

# Aesthetic-educational-approach in STEAM-teaching: (Ex)change in Science, Arts & Service-learning

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STEAM presents the primary school system with the need for continuous research and continuous (further) development of various learning materials and teaching concepts at the pupil, teacher, and curricular levels. The skills to be acquired and the numerous long-term goals in STEAM are primarily intended to lead to problem-solving thinking, responsible action, and a value-based society. It is therefore a broad and complex bundle of skills (knowledge, handling, application), which is often summarized as literacy in the variety of terms used in current research. By expanding the STEM concept to STEAM, the learning and teaching approach of aesthetic education is chosen in the doctorate in order to train the aforementioned meta-skills, which also play a central role in computational thinking and informatic thinking (pattern recognition, algorithms, etc.). Aesthetic education, in particular, makes a significant contribution to the development of images of meaning and the understanding of symbols, which in turn are essential components of computational thinking. Based on research, learning scenarios are to be developed at both teacher and student levels, which, above all through the creative and artistic approach, sustainably promote students' self-expression, their ability to reflect, and the learning of STEAM content. The Erasmus+ project SLIDE (1/01/22-31/12/24) stands for Service-Learning, Inclusion and Digital Empowerment.

The Service-learning- and civic-engagement approach aims to motivate people for positive social change, facing societal, environmental, and technical challenges/problems. The participants develop solutions and participate actively in their community. Digital Empowerment in SLIDE is one of SLIDE's main outcomes: a free MOCC, fostering Design-Thinking-Skills and digital skills through interactive and holistic games, videos, exercises and lectures. Inclusion in the SLIDE-project includes rural/remote and urban areas, people with special needs and different ethical and societal backgrounds creating their environment based on their individual needs in rural/remote and urban areas. SLIDE offer inclusive settings and virtual events, such as an online-world-cafe, where different educational institutions enable international exchange.

SLIDE's sophisticated concept has been published in a manifesto; several upcoming events as well as detailed success stories and completed projects are summarized on the website: <https://slide.reu.pub.ro>