

STEM in Early Childhood and Care (Poland)

NATIONAL POLICIES



STEAM education in Poland is concentrated at the primary education level. At ECEC level policies and programs are still lacking. No robotics nor STEAM elements are explicitly included in the national curriculum for pre-schools. Many aspects important in ECEC – as indicated in the core curriculum – can be taught within STEAM model but, in practice, this approach is still rarely adopted by Polish nurseries and pre-schools.

GOOD PRACTICES

1. **Foundation for the Development of Digital Education** has developed the "We teach Children to Program" program, in which learning to code is treated as a process, where each action results from the previous one and is an introduction to the next.

2. **Private pre-school „Academy of Smile“** is a bilingual private nursery and kindergarten, where great importance is attached to conducting creative activities in order to prepare children for education in primary schools and for life.

3. **Teddy bear public pre-school in Tychy** - there are general development activities, but also those that build digital competences. Thanks to the staff's approach, children are able to use new technologies and media.

4. **Profi Lingua** runs workshops for children where they can acquire mathematical skills and soft competences. They have the opportunity not only to participate, but also to take on the role of inventors, constructors, scientists and explorers.



CPD



The analysis of the available courses and training showed that there is an offer regarding robotics and STEAM education in ECEC, but the availability varies depending on the region, often is very limited, and most of the courses are paid. It should be noted that qualification courses may only be conducted by teacher training institutions. At the same time, on the Polish market there is a wide range of commercial training courses that do not meet the criteria for such classes to be classified as professional development.

GAPS & ROOM FOR IMPROVEMENTS

1. Lack of systemic approach
2. Lack of easily accessible and high-quality learning opportunities for ECEC teachers
3. Lack of funds to support forms of professional development
4. Lack of available activities for children younger than 6-7 years of age, especially outside larger cities



MAIN CHALLENGES

1. Raising awareness about importance of STEAM in ECEC among policy makers, teachers, and parents.
2. Preparing teachers for introduction of Educational Robotics and STEAM education.
3. Securing financial resources for educational materials, kits and equipment for pre-schools.



MORE

All the above-mentioned challenges are interlinked. To eliminate disparities in children's opportunities and expand access to high-quality robotics and STEAM education, it should be incorporated in everyday activities of pre-schools. But even more importantly, well-prepared teachers who can make a good use of these resources are needed.