

e-book



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**FREE**



# Developing the Cognitive Potential of Preschoolers from Disadvantaged Backgrounds

## FREE EDUCATIONAL MATERIALS FROM THE DECODE PROJECT

Educational materials for kindergarten teachers, parents of preschool children and the professional community have been developed as part of the European project – DEveloping the COgnitive Potential of Preschoolers from Disadvantaged Backgrounds (DECODE), under registration number 2022-1-CZ01-KA220-SCH-000086145



[www.decode.raabe.cz](http://www.decode.raabe.cz)

## About the DECODE project

The **DECODE** project (*full name – Developing the Cognitive Potential of Preschoolers from Disadvantaged Backgrounds*) is an international European project, developed as part of the **Erasmus+** programme (Key Action KA220-SCH – Cooperative Partnerships, project registration number: **2022-1-CZ01-KA220-SCH-000086145**).

The project is coordinated by the **Dr. Josef Raabe Publishing House** and involves three European countries: the **Czech Republic, the Slovak Republic and Slovenia**. A total of **eight partners** are involved in the project, including four professional organisations:

- **Association of Preschool Education (APV)** and **Dr. Josef Raabe Publishing House** (Prague, Czech Republic),
- **University of Maribor, Faculty of Education** (Maribor, Slovenia),
- **EXPOL PEDAGOGIKA** (Bratislava, Slovak Republic).

In addition, one kindergarten from each participating country contributed to the development, preparation, and practical testing of the project activities:

- **Liběšice Primary School and Kindergarten** and **Čtyřlístek Kindergarten Kadaň** (Czech Republic),
- **Kalinčiakova Primary school and Kindergarten** (Bratislava, Slovak Republic),
- **Ivan Glinšek Kindergarten** (Maribor, Slovenia).

The aim of the project was to contribute **to the improvement of the quality of preschool education by introducing a comprehensive approach** to supporting **children's cognitive development**. The project focused on all preschool children, with special emphasis on those at risk of delayed cognitive development.

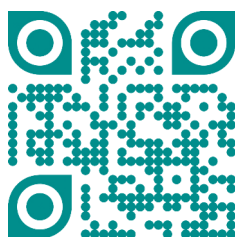
The project's outcome is a set of **freely available educational materials and online tools** designed to foster development of children's cognitive skills. Pre-school teachers received comprehensive **methodological support, cooperation between kindergartens and families** was enhanced and **parents** were given access **to a digital repository** filled with activities suitable for use at home.

In this way, kindergartens and families worked together to support children's cognitive development and strengthen their **key competences**, thereby helping to **prevent educational disadvantage** and **low levels of basic skills**.

**Implementation:** 2022–2025 | Erasmus+ | Coordinator: Dr. Josef Raabe Publishing House, Prague

More at:

[decode.raabe.cz](https://decode.raabe.cz)



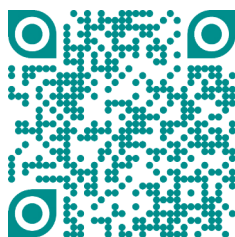
The project results are **freely available as open educational digital resources and free digital repositories** in all national languages of the project as well as in English.

*We believe that the DECODE outputs will serve as tools not only for kindergarten teachers, but also for parents at home. We are confident that these outputs will contribute to improving the quality of education the quality of preschool education for children in all participating countries.*

