skiing Snowboarding Cross-country skiing	<b>Individual sports</b> Athletics Cycling Equine Triathlon Weightlifting	<b>Racquet sports</b> Badminton Racquetball Squash Table tennis Tennis	<b>Team sports (ice)</b> Broomball Hockey Ringette  <b>Team sport (floor)</b> Basketball Volleyball
<b>Team sports (Field)</b> Baseball Cricket Field hockey Football Lacrosse Rugby Soccer Softball Ultimate frisbee	<b>On-water sports</b> Canoe/Kayak Rowing Waterski Wakeboard Yachting	<b>Para sports</b> Goalball (Visually impaired) Boccia (Cerebral Palsy) Wheelchair rugby (Quadriplegics) Sledge hockey (Various disabilities)	Notes: ♿ For Para sports (sports for persons with a disability) running includes alternate means of locomotion, including wheelchairs. Sports in red: Indicates the most common sports for persons with physical or intellectual disability. *Early specialization sports				

When teaching in nature, aiming to develop the psychomotor competencies of preschool children, one of the useful tools may be the analysis and evaluation of the movement affordances that the environment in one's vicinity and/or facilities provide. Using the following Matrix (the chart on "The types of fundamental movement skills and groups of various sports or activities"; *Courtesy of Canadian Sport Centre*), please rate (eg. "3" – strong, "2" – moderate, "1" – weak; or use preferable color description) at which level your children are developing the basic movement abilities (i.e. agility, balance, coordination, running, jumping, swimming, etc.). After revealing the "soft spots", limiting the development of particular basic motor skill(s) of your children (eg. balance, dribbling, or rhythmic), try to search for creative solutions on how you may support the increase in improvement of lacking fundamental skill(s).

Another useful tool for the analysis and evaluation of movement affordances, is making a list of various exercises, games or simple actions with, around, on top, or under any objects found in the surrounding environment which may support psychomotor competence development. Try finding as many different options as possible to move using various objects, uniquely offered by the surroundings, of nature or urban origin (eg. a tree, a stone, a hill, an ice on a puddle surface, a pavement, a lamp post, stairs, gravel, grass, a ledge, etc.). Make it a funny explorative task together with children.

Please bear in mind, that according to Storli & Hagen (2010), changing season characteristics (i.e., snow, ice, frost, grass, autumn leaves) and whether conditions (i.e., rain, wind, temperature) should be considered as contributors to environment diversity or potential affordances, and can both encourage and inhibit physically active play outdoors.

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Climbing with/without ropes and sliding down after. Children can climb a hill in different ways: sometimes just using their body, sometimes using external objects such as a rope, sticks or help of friends/teachers. Getting down a hill is the same: they can slide down, roll down, run downhill or simply go down the hill carefully. They can adapt movement to their current needs, mood, physical capabilities, or their temperament. Children are free to decide in what way they want to move.



In the sensitive period, the child can, for example, see the shape of letters in everything.

# COGNITIVE COMPETENCIES



*Mgr. Lubica Šoltésová*  
psychologist and lecturer

Cognitive skills<sup>[1]</sup> are **brain-based skills which are needed in knowledge acquisition, manipulation of information and reasoning**. Cognitive skills or functions encompass the domains of **perception, attention, memory, learning, decision making, and language abilities**. Other term

for cognitive skills can also be **cognitive competences**, which is sometimes defined broader, also encompassing skills like intuition, imagination, inventiveness, creativity or oral and written expression.<sup>[2]</sup>

## 1. PIONEERS OF COGNITIVE DEVELOPMENT STUDY

The first well known pioneer of systematic children's cognitive development study was a **psychologist Jean Piaget** (1896 – 1980). According to Piaget, **problem-solving skills cannot be taught, they must be discovered** and children need to be active learners. He believed that children have **an inner force which drives the learning process**, as humans do not like to be frustrated and will seek to restore balance by mastering a new challenge.<sup>[3]</sup> For example, a child who can count only on their fingers suddenly needs to count 5 plus 6. They become frustrated and try to come up with another strategy to solve the problem.

Piaget believed that children go through several **stages of cognitive development**, which are a result of biological maturation and their interaction with the environment. Piaget<sup>[4]</sup> placed preschool children into **the Preoperational Stage** (2 to 7 years of age), which is characterized by children **using symbols to represent**

**words, images and ideas**. As they use symbols, children at this stage engage in a lot of **pretend play or role play**. According to Piaget preoperational children are **egocentric** and cannot take a perspective of another person yet. They also make a lot of **errors in logical thinking**, like conservation errors (e.g. the same amount of objects is bigger, when we spread them) or classification errors (one object cannot have two different names).

**Lev Vygotsky**<sup>[4]</sup> (1896 – 1934), another pioneer in cognitive development study, was a Russian psychologist who argued that **without interpersonal instruction, children's minds would not advance very far** as their knowledge would be based only on their own discoveries. Vygotsky stated that children should be taught in the **Zone of Proximal Development**, which occurs when they can almost perform a task, but not quite on their own without assistance. With the right kind of teaching, however, they can accomplish it successfully.

**A good teacher identifies a child's Zone of Proximal Development and helps the child stretch beyond it.** Then the adult gradually withdraws support until the child can then perform the task unaided.

Maria Montessori (1870 – 1952) invented another, very popular term **Sensitive periods**. A Sensitive period is

## 2. MORE RECENT FINDINGS

Both Piaget and Vygotsky<sup>[4]</sup> believed that children actively try to understand the world around them, referred to as constructivism. More recently, developmentalists have added to this understanding by examining how children organize information and develop their own theories about the world. **Theory-Theory is the tendency of children to generate theories to explain everything they encounter.** Children frequently ask questions about what they see or hear around them. When the answers provided do not satisfy their curiosity or are too complicated for them to understand, they generate their own theories. In much the same way that scientists construct and revise theirs.

Another recent concept is the **Theory of Mind**<sup>[4]</sup>, which refers to the ability to think about other people's thoughts. While Piaget thought that children do not overcome egocentrism until the end of the Preoperational Stage, more recent studies suggest that **children can take the perspective of another human quite well at age of 4** already. However, also culture and other factors as having older siblings have a major influence on this ability.

### 2.1. Attention and memory

For preschool children, it is more **difficult to divide their attention** among more tasks or to selectively **pay attention only to certain stimuli**. As a result, they for example

a transitory state characterised by an **inner compulsion to seek specific objects and relationships** in the environment, which children use to develop themselves. E.g., a 6-year-old can seek the words written in capital letters and try to read them. These periods are individual, and the teacher can find out what children need by observing them and interacting with them.



cannot hear the teacher saying something when they are playing.<sup>[4]</sup> Also, their **attention span is shorter**, although it depends on many factors. It is extended by intrinsic motivation and fluency in performed task and shortened by fatigue, hunger, noise, and emotional stress.<sup>[5]</sup>

Generally speaking, preschoolers **keep less material in their memory and for a shorter period of time** than older children and adults.<sup>[4]</sup> They also cannot recall past experiences as cohesively and **retell them as a story** as school-age children.<sup>[6]</sup> However, preschool children are **better at remembering rhymes** than adults.<sup>[7]</sup>

### 2.2. Language and phonological perception

Generally, **language development** in preschool children is still **very fast and quite effortless**. They gain a lot of new vocabulary, learn grammar and finally also start to understand some figures of speech (which they take literally at first). Children **naturally acquire languages**, which they interact with and according to studies, bilingual children even have some advantages later in life.<sup>[4]</sup>

**Phonological perception** develops fast from 4 years on. **At the age of four**, most children imitate and enjoy rhymes and alliterations. **When five**, they recognize rhymes, phonemic changes and can clap or count syllables. **At the age of five and a half**, they distinguish phonemes, produce rhymes and can isolate and match

initial sound, and **at the age of six**, most children can already blend two or three phonemes, segment single syllable words with two or three phonemes, and delete syllables from words.

### 2.3. Problem solving and creativity

**Three-year olds** see the problem in the immediate moment, they **rely on their senses** for things they can see and touch. They develop their problem-solving skills **through trial and error**. **Four-year olds can brainstorm**

## 3. TOOLS TO SUPPORT COGNITIVE COMPETENCES OF CHILDREN IN OUTDOOR EDUCATION

As seen in the previous part on cognitive development, cognitive competences develop due to the combination of **brain maturation and interaction with the environment**. This means, the role of adults in education should be to **create an appropriate environment and interact with children according to their needs**. In this part several tools and methods which can be used for this purpose in outdoor education will be mentioned.

