Co-funded by the European Union

robo STEAM kids

STEM in Early Childhood and Care (Romania)

NATIONAL POLICIES

To accomplish the integration of STEAM into the Romanian educational system, the Ministry of Education produced in 2019 the "Action plan for education in Romania 2019–2030" with the goal of enhancing the quality of public education by boosting the well-being of school communities. By producing a new STEAM curriculum, will result a new approach to mathematics skills, creative thinking abilities, computational thinking and coding, engineering and technology innovation, as well as a calibrated evaluation of learning outcomes based on individual routes and clearly defined criteria.

GOOD PRACTICES

The STEM Kids Robotics Academy (www.stemkids.ro) - exposing children to multicultural experiences and international robotics and innovative solutions competitions.

The "RoboIT 9" project (www.stiintescu.ro/proiecte/roboit-9) facilitate and support a clear, easy-to-follow journey in the STEAM disciplines.

Robo Club (www.roboclub.ro) is a club created by parents for children, so that they can create robots to explore science in a fun way.

CPD

Unfortunately, in Romania, pre-school and primary school teachers cannot find formal CPD programmes for specialising in educational robotics and STEAM education in ECEC.

The only resources and training programmes there are available are provided by various learning platforms, such as: **Nextlab.tech** (www.nextlab.tech/english) is a frictionless adaptive learning platform that empowers teachers, children and students to build simple robots, plant caring robots, aeroponics towers and robotic greenhouses.

PROJECT NUMBER: KA220-SCH-000048987

GAPS & ROOM FOR IMPROVEMENTS

- the insufficient training of the pre-school and primary school teachers.
- the need for improvements in the methodology of training for teachers.
- The need for improvements in the pedagogical practices with students.
- The need for devoting more resources to teachers with lesser programming skills and greater initial motivation.

MAIN CHALLENGES

- Making cross-disciplinary STEM linkages is a difficult endeavour that requires instructors to develop courses that enable students to comprehend how STEM knowledge is applied to real-world challenges.
- Many educators believe that planning and delivering interdisciplinary and multidisciplinary education takes too much time and energy.
- The majority of youngsters are unable to apply the classroom-learned notions to the actual world.

MORE

Pre-schoolers continuously investigate, experiment, and use a variety of instruments, solve issues, compare things, and question facts and rules.
Numerous academics and educators concur that the incorporation of Natural science, Technology, Engineering, Arts, and Mathematics in basic school serves as a powerful motivator and accelerates learning.
Many of the daily activities of children need STEAM abilities.

PROJECT NUMBER: KA220-SCH-000048987