*DECODE project partners and Raabe Publishing team*

**All DECODE outputs can be found on the official website:**

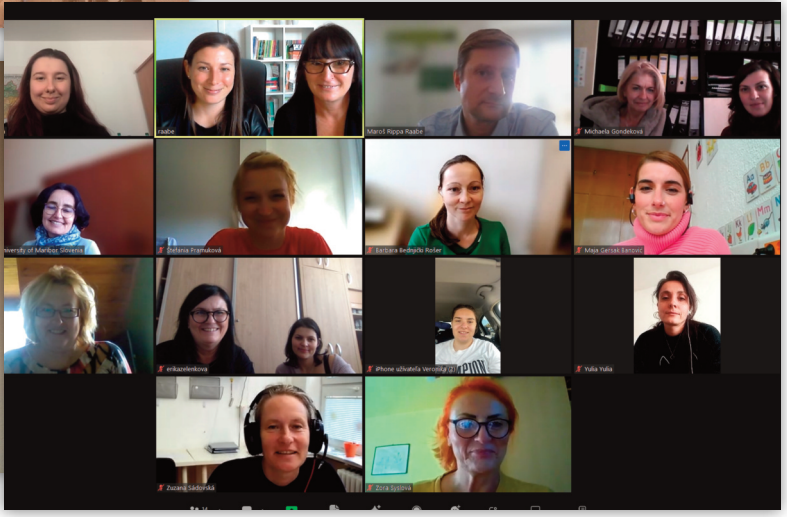
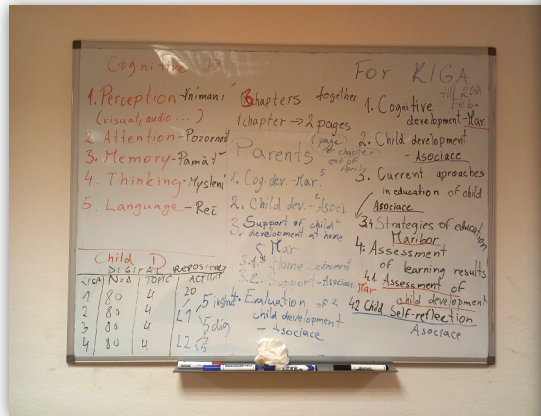
<https://decode.raabe.cz/project-objectives-en/>



*The materials can be freely downloaded and are intended for teachers, parents and the professional community.*



# Photos from project meetings





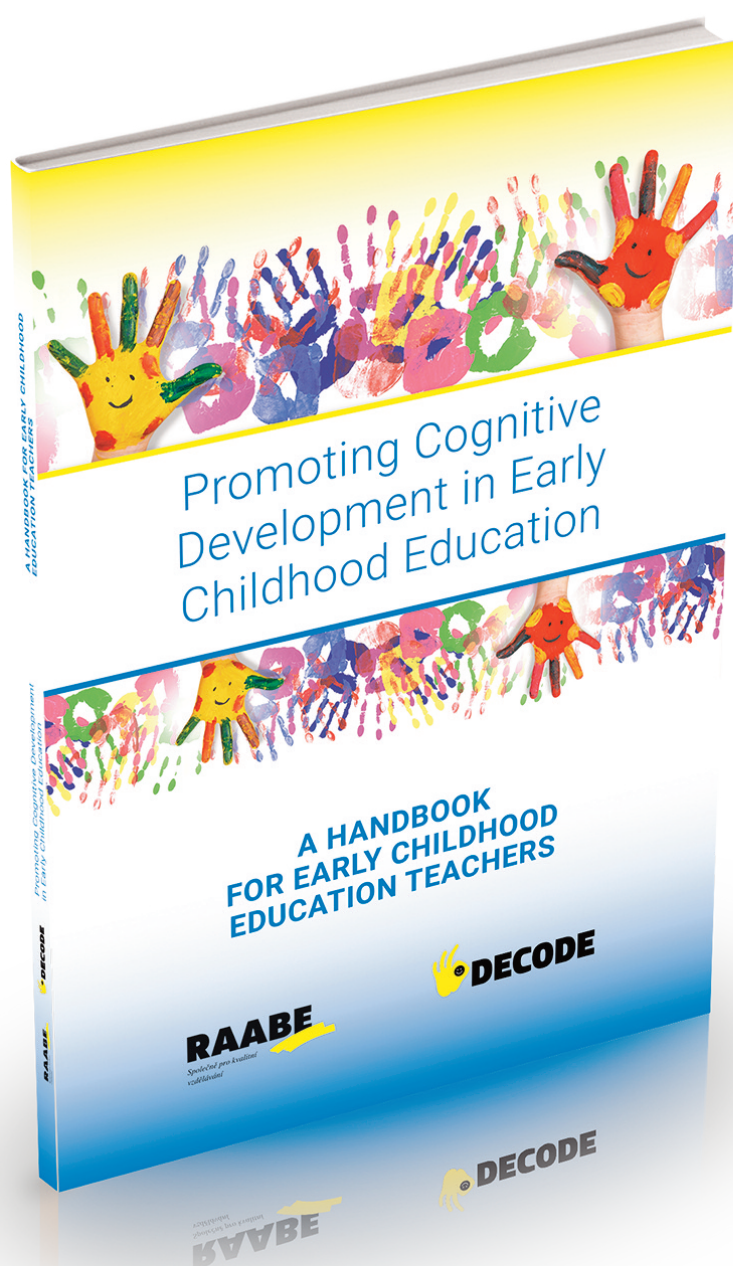
## **PROJECT OUTCOMES or FREE MATERIALS from the DECODE project**