### 3.1. Experiential learning

Experiential learning means **learning** through **experience**, and is more narrowly defined as **“learning through reflection on doing”**.<sup>[10]</sup> As young children love to play the same games over and over again, this can be a very useful tool. A lot of games can be found in books or on the internet, for example on portals with scout games and similar pages.

To facilitate learning from the experience **children can be asked questions or comment on the process from adults' perspective**. For example, a child, who was found quickly in a game of hide and seek can be asked, where

**suggestions, listen to their friends' ideas**, and enjoy solving problems and working together cooperatively.

**Five and six-year-olds** bring their ability to use **deductive reasoning** to problem-solving. They love being “thinking detectives” as they try to put together pieces of information to solve a problem.

At this stage, children can **think about how to solve problems without actually needing to manipulate**, or “do” something, but they still need to experience the process of **testing out their solutions in a hands-on way**.<sup>[9]</sup>

they were hiding and how the seeker spotted them. Then they can be asked whether they have some other ideas, where to hide. An exception is, **if the child is very upset**. In that case, it is important to address these feelings first and ask reflective questions afterwards.

### 3.2. Scientific method

For helping children discover how the world around them works, a simplified scientific method can be used. Some or all of these six steps can be applied<sup>[11]</sup>:

- 1. Make observations** – E.g. the snow melted in my hand.
- 2. Form questions** – How can I handle snow, so that it will not melt?
- 3. Develop a Hypothesis** – I think that the snow will not melt in my pocket.
- 4. Test the Hypothesis** – E.g. put the snow in your pocket and wait.



The children realized they had an abundance of snow gliders but not enough hands to carry them all. Resourceful and innovative, they independently devised a clever solution. They ingeniously fashioned a stick to which they securely attached all snow gliders, allowing them to transport their collection effortlessly.

**5. Record the Results** – Take a photo, make a video, draw the result...

**6. Share the Results** – If more children were doing similar experiments, talk about their results together.

### 3.3. Language development activities

As mentioned previously, kindergarteners go through a big spurt in language development. This can be supported by a lot of different activities, including **reading, drama, singing, reciting or word games** such “Word Football” or “What am I thinking about”?

**How to play:** In “Word Football” one person says a word e.g. “a ball” and the next person has to say a word beginning with the last letter of the previous one, so they can say for example “a lamp”.

In the game “What am I thinking about”, one person thinks about an object, an animal or a person and others can pose closed questions like: “Is it an animal?”, “Is it smaller than me?”, “Does it have fur?”, and the “Thinker” answers Yes or No.

**Total physical response** for acquiring both foreign or maternal language can also be implemented. The goal is to understand and respond correctly. Children can for example respond to instructions in a song, or touch correct objects in space, etc.<sup>[12]</sup>

### 3.4. Hejny’s method

This method, invented in the Czech Republic 40 years ago by prof. Hejny while teaching mathematics, is very popular in the Czech and the Slovak Republic. It is based on **constructivism, collaboration and inner motivation**. Children solve problems **in environments they are familiar with** (e.g. counting steps, passengers in the bus, placing tiles, building blocks etc.), but not abstract problems.

The teacher, using previous experience with specific children, presents children with an appropriate challenge or lets them choose themselves. Then, according to professor Hejny, teacher should be a facilitator, who merely **asks questions, and encourages** children to come up with the answers themselves. Possible questions to be asked are: “How did you come up with this answer?”, “Do you think, there could also be another way?”, “Have you discussed it with Mary? I can see you have different solutions.” These questions should be answered by kids, not the teacher. Ideally, the teacher pretends not to know the answers at all.<sup>[13]</sup>

### 3.5. Montessori

In Montessori pedagogy, the basic concept is that children **learn concepts from working with materials** rather than by direct instruction. Children can freely choose from a variety of options, and they have uninterrupted blocks of work time. Montessori materials can be bought but they can be also made. More natural materials as wood or glass are preferred over others. Montessori also poses a great importance on **autonomy**, for example kids being able to take and put back the toys, pour their own drink etc. The role of the adult is to **create an environment which supports this kind of action**.<sup>[14]</sup>

### 3.6. Play-based learning

Play-based learning is a complex system also encompassing a lot of ideas from previously mentioned methods and adding some new components. Both, **environment and interaction with adults are seen as playing a key role in children’s development**. The environment is safe, with appropriate challenges, the whole community participates in creating it and it evolves over time according to the group’s progress. The adults interact with children mainly by observing them, posing questions, “provoking”, descriptive feedback and engaging in reciprocal conversations. Play-based kindergartens usually have a large part of their premises outside, so they can be a very good inspiration for forest kindergartens.<sup>[15]</sup>



Even the youngest children in kindergarten have great powers of observation and reflection. Nature allows real experiences that no other medium can ever offer.



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# LEARNING COMPETENCIES



**Bc. Veronika Mudroňová**

pedagogue in forest kindergarten

## HOW THE BRAIN LEARNS

The human brain is an evolutionary tool that enables a person to survive, and it needs movement and constant communication with other human beings for its development. The brain is constantly changing and developing, it is capable of improvement, which happens continuously and individually in everyone; therefore, in fact, no two human brains are alike. In addition, there is a difference between the brains of men and women. The brain has areas of short-term and long-term memory, but the rate of storing information in is very low, and what is remembered is not an accurate picture of the world, because the brain stores new information and memories in one memory track. To remember some information, the cooperation of several senses is important, even if sight is dominant.

People acquire the world based on cultural and biologically conditioned matrices (patterns). A map is not the same as a landscape, and in every brain a slightly different map of the world can be found. Humans do not perceive reality in its entirety, but the brain itself sorts out what is and will not be perceived according to its own algorithms. It is therefore obvious that if children are sent information, everyone will perceive it with minor or major deviations.

## Inside the preschooler's brain

The neurological processing in a three to five-year old's brain is twice as busy as that of a college student, and perhaps three times busier than the adult's. A preschooler has 100 billion brain cells (neurons), with 77 percent in the cerebral cortex – the territory that handles language, math, memory, attention, and complex problem solving. The neurons form connections via their dendrites, skinny octopus arms that slither out to receive information from up to potentially 15,000 other cells, and axons – which transmit information from neurons to other cells. The connections between neurons – called synapses – eventually total up between 1,000 trillion (estimates vary).

### Brain-booster guidelines

- Activate their minds.
- Be gentle.
- Have chatter time.
- Provide social graces.

- Focus on the preschooler's brain.
- Categorize the world.
- Digestion.
- Body building.
- Rare TV.

## THE BRAIN IS LIKE A TWO-STOREY HOUSE WITH DIFFERENT RESIDENTS

One of the methods to explain the functioning of the brain to children in a playful and engaging way is described by the authors Daniel J. Siegel and Tina Payne Bryson in *"Develop Your Child's Brain to the Fullest"*, who compare brain to a house with two floors. If the topic is adapted to child's needs, it can be easily and understandably explained to them what is going on in their head. It is also possible to invent names of miniature inhabitants living in the house. The upper floor can represent functions of the neocortex, i.e. thinking, and the lower layer the limbic system, i.e. feelings.

Thus, there should be a thinker, a problem solver, a planner, a regulator of emotions, a creative and a flexible characters living upstairs. Downstairs, there are those who are guided mainly by feelings, for example, vigilant, timid, or angry. Regardless of what names the characters are given in cooperation with the child, it is important to make it clear which one is being discussed. The names of characters can be adapted from children's books or movies, or invented using own ideas. The individuals living downstairs should be responsible for one's safety and comfort, watch threats, notice a possible danger, push "the red button", trigger the alarm and prepare an individual to fight or flee.

The brain works best when both storeys work together. Residents meet on the staircase, smiling and waving as they carry messages from top to bottom. Thanks to their excellent cooperation, an individual feels contented, has a good relationship with others gets inspiration for the game, is able to calm down and find solutions to problems.

As the crisis comes, sometimes, there are situations when the characters panic. Thinking that they are in danger, one screams, another runs and inconsiderately pushes the alarm button. The whole floor runs up and down panicking without control at a given moment. It is even impossible to get downstairs, have a normal, peaceful conversation and take control. The noise in the house makes communication extremely difficult, no one hears or listens to anyone. Upstairs, everyone quiets down and watches on the situation downstairs. Due to the excessive activity of the first floor, the pulse in a body accelerates, the heart rate increases, and the body prepares for a state of fight or flight. This makes an individual faster or stronger, or remain completely still as if frozen to hide from danger. Everything that happens in the body is solely for the purpose of keeping it safe.

Children should be allowed to imagine the situation with unrealistic details, for example, that a dinosaur suddenly

appeared on the first floor. What is going on? How do the residents of the first and then the second floor react?

The example can be also used to explain children the difference in behavior of children and adults. For children, the top floor is still being built, so the bottom ones more often takes control of the situation and causes unnecessary panic even over things that adults do not consider essential. For example, if a child wants to buy a new toy, they may act hysterical in a store, as a result of their brain being controlled by the creatures from the first floor and they are not able to act otherwise. The second floor is usually completed only when in twenties.

## MOTIVATION IS CONSIDERED A DRIVING FORCE IN HUMAN LIFE

What incites and prompts a person to a certain activity, reaction, or, on the contrary, what suppresses a person, what prevents them from doing something, reacting. Simply put, motivation can be understood as a certain force that moves an individual to do something.

At present, **internal motivation** is considered the most important for forming someone's personality, because it is based on the needs of each individual and their internalized values. Internal motivation leads humans to develop their assumptions. If deeply convinced, they will do their best, regardless of the effort.

## STYLES OF LEARNING

### VARK model

This model identifies four types of learners: *visual, auditory, reading/writing, and kinesthetic*.

### How to get the house under control?

Once the child understands this system, it can be explained how to teach the little characters in the house to cooperate and not to set off the alarm too often. When parents see that their son or daughter is getting into a state that will turn into hysteria in a short time, the house theory can be used. For example, *"I see that someone downstairs is about to push the button that will set off the alarm. How about to call someone upstairs to come look and help? They may suggest focusing on breathing."*

It is clear that an individual can live and act upon internal motivation based on one's own evaluation of their needs, and what is important to do. If a certain activity is considered to be meaningful, useful or interesting, it is implemented, without expecting an external reward.

The experiment of Lepper, Green and Nisbett (1973) found out that children who performed tasks without rewards first, or received an unexpected reward, were just as interested in the activity as before. Children who received the expected reward showed lower interest and spent less time doing the activity.



**Visual learners** are individuals who prefer to take in their information visually – be that with maps, graphs, diagrams, charts, and others.



Provide space for activities the child feels internal motivation for – a guaranteed way to support learning.

**Auditory learners** are individuals who learn better when they take in information in an auditory form when it is heard or spoken. They learn best when information is presented to them via strategies that involve talking, such as lectures and group discussions.

**Kinesthetic learners** are individuals who prefer to learn by doing.

**Reading/writing learners** consume information best when in a verbal form, be it written or read/spoken.

### Kolb's Learning Cycle

The four stages of the Kolb Learning Cycle are:

- Concrete Experience,
- Reflective Observation,
- Abstract Conceptualization,
- Active Experimentation.

In basic terms, this cycle consists of **experience, reflect, thinking and acting.**

### ATTENTION SPAN BY AGE

Attention or concentration span is a child's ability to give undivided attention to the specific task at hand. It requires blocking out all other stimuli – such as sound (the class next door making a noise), visuals (watching what is happening outside the window) or unnecessary information (old notes written on a board).

### Alternative Education Methods

Alternative education methods and approaches refer to an educational process that facilitates teaching and learning. Evaluating different strategies begins by defining traditional methods of education with characteristics such as formalism, authoritarianism, memorization and repetition. Alternative education seeks to eliminate these characteristics to work in favor of new ways that involve experiential education.

### Six Alternative Educational Methodologies

- Montessori method,
- Waldorf method,
- Amara Berri system,
- Reggio Emilia philosophy,
- Popular education,
- Doman pedagogy.

These teaching methods are continuously evolving and with time, each model develops with the need to align with what the new generation of learners demands from their education.

Average attention spans work out as follows:

- Two-year olds: four to six minutes
- Four-year olds: eight to twelve minutes
- Six-year olds: 12 to 18 minutes

### Extending a child's attention span

- Bring creativity to tasks the child does not enjoy.
- Try fidgets.
- Check-in frequently with the child when they work on hard tasks.
- Build in short breaks for tough tasks.
- Give attention to get attention.
- Break down the task.
- Spice up mundane tasks.



### STRESS

The optimal mental state for learning is a relaxed and stress-free one. This is to say, when an individual feels safe and in a relaxed environment, their brain can stop wasting energy on 'self-preservation' manifested in a form of feelings stress, and spends more energy to create quality memories that store information easily retained and remembered when required.

#### *The Neuroscience of Memory*

According to current findings, memories can be altered when presented with memory-related information, which makes these memories highly malleable. The brain's medial prefrontal cortex (mPFC) is responsible for detecting whether or not is incoming information related to such stored memories in any way.

- Get moving.
- Boost brain power. For example activating games, connecting hemispheres: Crossed laterality: "Pat your head and rub your tummy." Or: "Touch your left shoulder with your right hand." Tasks can vary: Touch the opposite eye, knee, elbow, heel and more.
- Eliminate hunger and fatigue.
- Praise child's efforts.
- Recognize when to get help.

#### *How the Law Works*

The Yerkes-Dodson law describes the empirical relationship between stress and performance. In particular, it posits that performance increases with physiological or mental arousal, but only up to a certain point. This is also known as the inverted-U model of arousal.

When the level of stress gets too high, performance decreases. To add more nuance, the shape of the stress-performance curve varies based on the complexity and familiarity of the task.

Task performance is best when arousal levels are in a middle range, with difficult tasks best performed under lower levels of arousal and simple tasks best performed under higher levels of arousal.



The rich textures, varied temperatures, and captivating smells offered by natural materials and the environments in which they are discovered and collected enhance the ability to classify, marvel, count, and engage with them to a great extent. This profound interaction guarantees meaningful learning experiences.

## RESILIENCE

It is the ability to 'bounce back' after challenges and tough times. Children who are resilient can recover from setbacks and get back to living their lives more quickly. And when things do not go well and children feel anxious, sad, disappointed, afraid or frustrated, resilience helps them understand that these uncomfortable emotions usually do not last forever. They can experience these emotions and learn they will be all right before too long.

**Relationships** are the foundation of child's resilience. Children develop resilience through experience.

Children develop resilience over time, so try to be patient and supportive while your child works out how to respond to challenges. You might want to make everything all right for your child, but sometimes your child has to go through uncomfortable feelings so they can work things out for themselves.

## INDIVIDUAL APPROACH IN UPBRINGING AND EDUCATION

Every child in the class is a unique individual; everyone has different needs, different characteristics and abilities. This also applies to the child's needs and qualities, which relate to their learning, receiving information, affective

personality development, social learning, or self-development. No two children in a class learn exactly the same way. Therefore, the teacher must use an individual approach in education.

## COOPERATIVE METHOD OF UPBRINGING AND EDUCATION

Both, individual human understanding of things and ways of human thinking originate in social interactions and are shaped by these interactions. The essence of learning is therefore social. The most effective way of learning (solving life situations) is learning from other people, solving situations in discussion with them. The cooperative method of upbringing and education means working consciously with social situations during educational and learning tasks at school and using these situations for more effective learning and personality development.

### Self-evaluation

Self-evaluation becomes a source of self-regulation if, based on it, an individual begins to set realistic achievable

goals for themselves, makes efforts to master them, can evaluate their fulfillment and set new ones. They seem to have control over themselves, control themselves, "know how" to appreciate the result, or self-critically admit a mistake and look for its cause in order to eliminate it. Only realistic self-evaluation can fulfill such a function. For self-evaluation to fulfill the function of a regulator, the pupil necessarily needs the most accurate feedback possible.

### Learning the art of making mistakes

Making mistakes is a guarantee in life. No one can avoid them entirely, no matter what they do. What matters more than any blunder, or its magnitude is their response afterward.



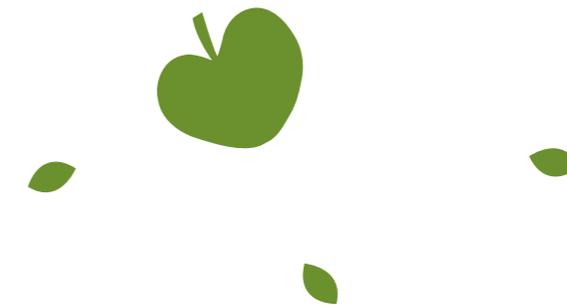
Opportunities for free expression: drawing and writing. They serve as both, a means of communication and a powerful outlet for showcasing someone's true identity. It is a journey that unfolds through numerous moments, some shared with others, all of which are valued and given the necessary time and space.