Available outputs include:

- 1. Methodology for kindergarten teachers**
- 2. Handbook for parents of preschool children**
- 3. Handbook on workshops for teachers**
- 4. Training programme for kindergarten teachers**
- 5. Digital activity repository for children**

## FIRST PROJECT OUTPUT – METHODOLOGY FOR KINDERGARTEN TEACHERS

One of the first outputs of the project is a publication entitled **Promoting Cognitive Development in Early Childhood Education**. This publication is primarily intended for kindergarten teachers and aims to enhance their readiness to apply effective educational strategies that support the balanced socio-emotional and cognitive development of children (not only) from socially disadvantaged backgrounds. The publication combines expert theoretical content with 96 engaging learning activities for working with children.



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<b>5.2.6 Our surroundings</b>	
<b>Author</b>	Hanna Zbinden
<b>Title</b>	What does the design see from above?
<b>Topic</b>	Our surroundings
<b>Cognitive development domain</b>	Memory
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• Create oriented in the immediate surroundings, remember the names of various objects and their locations in the village.</li> <li>• Distinguish certain objects in symbols and memorize them.</li> <li>• Name most of what surrounds the child, what they see around them, and in the picture.</li> <li>• Collaborate with others.</li> </ul>
<b>Age of children</b>	5–7 years
<b>Anticipated challenges and recommendations, suggestions for children with disadvantaged backgrounds</b>	<p>Choose only one object or a small number of buildings. It will also be better for the child to choose an object they know best – for example, the kindergarten or a store.</p>
<b>Preparation/materials</b>	IPads
<b>Instructions</b>	<p>Wait for to look at the world from above. Do you know, children, what a dragon sees from above? First, I will use photos of the most well-known buildings in our town on iPads, and then, back at kindergarten, we'll look at them from above. Take iPads and head to the village.</p> <p>Stop at interesting objects and take photos of them (preferably from multiple angles).</p> <p>Name the objects and describe how they look (from below), from the front, from the side, from the back.</p> <p>Upon returning to kindergarten, use iPads to list the satellite image in the Google Maps app.</p> <p>Look at the objects from the perspective of a dragon (from above).</p> <p>Try to identify individual objects and answer the question: What houses, ponds, etc.) English names: houses on maps (e.g., for the map, etc.).</p> <p>The children will note the village, take photos of interesting objects (school, church, etc., restaurant, etc.). The children will work in smaller groups of parents taking turns in photography. They will discuss each other's photos.</p> <p>They will discuss what they see for above: for describe how they look, and try to remember all the objects they photographed in the village (upon returning to kindergarten, they will review the photos once more (the teacher can print the photos for better reference).</p> <p>Using iPads, they will open the Google Maps app, access the map of the area, and try to find the photographic objects from a dragon's perspective (from above). They can also name other things in the vicinity of these objects (trees, cemetery, pond, etc.).</p> <p>They will discuss the difference between what they see from the ground and what they see from above.</p>

<b>Description</b>	They will try to recall various details about the objects that would help them recognize them on Google Maps.
<b>Feedback and support during the activity</b>	<p>The teacher asks the children:</p> <ul style="list-style-type: none"> <li>What interesting objects in two places they know.</li> <li>Whether they know where these objects are located and if they can find their way to them.</li> <li>Why these objects are interesting to the children.</li> <li>What they like and dislike about them.</li> </ul> <p>The teacher for himself will always share his opinion with the children in the end and that will emphasize to them that not everyone's opinion has to be the same, and that each child may use different objects as family.</p>
<b>Questions for reflection</b>	<p>The teacher asks the children how well they did in negotiating the village and finding objects. She begins if they had problems to see anything unusual that caught their attention. She asks whether they remember the rules to individual objects (from school to the church, etc.). Do you like the buildings? Which objects are interesting and why? Do you like this activity or why? Do you think you could find your house or a map with your camera?</p>
<b>Anticipated challenges and suggestions</b>	Review safety when using iPads outdoors – pushing, dropping to the ground.



Image – Working with a label



Image – Photographing the municipal office



Image – Searching for objects in the Google Maps app



Image – Collaborative work on the classroom



Image – Photographing objects



Image – Objects from the diago's perspective



Activity plan. Our surroundings – memory

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<b>5.2.16 Safety in road traffic</b>	
<b>Author</b>	Jilliana Kofala
<b>Title</b>	<b>What does this traffic sign mean?</b>
<b>Topic</b>	<b>Safety in road traffic</b>
<b>Cognitive development domains</b>	<b>Memory</b>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• Training visual working memory (through play)</li> <li>• Training attentional memory (through engaging in traffic)</li> <li>• Training semantic memory (understanding the meaning of traffic signs)</li> </ul>
<b>Age of children</b>	4–5 years
<b>Anticipated challenges and suggestions for facilitators, recommendations for children from developmental backgrounds</b>	We ensure that children have enough opportunities for active learning. We also meet a variety of questions tailored to their backgrounds to get them thinking.
<b>Preparation/materials</b>	Duplicated traffic sign cards, reflections, traffic surface (e.g. play mat on the top of the table)
<b>Instructions</b>	<p>On an active week we observe the surroundings, look for road signs and discuss them. In the playground we can do the conversation about road safety. What does road safety mean to you? Do you know any other kind of traffic?</p> <p>Show the traffic sign card and talk about what they mean. Explain the meaning of the signs to those who do not remember or know them.</p> <p>Divide the children into pairs to play a memory game. They turn over the cards with the road signs and take one sign for each pair. When a child finds two cards with the same sign, they try to name them and explain the meaning of the road sign. The meaning can also be shown in traffic.</p> <p>The children continue the game in pairs on a traffic sign to play mat with traffic drawn on it where they act out their patterns. They use small figures of road signs and means of transport (e.g. toy car).</p> <p>During the game, encourage the children to talk, negotiate and explain to each other what decisions they have made in choosing a traffic sign and what to meaning it.</p>
<b>Description</b>	The children choose cards a box for a pair of traffic signs while developing their visual and listening and reinforcing traffic concepts through conversation. During the activity, the children work together, talk, listen to each other and help each other.
<b>Feedback and support during the activity</b>	I can see that you are observing well and talking to each other. We encourage children to talk and give them individual support if they need it. Children do not understand that traffic, work and play together to participate and explain the meaning of the traffic signs to their peers.
<b>Questions for reflection</b>	<ul style="list-style-type: none"> <li>• How did they agree on who should start?</li> <li>• How many signs did they find? And how?</li> <li>• What should we do when we see the road sign on the street? And why?</li> <li>• What colour is it? What shape does it have?</li> <li>• Why do you think the signs have different shapes?</li> </ul>

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TRACED

<b>Anticipated challenges and suggestions</b>	When actively working on the side of the road (be aware of the safety of others (reading hands, reflectors, walking on the inside of the road). Stop safely during the observation so that the children can take a peak about the road sign, its features and its meaning.
<b>Appendix</b>	Revised 7/9/3/2023 from: <a href="https://learning.com/developing/7/9/3/2023/fofbc/74476x38649706.jpg">https://learning.com/developing/7/9/3/2023/fofbc/74476x38649706.jpg</a>

Appendix 1 – Active observation work

Appendix 2 – Learning the meaning of road signs

Appendix 3 – Reinforcing the meaning of road signs

Appendix 4 – Memory game

Appendix 5 – Playing the game on the TAFATC board

Appendix 6 – Traffic signs

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Activity plan: Safety in road traffic – memory

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The publication is available in PDF format and can be downloaded free of charge.

Download at:

<https://decode.raabe.cz/project-objectives-en/>



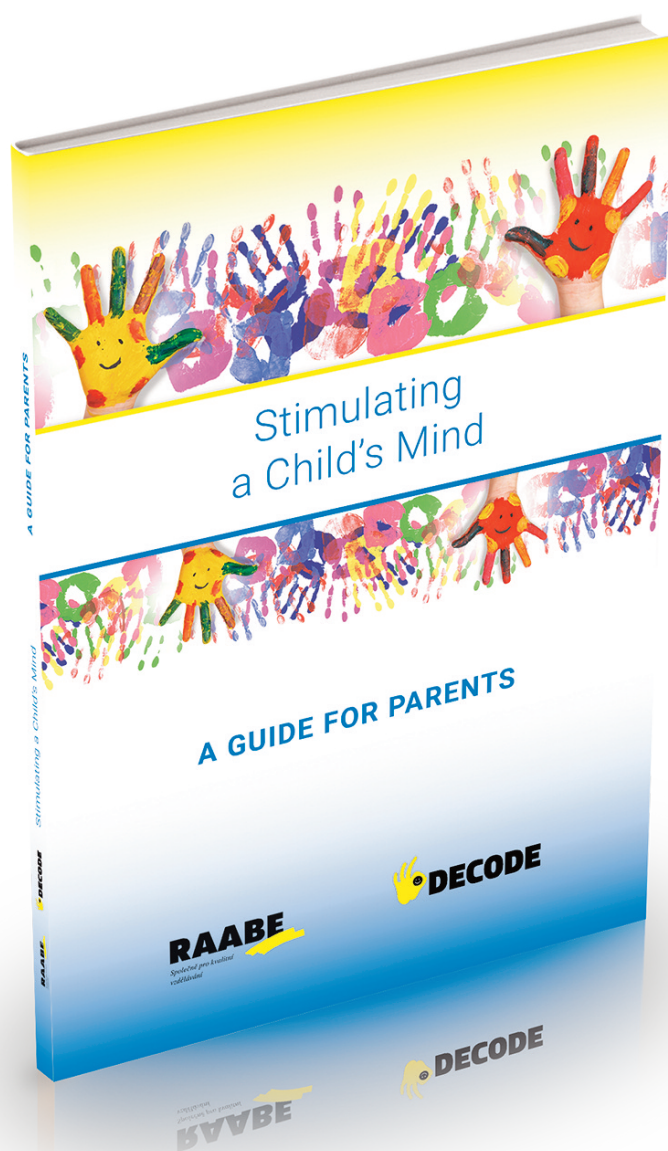


## SECOND PROJECT OUTPUT – A HANDBOOK FOR PARENTS OF PRESCHOOL CHILDREN

Another guide, ***Stimulating a Child's Mind***, offers tips on activities that can support your child in the transition from nursery to primary school. It focuses particularly on the development of intellectual skills such as perception, attention, memory, thinking, language and speech.

The introduction provides an overview of these areas to help you better understand you can better understand what school readiness entails. This is followed by practical recommendations for supporting your child at home – from creating a stimulating environment and encouraging learning, to developing healthy habits and a positive relationship with knowledge.

Finally, the guide provides concrete ideas for both indoor and outdoor activities that help your child learn with joy.



## 1. Cognitive development

### 1.1 Discovering the world through perception

Author: Alja Krevcl

#### What is perception?

Perception is the complex process by which people organize and make sense of the sensory information they get from their surroundings. We perceive the world around us through five senses: sight, hearing, touch, taste and smell. These multiple sense modalities give us rich perceptual information about the world and things that we are doing.

#### What are some key concepts of perception?



**Visual perception** is the process of making sense of what you see. This is crucial for learning, communicating, and navigation. It helps children understand where things are in the room and how they relate to each other, it even helps them use their eyes and hands together, like when catching a ball.



**Auditory perception** is the ability to understand and interpret sounds, which is important for communication. It helps children recognize a familiar voice in a noisy room and localize a specific sound.



**Tactile perception** is the process of interpreting information through touch, which is important for physically interacting with the environment. Children use tactile perception to explore textures and temperature. It even helps them to name an object without seeing it.



**Olfactory perception** is the ability to detect and identify smells, which often have emotional associations. It helps children connect smells to memory, as children often associate smells with specific memories.



#### Foster love for learning /Encouraging Learning

Nurturing a love for learning is a powerful gift that can shape a child's future. Through strategies such as making learning enjoyable, following their interests, being a learning role model, embracing mistakes and growth, and encouraging curiosity and questioning, we can inspire a lifelong passion for learning.



##### Make learning enjoyable

Create a positive association with learning by making it enjoyable. Incorporate games, hands-on activities, and interactive experiences that make learning engaging and fun.



##### Follow their interests

Pay attention to your child's interests and tailor learning experiences accordingly. Encourage exploration of topics they find intriguing and provide resources, books, or materials related to their passions.



##### Be a learning role model

Demonstrate your own love for learning by sharing your interests and engaging in intellectual pursuits. Let them see you reading books, seeking new knowledge, or pursuing hobbies that involve continuous learning.



##### Embrace mistakes and growth

Foster a growth mindset by emphasizing that mistakes are opportunities for learning and growth. Encourage them to embrace challenges, persist through difficulties, and celebrate their efforts rather than solely focusing on outcomes.