## BENEFITS TO MAKING MISTAKES

- Acknowledge mistakes.
- Reframe and analyze the mistake.
- Ask yourself the hard questions.
- Put the lessons learned into practice.
- Review progress.
- Recognize that it is all right to feel vulnerable.
- Remember that nobody can avoid making mistakes.

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Boy with two backpacks (independence, self-motivation)

# INTRAPERSONAL COMPETENCIES

## Tools and Methods to Support Development of Intrapersonal Competencies in Preschool Aged Children in Outdoor Education

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Kindergarten plays a relevant role in the development of the abilities that enable the infant to interact in both areas, inter and intrapersonal (Alif et al., 2019; Mann et al., 2022). Kindergarten is the setting not only for learning and mastering academic abilities (reading and counting), but also to foster other skills that induce the proper development of the infant, as a whole person: the social and emotional competences (Denham, 2019, p. 85).

Several academic models include intrapersonal competences within the so-called emotional intelligence, due to their close relation to interpersonal competencies. Gardner (1983) in his "Theory of the Multiple Intelligences" includes the intrapersonal intelligence (emotional) and the interpersonal intelligence (social); the author considers that an individual has the intrapersonal intelligence developed when they know themselves,

acknowledge their inner world of emotions and thoughts and, considering that knowledge, acts in a way that is adaptive and with self-control (Gardner 1991).

Self-knowledge and the ability to act adaptively based on that knowledge. This intelligence includes having an accurate picture of oneself (one's strengths and limitations); awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem (Gardner, 1993, as cited in Armstrong, 2017, p. 9).

Reference also needs to be made to other models that have conceptualized the intrapersonal competence as a set of abilities and skills that enable the infant to reach an internal well-being that allows them to enjoy what they do, to boost their working pace, to achieve their goals,



etc., while contributing to minimize frustration, anxiety, and the waste of cognitive and emotional resources. The paper refers to the Mayer and Salovey's Model of Emotional Intelligence (Salovey & Mayer, 1990; Mayer & Salovey, 1993, 1997), the Bar-On's Model (2006), the CASEL's Model (Casel, 2020, as cited in Shoon, 2021), or DOMASEC's Integrative Taxonomy (Shoon, 2021).

Mayer and Salovey (1995) present a Regulator Model related to the emotional construction and regulation, in which they apply the concept of intelligence to the emotion. They get further to what is understood as basic emotion, in terms of adaptation (characteristic of babies, who use few intentional regulations to build the emotion). They suggest three levels of emotion control and regulation (unconscious, low level of awareness and higher level of awareness) that become more complex over time, as a result of social and cultural learning, leading the individual to focus attention from or to the emotional experience (i.e. to decide to attend or not to attend to a feeling), and at a high level of awareness, to try to understand, define and intentionally improve attention to emotions. Therefore, attention is paid to emotions, their qualities are evaluated, and regulation is attempted. This level of awareness focuses more on the – more enduring – states of mind than on the emotions themselves.

Goleman (1998, as cited in Boyatzis et al., 1999) proposes five dimensions of emotional intelligence, such as self-awareness (emotional awareness, accurate self-assessment and self-confidence), self-regulation (self-control, confidence, conscientiousness, adaptability and innovation), motivation (drive, commitment, initiative and optimism), empathy (understanding others, developing others, service orientation, embracing diversity and political awareness) and social skills (influence, communication, conflict management, leadership, catalyst for change, bonding, collaboration and cooperation, and team skills).

Bar-On (2006), instead of emotional intelligence, on the one hand, and social intelligence on the other, refers to emotional-social intelligence (ESI) as a multifactorial set of interrelated emotional and social competencies that influence the ability to recognize, understand and manage emotions, relate to others, adapt to change and solve problems of a personal and interpersonal nature, and to cope effectively with everyday demands, challenges and pressures. He stresses that cognitive and emotional intelligence are different constructs and have different locations in the brain. In his model, intrapersonal ability involves being self-aware, understanding one's strengths and weaknesses, and expressing feelings and thoughts in a non-destructive way. To measure social-emotional intelligence, Bar-On included five scales in the Emotional Quotient Inventory (EQ-i), distinguishing among others, the intrapersonal, which, in turn, comprised five subscales: self-regard, emotional self-awareness, assertiveness, independence, and self-actualization. After validation, the latter two were excluded and considered as important correlates and facilitators of the construct. Bar-On (2006) relates social-emotional intelligence to well-being by stating that the competencies, skills and facilitators that contribute most to subjective state are: a) the ability to understand and accept one's emotions, b) the ability to strive to set and achieve personal goals to enhance one's potential, and c) the ability to check one's feelings and put things in their proper perspective.

Shoon (2021) introduces the integrative taxonomy DOMASEC which specifies Domains and Manifestations of Social-Emotional Competencies that relate to frameworks focused on Social and Emotional Learning (SEL), personality traits (such as the Big Five) and self-determination theory. Regarding SEL frameworks, the CASEL (Collaborative for Academic, Social Emotional Learning) proposal stands out, which places SEL as an essential part of children's education, from pre-school to secondary school (Gracyk et al., 2012). It comprises 5 domains (Gordon et al., 2022): self-awareness, self-control, social awareness, relational skills, and responsible

decision-making. These domains can be taught and applied at different stages of development, being essential to establish equitable learning environments and coordinate practices in classrooms, schools, families, and communities and, among other aspects, it is related to well-being. In terms of personality traits, the Big Five Model (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) is the reference framework for the study of emotional skills. The difficulties in distinguishing between social-emotional skills (peak performance on specific tasks) and personality traits (typical behaviors or characteristic patterns of feelings, thoughts, and action) is what motivates Shoon (2021) to propose the DOMASEC taxonomy (Danner et al., 2021). Finally, Self-Determination Theory allows explaining the processes of intrinsic and extrinsic motivation, together with student well-being and academic performance, referring to three basic psychological needs that must be satisfied: autonomy (ability to act independently, with initiative and being responsible for one's own actions), competence (mastery, feeling of being able to succeed and personal growth) and relationships (sense of belonging and connection with others) (Ryan & Deci, 2020).

The domains and manifestations of the DOMASEC taxonomy (Shoon, 2021) refer to orientations towards oneself (intrapersonal competencies), towards others (interpersonal competencies), and towards developmental tasks. The domain of self-orientation includes, on the one hand, affect (e.g., self-esteem) and cognition (e.g., self-concept), which would correspond to CASEL's self-awareness, happiness, self-efficacy, self-reflection and SEL identity (emotional and social learning) and autonomy (basic psychological need), and, on the other hand, behavior (e.g., self-regulation), which corresponds to CASEL's self-management, SEL's self-control, emotion regulation and stress regulation, and autonomy. As for their relationship with personality traits, self-orientation is associated with neuroticism and behavior with conscientiousness.

Considering this can be taught and learned, as Bar-On (2006) states, the early childhood school is seen as contributing to academic development and the ability to understand one's own emotions and behaviors of both infants and others in ways that have impact on effective communication (Cudworth & Lumber, 2021) and the formation of social and emotional skills for the development of the whole child (Denham, 2019) in both intra – and interpersonal domains (Alif et al., 2019). An optimal space for the development of such skills in childhood is provided by nature schools, where all pupils enjoy regular opportunities for achievement, confidence and self-esteem development through practical learning experiences in a natural environment (Forest School Association, n.d., as cited in Beresford & Phillips, 2022) and where a calm and safe context is provided, where autonomy, creative and self-directed play and the development of cooperative relationships are encouraged (Kuo et al., 2022).

The study of nature schools is further explored, as well as their benefits to the development of intrapersonal competencies and, in general, children's well-being by supporting their basic psychological needs, awakening their curiosity and their inherent tendencies to learn and explore the world around them (Ryan & Deci, 2020). The project will also focus on the role of the teacher in this natural environment, as a promoter and supporter of children's natural inquisitiveness, deeper internalization of learning processes, materials, or social norms, through organismic integration (Barrable & Arvantis, 2019; Kuo et al., 2022).