##### Encourage curiosity and questioning

Foster a sense of curiosity by encouraging your child to ask questions and explore the world around them. Support their natural curiosity by providing explanations, engaging in conversations, and encouraging them to seek answers through books, online resources, or hands-on exploration.



Unlocking your child's cognitive potential at home

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## 4. Unlocking your child's cognitive potential at home

Author: Maruša Laure

#### Create a nurturing environment

Your home is your child's primary learning space. Ensure it is a safe and nurturing environment that enables curiosity and exploration, balanced with proper supervision for safety.



##### Express your love

Creating a warm and loving environment is crucial for your child's cognitive development. Small gestures of love, like a hug, a cuddle, or a comforting touch, can provide your child with a sense of security and emotional stability, fueling their confidence and mental well-being.



##### Provide clean and safe environment

Ensure that the objects and toys your child plays with are clean and safe. Regularly check for potential hazards. Clean them regularly to maintain hygiene.



##### Create structured personal spaces

Structure is essential for a child's cognitive development, promoting predictability and security. Having their own sleep area helps establish good sleep patterns, crucial for memory and focus. A separate play or learning area reduces distractions and encourages deep learning.



##### Establish a routine

Routine and consistency offer a sense of security to your child. Establishing a consistent schedule within your home environment can support cognitive development and enhance their sense of predictability and safety.



##### Minimize distractions

Distractions can often be obstacles on your child's path to cognitive development. By minimizing distractions like excessive screen time or noise, you can create a conducive environment for their learning and cognitive development.

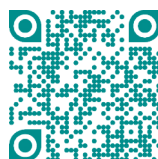
6 Stimulating a Child's Mind: a Guide For Parents



The publication is available in PDF format and can be downloaded free of charge.

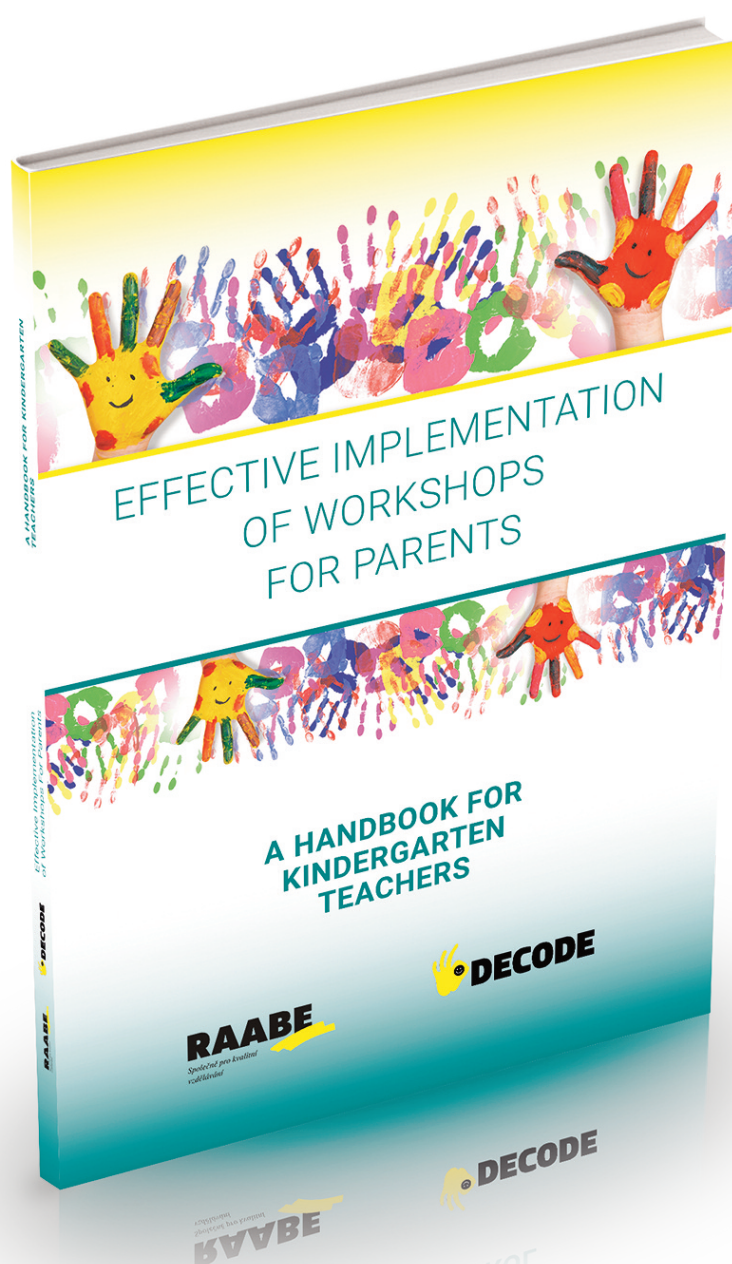
Download at:

<https://decode.raabe.cz/project-objectives-en/>



## THIRD PROJECT OUTPUT – A MANUAL ON WORKSHOPS FOR TEACHERS

**Effective Implementation of Workshops for Parents** is a practical guide for kindergarten teachers who want to effectively involve parents in the education of preschool children. The manual offers clear guidelines, tips and strategies on how to successfully prepare, organize and conduct workshops and seminars that promote active collaboration between school and family. The goal of these activities is to motivate parents to create a stimulating learning environment at home, thereby enhancing children's cognitive and socio-emotional development.





## 2. Planning and preparing the workshop

### 2.1 Identifying the needs of parents

Identifying the needs of parents of preschool children is vital to developing effective workshops and other support programmes.

The following are selected steps and methods to identifying these needs: Questionnaires and surveys, one-on-one interviews, face-to-face meetings, group discussions, feedback from workshops, online communities, research and studies.

By using a combination of these methods, teachers can gain a comprehensive picture of the needs of parents of preschool children and better tailor the workshops to their expectations and requirements.

#### DECODE<sup>11</sup> WORKSHOPS:



##### Identifying the needs of parents of preschool children involved in the DECODE project:

The DECODE project focuses on developing the cognitive potential of preschool children, especially disadvantaged children. It supports education through innovative learning resources for the home environment.

**The identification of the needs of parents of preschool children participating in the DECODE project covers the following areas:**

**Supporting cognitive development.** Parents need the knowledge and resources to support the development of their children's perception, attention, memory, thinking, language and speech at home so that they can effectively build on their children's learning activities in kindergarten.

**Supporting the child in the home environment.** Provides recommendations and suggestions for preparing a supportive home environment to stimulate thinking, promote health and nutrition, and build a positive relationship with learning and the joy of discovery. To help parents motivate their child to participate in activities.

**Parents' communication with teachers.** Parents want effective feedback and consultation with teachers about their children's progress and the opportunity to ask questions about the project's methods and objectives.

**Access to methodological and digital tools.** Parents need access to digital materials and a parent handbook that they can use to work on their children's skills outside of school.

### 2.2 Selecting the topics and defining the objectives of the workshop

The topics of the workshops are based on identifying the needs of parents of preschool children.

Parents of preschool children are usually concerned about their child's development while improving their parenting skills.

<sup>11</sup> Link to the DECODE project: <https://decode.raabe.cz/>



## 4. Implementation and examples of DECODE workshop invitations



## 3. Structure of the DECODE sample workshop for parents

Examples of workshop titles for the parenting public:

1. HOW CAN YOU PROMOTE THE DEVELOPMENT OF THE SENSES, LANGUAGE AND THINKING IN PRESCHOOL CHILDREN AND NOT MISS OUT?
2. HOW TO ENCOURAGE AND NOT MISS OUT ON THE DEVELOPMENT OF SENSES, ATTENTION, MEMORY, THINKING, LANGUAGE AND SPEECH IN PRESCHOOL CHILDREN?
3. HOW CAN YOU SUPPORT AND NOT MISS OUT ON THE DEVELOPMENT OF A PRESCHOOL CHILD FOR ENTRY INTO THE 1ST GRADE OF PRIMARY SCHOOL?

**Total duration of the workshop:** 4 hours (half day)

### Structure and schedule of the demonstration workshop:

#### 3.1 Introductory part (15–20 minutes)

- a. Welcome of the participants and introduction of the lecturers and organisers (kindergartens).
- b. Presentation of the aim and agenda of the workshop.
- c. Brief introduction of the participants to each other (e.g. short introduction or icebreaker).

#### 3.2 AREAS OF CHILD DEVELOPMENT – theoretical part (30–45 minutes)

- a. Presentation on areas of child development (source: Chapter 1 from the *Stimulating a Child's Mind: A Guide for Parents*<sup>12</sup>).
- b. Areas: Perception, attention, memory, thinking, language and speech, motor and graphomotor skills, socialisation
- c. Practical examples (DECODE videos can be used for demonstration).
- d. Opportunity to ask questions.

#### 3.3 HOW PARENTS CAN SUPPORT THE CHILD AT HOME – practical part (45–60 minutes)

- a. Presentation on how you can support your child at home (source: Chapter 2 from the *Stimulating a Child's Mind: A Guide for Parents*<sup>13</sup>).
- b. Involve parents in modelling situations.
- c. Discussion and exchange of experiences among the participants about selected stimuli that we can prepare in the home environment for the development of preschool children.

<sup>12</sup> Link to the DECODE project: <https://decode.raabe.cz/>

<sup>13</sup> Link to the DECODE project: <https://decode.raabe.cz/>

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## FOURTH PROJECT OUTPUT – TRAINING PROGRAMME FOR KINDERGARTEN TEACHERS

The online course **Competence Development of Children in Preschool Kindergarten Teachers** offered under the umbrella of the Raabe Academy, is designed to support the professional growth of kindergarten teachers and promote their continued education.

The course provides flexible self-paced learning with no fixed schedule. It is enriched with expert texts, annotated presentations, video demonstrations and reflective assignments.

The aim is to strengthen the professional development of teachers and teams, equip them to face modern educational challenges, and contribute to improving the quality of preschool care and children's readiness for school.

Upon successful completion, participants receive a certificate that is officially recognised as part of their professional development.

The training programme is available online and free of charge. Registration and login are required for certificate issuance.



Register HERE:

<https://raabeakademie.cz/vzdelavanie/vzdelavani-jednotlivci/cognitive-development-of-children-in-preschool>

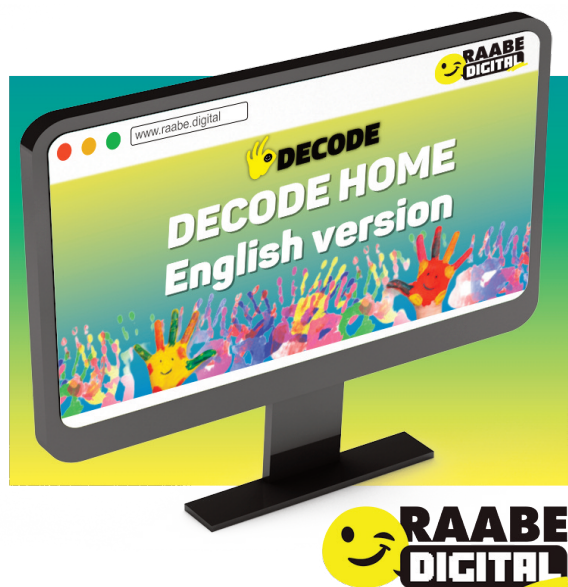


## FIFTH PROJECT OUTPUT – DIGITAL REPOSITORY OF ACTIVITIES FOR CHILDREN

**DIGI HOME DECODE** – a digital learning platform that is freely available and ready to use any-time, anywhere. Whether you're using a computer, tablet, or smartphone, DECODE HOME is always at your fingertips – a practical tool for supporting your child's cognitive development.

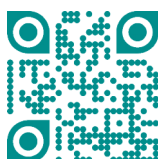
The platform **DECODE HOME** offers a set of activities focusing on five areas of cognitive development. The activities are clearly divided according to the environment in which they can be implemented – indoors (e.g. at home, ideal in bad weather) and outdoors (e.g. in the garden, in the park or when travelling, when you want to use your free time in a meaningful way).

**The DECODE HOME** digital environment contains a total of 320 game activities that are fun, diverse, and age-appropriate. These activities not only provide engaging play and entertainment, but also support the development of logical thinking, memory, attention, language skills and other key areas of cognitive development.



The digital repository is available in IZZY format and can be accessed freely without registration.

Link to the platform HERE:  
<https://sk.izzi.digital/#/>





## Author team of the DECODE project

("DEveloping the Cognitive Potential of Preschoolers from Disadvantaged Backgrounds") of the international European Erasmus+ project (Erasmus + Program, KA220-SCH, Cooperative Partnership, project registration number: 2022-1-CZ01-KA220-SCH-000086145)

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*We believe that the DECODE outputs will serve as valuable tools not only for teachers in kindergartens, but also for parents at home. We believe that the project outputs will contribute to improving the quality of early childhood education in all participating countries.*

*DECODE Project Partners and the Raabe Publishing House Team  
(Prague, 2025)*