## INTRAPERSONAL COMPETENCES IN THE FOREST SCHOOLS IN EARLY CHILDHOOD EDUCATION



In recent decades, there has been a growing interest in incorporating learning experiences in schools under the umbrella of the concept of alternative pedagogies, which are fundamentally based on nature as a way to increase children's well-being, environmental awareness and connection with the environment (Arvanitis et al., 2022; Beresford & Phillips, 2022). One of the most prominent spaces are Nature Schools (NS), created to help children grow as individuals, develop their physical, social, cognitive, linguistic, emotional, social and spiritual skills (Ahi & Kahriman-Pamuk, 2021; Cudworth & Lumber, 2021), build their confidence, establish healthy relationships with each other and their environment (Barrable & Arvanitis, 2019), with a special emphasis on their emotional intelligence (Cudworth & Lumber, 2021).

Indeed, working with nature allows for the cultivation of skills that are not only cognitive and linked to academic performance, but others directly related to working in this space have also been identified (Kuo et al., 2022). Dabaja (2022) referred to six clearly relevant types of skills: social and cooperative skills, physical skills, self-esteem and self-confidence, environmental awareness and sense of belonging, emotional and mental well-being, and risk management skills. Meanwhile, Arvanitis et al. (2022), considering that children's connection to their natural environment allows them to acquire skills and develop their intrinsic tendencies (Barrable & Arvanitis, 2019), referred to how different skills can be worked on in nature schools using activities linked to five areas: knowledge and skills, connection to nature and physical and mental well-being, structure (flexible), inclusivity, and enjoyment. Akin et al. (2020) consider that outdoor education considers both the management of natural resources and relationships with oneself (intrapersonal relationships), with others (interpersonal relationships) and with the wider community (ecosystems and ecology).

Evidence from Dabaja's (2022) literature review suggests that these skills are closely related and need to be worked on together in nature schools. For example, the development of social and cooperative skills in nature schools has been closely linked, firstly, to the self-confidence and self-belief that children develop when they feel free and have time and space to learn, grow and demonstrate their ability to be independent; secondly, to self-awareness of the consequences of their own actions in the context of relationships with others (with peers, with adults); and thirdly, to the motivation to participate in exploration and play activities. Cudworth and Lumber (2021) refer to nature connection pathways, which facilitate an alternative space for more intrinsic social and emotional development that allows children to connect positively with nature, themselves and others: contact (Encountering nature through the senses), emotion (affective state or feeling that occurs when you engage with nature), meaning (using nature's symbolism to communicate thoughts), compassion (including nature within one's concept, leading to concern for nature and empathy; motivating help/cooperation) and beauty (Perceiving nature's aesthetic qualities including color, shape and form that please the senses and create awe). Also, Kuo et al. (2022) differentiated between personal skills (leadership, communication, resilience, critical thinking, and problem solving, spatial orientation) and stewardship skills (connection to nature, environmental values, and pro-environmental behavior), understanding that the latter are key to fostering more attentive, self-disciplined, engaged and physically active learning.

Ultimately, the possibility for children to know themselves better and to be able to pursue and obtain what they want is the driver for greater personal satisfaction and self-fulfillment (Cudworth and Lumber, 2021) and greater school well-being. But how can intrapersonal competencies be worked on in nature schools, what can

teachers do to facilitate their development, and what are the areas to focus on?

As highlighted at the beginning of this chapter, the conceptualization and operationalization of intrapersonal competencies have been and continue to be subjects to intense scientific debate, although, in general, it is possible to refer to several dimensions or domains that appear repeatedly in taxonomies, models and theories on intrapersonal competencies. These are: self-awareness, self-development, self-discipline, self-control, self-confidence, autonomy, and self-motivation.

Firstly, **self-knowledge or emotional awareness** allows children to express themselves in front of others using a positive emotional style, to understand what others mean and to regulate emotions in these communicative interactions in an adaptive way. These skills, also understood as emotional competence or socioemotional competence, have their initial moment of acquisition and development in early childhood, and can be influenced by both intrapersonal aspects (intrinsic to each child) and interpersonal ones (at this stage, fundamentally, family and teachers), together with certain elements of culture and gender (Denham, 2019; Domitrovich et al., 2017). In addition, they may be enhanced by environments, such as nature schools, which create an ideal space for children to experiment with certain risks, with appropriate support, and to test themselves in their relationship with the environment (Beresford & Phillips, 2022; Kahriman-Pamuk & Ahi, 2019).

Self-awareness is a key tool that will enable children to develop other skills, such as **self-development**, by requiring deep understanding of their capacities, life goals and limitations to take action. In nature schools this skill is fostered through attention to children's individual differences using, for example, interviews or self-reports through drawings and other graphic representations that help them express their needs (Ahi & Kahriman-Pamuk, 2021; Kahriman-Pamuk & Ahi, 2019) Self-development

will enable children to engage with themselves, not only academically, but also in their personal development and in their relationships with others. It involves a sequential process that starts from goal setting (what the child wants to achieve and how), through the development of an action plan (allows for a concrete vision of what needs to be done to achieve their goals) to full goal awareness (where they want to go and where the limit is).

Related to this skill it is also possible to refer to **self-discipline**, understood as perseverance, consistency with norms or rules and the willpower to do and carry out one's goals. It involves focusing on fulfilling one's personal and academic goals and can materialize in changes of habits or daily activities towards others that allow the person to improve. Contact with nature has been linked to greater self-discipline in various studies reviewed by Kou et al. (2022) which led him to conclude that children who have frequent contact with nature have a greater ability to control their impulses.

This is also where the concept of **self-control**, or the ability to regulate oneself, to set limits on attention, thoughts, emotions, desires and actions, arises from the development of self-awareness, as it is this ability that allows the child to identify and self-destroy thoughts or to focus attention on their goals. The emotional regulation requires the development of several skills (Denham, 2019): the child must clearly (and not diffusely) recognize his or her feelings, in order to know how to regulate them; he/ or she must also recognize and manage "false" signals (e.g. it is easy to confuse frustration and anger, surprise and fear...), learning to discriminate and use appropriately those emotions that are relevant and useful (e.g. expressing sadness or uneasiness about an event), attenuate those that are relevant, but their expression is not very functional (e.g. getting disproportionately angry with peers about something they consider unfair), and even dampen those that are irrelevant. In this sense, the ability to moderate the intensity of certain emotions when they threaten to become overwhelming (e.g.,

showing fear in a situation that requires quick action), to increase it when necessary for the achievement of goals (e.g., trying to encourage oneself in moments of apathy or disinterest) and to change emotional state when faced with challenges (e.g., in a situation where anxiety appears, trying to calm oneself by smiling to convince oneself and others that one is calm), allows the child to maintain genuine and satisfying relationships. e.g. when faced with a situation in which anxiety arises, trying to appease oneself by smiling to convince oneself and others that one is calm), enables the child to maintain genuine and satisfying relationships with peers, to pay more attention to pre-academic tasks and to learn the rules of social and intellectual experiences in different settings. Alif et al. (2019) note that children often express their ideas and feelings through play, so when they feel happy and enjoy learning, their development is enhanced. Nature schools take advantage of natural environments to carry out play-based learning activities, with the aim of improving children's problem-solving and collaborative skills, self-esteem, intrinsic motivation, and self-confidence (Pamuk & Ahí, 2019).

The natural inclination of human beings to transform regulation by external contingencies into **self-regulation** is one of the aspects evidenced in Deci and Ryan's Self Determination Theory (Barrable & Arvanitis, 2019), which refers to different levels of integration or internalization of social structures and experience into a unified sense of self, ranging from partial internalization or introjection (externally regulated behaviors that are performed to gain rewards or avoid punishment), to regulation by identification (the value of the behavior is accepted and seen, so it is considered highly internalized), to integrated regulation (fully integrated and self-determined behavior. Pupil motivation, enjoyment and engagement are better in natural environments, with higher levels of intrinsic motivation observed in these environments (Fägerstam & Blom, 2012; Hobbs, 2015; as cited in Kou et al., 2022). Barrable and Arvanitis' (2019) study, using the framework of self-determination theory to explain

intrinsic and extrinsic motivation processes, found that nature schools represent an optimal space to support these three basic psychological needs, thus facilitating intrinsic motivation and organismic integration.

In terms of knowledge and skill development, linked to the concept of competence, the study by Arvanitis et al. (2022) revealed that while nature schools are seen as a space for the development of important skills (motor, emotional and craft), along with improving concentration, they have also been criticized for not cultivating more traditional school skills, such as reading and writing. In this regard, Ryan and Deci (2020) point out that:

Yet more important than achievement outcomes, in our view, is students' psychological growth and wellness. Although not all students can or will excel at the cognitive agendas that are the central focus in many schools, schools should nonetheless be supportive contexts for development, provide conditions that enhance students' adaptive capacities and mental health, and, importantly, do no harm (p. 101860).

Finally, it should be noted that an interest in the emotional and adaptive component is important, not only for personal development per se, but also as a promoter of positive outcomes in relationships with others; that is: one of the most relevant developmental tasks in childhood is to achieve positive and sustained engagement with peers (Barrable & Arvanitis, 2019; Mann et al., 2022). Emotional competence contributes to ensuring successful and effective interactions with peers based on listening, cooperation, appropriate help-seeking, working together and negotiation. Success in these tasks enables the child to thrive in the social world, and to continue to develop independently with improved mental health and well-being during preschool and beyond (Denham, 2019). Massey's (2005, cited in Beresford & Phillips, 2022) study drew attention to this fact by finding that children who were educated in nature schools appeared to have greater independence, but also knew how to ask others

for help when needed, as well as better confidence and self-esteem development. This is the idea that Attwood (2010, p. 21) builds on when arguing for the contribution of nature schools to the development of better **self-esteem** and **self-confidence** by testing personal self-reliance and resilience in unfamiliar territory with new structures and possibilities.

#### **To conclude: Advice and recommendations to develop intrapersonal competencies in kindergartens linked to nature.**

Photo number 1 School education is a fundamental factor in children's development, not only at the academic level, but also in training the individual's ability to understand their own and others' emotions and behaviors, and to take this information into account to establish effective communication (Cudworth & Lumber, 2021). Educating in nature goes far beyond moving learning from an indoor to an outdoor space or changing the way academic content is delivered. It involves a holistic education that enables children to experiment with their environment, test their abilities, and train their skills to interact more effectively with others, with themselves and with the natural world. Nature learning provides "a rich platform for developing interpersonal and intrapersonal competencies" (Mann et al., 2022, p. 212), including enjoyment and engagement in learning, well-being and health, and connection to nature. In this sense, it can be concluded with some tips and recommendations for fostering intrapersonal intelligence in childhood:

- **Provide natural or naturalized time and space that enable play and free movement to foster self-development.** This space should allow the construction of their own personal, emotional cartography, and the time should be regulated by active listening, observation without judgement, and should present a structure connected to nature, i.e. based on its annual rhythms (seasons, culture...), weekly (established by the group or by each individual and their

different phases of development) and daily (moments of expansion and concentration).

- **Focus on the present: children should be taught to take one step at a time.** To achieve this, it can be useful to apply mindfulness exercises that allow them to focus on short-term goals, as well as tools to project themselves in the long term.
- **Adopt a teaching role based on respectful accompaniment.** The world of children feeds on the world of adults to support their understanding of the world. Accompanying children from a safe distance, close enough to observe and listen, and far enough away not to intervene in the play, providing presence and in good physical, mental (in-depth knowledge of evolutionary development) and psychological conditions, allowing us to observe the different aspects on an individual and collective level.
- **How is it possible to expect them to do this? By setting realistic goals.** It is important for the child to be able to identify their strengths and weaknesses and, from there, to develop a coherent plan of action that will be useful to them on a day-to-day basis. A key aspect is to abandon the idea that there are "good actions" and "bad actions", or that some people "can" and others "cannot" do things. Each person is the owner of his or her own development potential, which he or she will achieve by following his or her own personal learning path.
- **Use constructive criticism: negative emotions are a reflection of something that is happening and needs to be expressed.** Work with the child to understand what he/she is experiencing and how he/she can express it in a more functional way. It is important to bring the child to understand that a negative emotion is not, in essence, "bad", but only a manifestation of usefulness, in relation to an event that does not conform to expectation and a specific

moment. Understanding this emotion and knowing how to handle it appropriately will determine the most favorable outcome, first for the infant him/herself, and then for his/her immediate context.

- **Guiding and monitoring progress.** Autonomy is a key factor in the development of intrapersonal competence, but accompaniment must not be neglect. The teacher must act as a guide, accompanying the child,

validating, and supporting him/her in the process of self-knowledge and self-management.

- **Reflect with the child.** It is important to learn from mistakes, seeing them as a learning opportunity, and never using punishment or reward as determining factors. Analyze the situations that have worked or not, and which have been the key element for success or failure.

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# INTERPERSONAL COMPETENCIES

## Tentative title: Tools and Methods to Support Development of Interpersonal Competencies in Preschool Aged Children in Outdoor Education

Recommendations for the development of interpersonal competencies of young preschool children, as a complementary methodological material for teaching in nature

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## INTRODUCTION

The social competences that children possess when entering school, together with their emotional competencies, represent a crucial predictor of their success in school and much further, throughout their whole life. Preschool years are a window of opportunity for the development of these competencies, so it is important that the adults guiding young children better understand its unfolding and learn how they can facilitate their development. This chapter presents the main theoretical

underpinnings of interpersonal development during the preschool years and how these competences are catalyzed in nature education programs. The focus of this chapter is on tools and methods that work in developing children's interpersonal competence in forest kindergartens and nature education settings. These tools would hopefully inspire other pedagogues in finding means to enrich their tools for preparing children for school and throughout their whole life.

## 1. INTERPERSONAL COMPETENCE DEFINED AND ITS BENEFITS FOR SCHOOL READINESS AND LIFELONG WELL-BEING

In a broad definition, interpersonal competence is what one needs to successfully interact with people – from the short, superficial interactions with strangers, to forming and keeping professional relationships, and the

meaningful ones with the important people in one's life. They are often referred to as soft skills and are highly valued – both in the workplace and in personal lives of people.

Interpersonal skills comprise understanding others' needs and feelings, articulating one's own ideas and needs, solving problems, cooperating and negotiating, expressing emotion, "reading" social situations accurately, adjusting behavior to meet the demands of different social situations, and initiating and maintaining friendships (Kostelnik et al., 2002; Odom et al., 2002). Settings in which preschoolers are part of a group provide the experiences in which this knowledge and skills can be acquired, understood, practiced and refined, provide the guidance of an informed teacher/facilitator/pedagogue who knows when and how to offer support and teaching.

The successful development of interpersonal competence predicts later well-being, and is recognized as vital to school readiness (Carlton & Winsler, 1999). Learning itself is a social process, thus the development of the social competences is paramount to life-long learning. Social skills represent an important predictor of both school readiness and success, and also of life-long psychological well-being. A study conducted by Segrin and Taylor in 2007, indicated that social skills were consistently and positively associated with **all indicators of psychological well-being**, in a sample of **adults** (aged 18-87 years old).

When children enter school with friends, they are well liked, able to make and sustain new friendships, and are

able to initiate positive relationships with their teachers, they also feel more positive about school, participate in school more, and achieve more than children who are not described this way. Kindergartners who are victimized by peers or are aggressive, in contrast, have more school-adjustment problems and are at risk of a potential cascade of problems, including school difficulties, delinquency, and drug abuse (Gagnon, Craig, Tremblay, Zhou, & Vitaro, 1995; Haapasalo & Tremblay 1994; Kochenderfer & Ladd, 1996; Tremblay, Pagani-Kurtz, Masse, Vitaro, & Pihl, 1995).

Studies have shown that socially competent kindergartners are more successful than their less competent counterparts in developing **positive attitudes about, and adjusting to, school**, and they get **better grades and achieve more** (Birch & Ladd, 1997; Ladd, 1990; Ladd, Birch, & Buhs, 1999; Ladd, Kochenderfer, & Coleman, 1996). Studies have shown that interpersonal skills, including positive interactions with teachers, positive representations of self-derived from relationships, and non-rejected peer status, combined with emotional competences, predict academic success when other pertinent variables, even earlier academic success, are already taken into account (e.g., Carlton, 2000; Howes & Smith, 1995; Izard, 2001; Jacobsen & Hofmann, 1997; O'Neil, Welsh, Parke, Wang, & Strand, 1997; Pianta, 1997, Shields et al., 2001).

## 2. INTERPERSONAL DEVELOPMENT IN NATURE KINDERGARTENS

Outdoor education has a well-documented impact on children's health and well-being, which in turn impact all the areas of development. The natural settings offer children lots of relevant challenges and inspire them to cooperate with others, learning the value of teamwork. The direct contact with the natural world brings in lots of thrill and genuine curiosity, sparking children's desire to engage in a variety of tasks and challenges. This

generates well-being, which leads to more of openness and desire to cooperate. Nature acts as a catalyst on many levels, accelerating learning.

In a nature kindergarten the social skills are a great part of the day, as the ethos of these programs is highly democratic, children and adults interact freely and frequently. There is lots of unstructured and free play, which elicit



The direct contact with the natural world brings in lots of thrill and genuine curiosity, sparking children's desire to engage in a variety of tasks and challenges

loads of opportunities and challenges for the children to develop their social competence. The children also have lots of freedom to choose their activities and this brings in both the opportunity and the challenge, to decide and to negotiate, what they would do with oneself and the others. All of these are opportunities to learn how to compromise, advocate and resolve conflicts. A research conducted on the long term effects of forest school programs (Sarah Blackwell) concluded that –The children demonstrated an increased awareness of the consequences of their actions on other people, peers

and adults, and acquired a better ability to work co-operatively with others.

The adults play a key role in spotting these learning opportunities and coaching children in their interpersonal development. In the following section some tools that work in the context of early education and were successfully implemented in forest kindergartens in Romania, Slovakia, Lithuania and Spain will be explored. Hopefully they would inspire other pedagogues into enriching their repertoire of practices.

### 3. TOOLS FOR DEVELOPING INTERPERSONAL COMPETENCES IN NATURE EDUCATION PROGRAMS

The tools and methods proposed are mostly derived from the concept of School Family, from the Conscious Discipline program TM, which is a curriculum for socio-emotional development, a group management program and also a personal development program for adults. Its efficacy in development of socio-emotional competences is well proven by rigorous studies (see <https://consciousdiscipline.com/methodology/research/>).

The main premise is that children **need to feel they matter, and they belong to the group**, this is what motivates them to behave and learn. The core concept is **Belongingness**. Interpersonal skills are deep rooted in this important quality of a group. When both, children and adults feel that they belong, they matter for the others and the whole group, they are intrinsically motivated to initiate, develop and do their best to keep the positive relationships with the others. Conflicts and difficult situations would appear, as they are a normal part of any healthy relationship, and children do not yet possess the social, emotional and communication skills they need to tackle in a constructive way (as many adults, as well). These skills are taught indirectly by modelling and imitation and directly, through planned activities and spontaneous conflict mediation by skilled adults.

There are practical tools by which adults working with children as educators/caretakers/facilitators/parents, can instill this warm feeling of belongingness. It can be done throughout the structures and practices that held in place, in educational programs/families, all of which are rooted in one's own beliefs, attitudes and skills. children cannot be taught what their teachers are not familiar with and more importantly, do not practice in their personal life. Thus, all the things done with children work much better if they are in place in mutual relationships – with the adults in the workplace and in close circle of friends and family.

Derived from all these premises, the study focuses and exemplifies four categories of tools that can be used in early nature education programs to facilitate interpersonal competence development:

- 1) **Uniqueness framework** – focusing and building on the uniqueness of children (instead of their "specialness") and on their contribution to the welfare of the group.
- 2) **Helpfulness** and the skill of **noticing** – focusing on and encouraging positive interactions.



Children's superpowers can be designed on slices of wood or on nut shells and carried around like lucky charms reminding children of their uniqueness, strength and belonging.

3) **Routines and rituals** for building a community.

4) **Conflict resolution** skills development.

1) **Uniqueness framework – Each of us is Unique, not Special**

Self-worth is a precious part of the self-concept and it is built in interactions and relationships, mainly by feelings of mattering to the others and the group. Every child is **UNIQUE**, not special. Specialness leaves the others behind, putting the special person on a pedestal, above all others. Uniqueness makes room for everyone, as in a big puzzle of unique strengths and qualities, supporting one another – creating a community of learning to which everyone belongs.

Child's Name	Date	Skill observed	Way in which he/she can help others by it
Ana	29.10	Managed to climb 3 m high in the "rocket tree"	Teach the other kids how to do it by explaining and modeling it
	11.12	Recognizes 3 species of birds that typically visit our setting	<p>Could contribute to planning a mini-workshop for the rest of the group on birds</p> <p>Could draw an informative poster to post on the fence with the birds living in our garden</p> <p>Refer the kids to her, when they ask about birds they see</p>

Periodically identify and publicly recognize **each child's superpower** – do this in circle times with the whole group. Children name each other's strengths. There can be a big board displayed in the circle time area, or medals made from tree slices with each superpower design. Encourage children to identify even the teacher's superpower, a great way for teachers to have children's feed-back on their own strengths they value.

**Tool no.1: Look for each child's uniqueness** – their interests, strengths. Think about how they can use them to contribute to the other's and group's welfare.

1. Look for what each child does with **much ease/is good at/passionate about**.
2. Think about how they can use their strength to **help the others?**
3. **Include activity planning of activities** to enable each child to use their strength to help others;
4. Make it **public**, share with the other children and remind them about when they can use it.

Have **a form to take notes of each child's strengths**, interests, and suggestions to guide how to use them helping others in the group. For example:

**Cooperation over competition – Encourage cooperation, instead of competition**

Children would compete with each other, notice who is the first and last one to finish something, take pride in being the first/fastest/strongest/best. This tendency often brings seizures and disappointments, but there is a good twist to it:



Children cooperating – most probably spontaneously, or prompted by the pedagogue to help each other or have a common goal

- tell them that “**whoever has a good time / fun, they win!**”. At the end of the competition, ask children if they enjoyed doing it and if so, highlight they won then. Remind them of this **before** the contest starts, in case there is an official start (countdown).
- Respond to the child who was the first one, by:
- **noticing what they accomplished** and what helped them reach their performance – *You have run very fast, you have been eating so fast, it seemed you have been very hungry/have enjoyed the food very much! You practiced a lot climbing this tree, now you can climb it so high!* etc.
- If appropriate, **encourage him/her to help the others finish**, learn to do better in the task, be helpful – *Could you help your peers get their boots on, too? Could you show and teach the others to climb so high up the tree?*

**Tool no.2: Recognize and reflect on children’s and own temperamental traits.**

Temperament is the only personality trait that is inborn. It is modulated by experiences, but it remains throughout one’s life, as a way of approaching the world and what one experiences. It is very useful to **assess temperaments and be mindful of them and their strengths, challenges, and the goodness of fit** with your own temperament. Keep in mind that there are no good or bad temperaments, just some that are easy for us to relate to, others that we perceive challenging. They are inborn and all have their advantages and challenges. Outdoor settings have the advantage of giving children lots of space – they can naturally manifest the high activity and steam the tensions that are usually built up in indoor settings – thus the active temperaments are less challenging having space to manifest themselves and even be admired for their skills.

**Exercise:** Rate your own temperament and of the children that you have in care, here: <https://yourparentingmojo.com/the-temperament-assessment-quiz/>

**2) Helpfulness and the skill of noticing**

The motivation to relate positively to the others is in-born, intrinsic. Children do not need external rewards to get along well with the others, but **need to learn the skills** to do so. Whenever children make poor choices in relating to their peers, they lack the social or emotional competences to do differently. When focusing on building belongingness – the feeling that each child matters to the group and is seen, heard and can contribute, the core of prosocial motivation and well-being that children need so much is built.

**Tool no 3: Point out and emphasize children’s opportunities to be helpful.**

Children are able to take on all of the tasks that teachers perform daily. Always think before doing something yourself, if you can have a child helping you or even delegate them, the task entirely. Think about jobs and responsibilities by which the children can contribute to the others’ welfare.

**Examples of jobs that children can take to contribute to the welfare of the others:**

- **Morning greeter** – greets the other children;
- **Kindness recorder** – looks for friendly, generous behaviors of their peers records and reports them at the end of the day;
- **Encourager** – encourages and cheers on peers attempting difficult tasks or feeling discouraged.



The wooden playground needs to be repaired and everybody is doing its best, we are taking care of the place together letting children know, that they can be helpful in this process

- **Absent child committee** – do something for the absent children, wishing them well – via postcards, video messages, nature art etc.
- **New child buddy** – when a new child joins the group, they are his/her guide for getting used to all the routines and ways of doing things around;
- **Meals server** – serves the plates with food, shares the cutlery, cleans the tables etc.
- **Plants waterer** in the garden and inside;
- **Birds feeder maintainer** during winter.

Suggest these jobs to children and use the skill of noticing to encourage them and build their sense of belonging. **Take time to train the children** how to accomplish them, plan it in the first weeks of the kindergarten year.

**Tool no. 4: Use the skill of Noticing (instead of judging).**

Children need to feel being noticed, not judged. Adults often judge children’s behavior by labeling it. This does not help them much, but on the contrary: “Judgment underlies conditional love – love that is demanding. Encouragement is about accepting the child for who they are. Acceptance notices and describes what already exists. Noticing joins the adult, the child, and the moment. It unites.” (Becky Bailey, 2000).

**How to Notice?**

- **Start your sentence with the child’s name or the pronoun “you.” or with “You did it!”, “Look at you!” or “I noticed \_\_\_\_\_.”**

Judging statements generally start with “Good,” “Great,” and other general terms. Use “you” statements instead;

- **Next, describe exactly what you see.**

Pretend you are a camera or a sports announcer. Children process information in images, thus offer them images that their minds can record. To do this, describe specifically what you saw they were doing. *“You took out the water bottle and fruit snack and placed them in the baskets. That’s helpful!”* You have just given the child your definition of helpfulness. This helps them start to construct their own definition – one they will use for a lifetime.

When you do this in your group of children, you encourage the other children as well, as you specifically describe and let them know what was helpful and how it was done. We do this way more often with the negative things children do, so the attention is drawn to what is unacceptable (*You left all of your clothes all over the floor, so everyone will stumble across them and step on them!*)

Here are some examples of noticing:

Judging	Noticing (describing)
“Good job, Anne!”	“Anne, you took the hammer back to the basket after you finished using it, so you and your mates can find it when they want it!”
“You are such a good boy.”	“You showed your friend Cody how to butter his bread without tearing it. That was helpful.”
“That was a great climb!”	“You did it! You climbed the tree right all the way to four meters high!”



We do not have any rules, we have agreements, as they are to be agreed and understood by everybody, taking care is at the core of everything – I take care of myself, I take care of the others and I take care of everything that surrounds me.

**Exercise:** Commit yourself to notice throughout the day the interpersonal skills that you value, letting everyone know you treasure them

- **Kindness** – *You shared your last piece of pie with your friend!*
- **Helpfulness** – *You helped Carina climb the steep hill by pushing her up, that was helpful!*
- **Taking turns** – *You did it! You took turns using the rope swing counting to ten, Everybody swings!*
- **Caring** – *You went over to David to make sure he was OK, after slipping! That was caring of you!*
- **Sharing** – *You did it! You shared your binoculars with your friends so they can spot the squirrels too!*
- **Cooperation** – *You helped one another to carry that big log for your construction!*
- **Concern** – *You stood by your friend and hugged him, after he had a hard drop off, this morning!*

**Exercise:** Which other skills you would like to see more of, in your program? Write them down and think how you would notice them throughout the day.

### 3) Routines and rituals – the heart and soul of the community

- Routines offer **predictability and safety** – they are the same each day, children learn them and rely on them. Rituals offer **connection**.
- Draw and post the daily routine so the children can follow it and learn it – it is especially helpful for newcomers. Spot every occasion during routines to

encourage children to help each other and connect with them and among them.

#### Tool no 5: Rituals for connection

Authentic rituals for connection – daily or occasionally – are created jointly with children, they arise and dissolve naturally, provide sense of connection, and belonging. They are not rigid or imposed.

**Examples** of rituals:

- **Greeting children upon arrival** – say hello using a touch, eye contact, or presence;
- **The group's song/ rhyme** – hymn of the group sang at different times of the day;
- **Connection games** – part of the morning meeting/ circle times and for having a 1:1 connection moment with each of the children. Games that involve:
  - eye contact,
  - touch and
  - presence (you are here and now, your mind is where your body is, with the child);
- **Ritual for absent children – short song for well-wishing;**
- **Ritual for marking life changes** (birthday, death, new sibling, new mate, leaving child, changing of seasons);
- **Opening and closing the day rituals.**

#### 4) Conflict resolution

Conflicts are precious opportunities for learning. Teaching children problem solving skills is one of the biggest gifts you can offer children from young age,



Couples' routine – every now and then, on the way back from our walk to kindergarten, from the same spot, everybody knows the way, we make couples, mainly with children who have not been together much that day, so they walk together, talk, sometimes both, sometimes there is silence at the beginning. There is also a lot of space to take care of each other, because you can only start your walk, when you cannot see the ones that went ahead, teachers go the last ones.

even toddlers would benefit from it. The world would surely be a much better place if these skills were taught intentionally throughout the childhood. Learning to solve problems is linked to learning several valuable life skills: to think for themselves, to understand problems, to cooperate with others, to see different perspectives. It takes time and dedication to teach children to solve problems. The adult needs to help children understand the problem and to coach and encourage them to come up with solutions that work for everyone.

The responsibilities during the conflict resolution process:

- The **adult facilitates / mediates** conflict resolution between children – prompting them to go through the problem-solving steps, offering ideas if they get stuck, and describing what they feel and do;
- **Children do** it – they define the problem and search for alternatives.

#### Conflict resolution steps:

1. Ensure **children are safe** –stop physically the fighting/actions that put children in danger, if there are any;
2. **Organize their feelings**, help them **calm down**, if they experience strong emotions – validate their emotions and desires, resonate, calm down. Keep in mind that it is useless to attempt the next steps, before children have calmed down, the part of the brain that they need to solve the problem is unavailable, if they experience strong emotions;
3. **Describe** what you saw and heard and **listen to their perspectives** – encourage turn taking speaking and listening. It is possible use a **talking stick** – to facilitate turn taking – whoever gets the stick can talk, the others listen;

**4. Describe the problem** in terms of needs and desires  
*You wanted to..., You expected to... You both want to...*

**5. Brainstorm for solutions** (*What can you do?*) – many of them – *Each problem has at least 7 solutions!*  
**Encourage children to find more than one.**

It is believed that **most problems have more than one** solution, so it is possible to find one that suits **both** children in conflict, it is not about losing and winning the argument, it is such a great gift to pass them on;

6. Help them **pick a solution to try and specify how they will do it** (*How do you share a stick? How do you take turns? – Do they need a timer for this?*) – verify if it can work for both of them or not? "*Does this work for you?*"

It must work for both, if not, go back to step 5, name other solutions they found/can try.

**7. Try it out**, apply the chosen solution and assess it.

**8. Notice the successful solving of the conflict OR resume** the whole process, if it does not work.

The skills for conflict resolution should also be exercised **outside the conflict situations** by offering **role playing** so young children can practice opportunities to work out their ideas in acceptable ways. **Dramatic play, puppets, and stories** are helpful ways to identify feelings and discover solutions to problems. This way kind actions and understanding of others can be encouraged and this core social competence that will help children grow into strong problem solvers be developed, which would help them keep their friends and navigate the challenges of groups.

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## ABOUT PARTNERS

**Asociácia detských lesných klubov na Slovensku** (Slovak Association of forest kindergartens) was established in 2017. Its main goal is to support the education and upbringing of children in regular contact with nature in accordance with the principles of sustainability, environmental education and free play. Currently, the Association unites approximately 40 children's forest clubs from all over Slovakia. In addition to networking of associated organizations and their active support, we are also engaged in advocacy and educational activities.

**VšĮ Lauko darželis** is the very first outdoor kindergarten in Lithuania where children from 2 to 6 years old are educated. The kindergarten was established in 2014 in a beautiful regional park of Pavilniai situated in the city of Vilnius. During the years the kindergarten has grown into three departments in Vilnius and Kaunas and also an Outdoor primary school was established in 2018. Lauko darželis is a community leader of outdoor education as they organize seminars, advice on drafting laws, has established an Association of Outdoor kindergartens in Lithuania and more.

**Stejarul pitic** (Little Oak) kindergarten is one of the first nature kindergartens opened in Romania, in 2016, in the city of Cluj-Napoca. We treasure children's curiosity and rely on nature as a catalyst for their whole development - free play in nature, with natural materials. We focus on developing socio-emotional skills, in both children and adults that guide them (teachers and families), and build a caring community, the village that is needed for raising each child.

Entering our **Amadahi nature school** is a special and unique experience. A journey into "who we are". We are in Galicia (Spain). The sea and the forests are our rhythms. From the moment we walk through the door, we are enveloped in a cozy atmosphere, smelling of lavender and sea, sometimes also of bread. Everything invites you to play, to respect, to learn, to move and to discover yourself freely. Nature becomes our home, and our school allows to enter nature. Our main pedagogical objective is to invite each child to BE, so that they can develop freely and responsibly and feel cared for and carers. In this way, it is easy to love and care for what we are: nature.

