## TFK programme, funded projects 2023

### Project title: Digital learning in STEAM pedagogy for the Equity of Education

#### Coordinator

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Achieving equity in education is a significant challenge faced by educators and policymakers around the world. Today’s tools for contributing to equity of education extend to digital environments, which can increase access to education for people who have barriers to attend school. Digital pedagogy may also help bridge educational gaps between urban and rural areas and bring together learners from different corners of the world.

The aim of this project is to promote the equity in education through the implementation of digital pedagogy in STEAM teacher education, by creating, sharing and evaluating good practices and information within teacher education in Finland and South Africa. STEAM projects integrate subjects such as Science, Technology, Engineering, the Arts, and Mathematics into teaching and learning, while digital literacy provides a way to engage critical reading in STEAM education.

The project activities develop STEAM teaching and teacher training in Finland and South Africa. The project focuses on the interchange of pedagogy practices through virtual learning activities and short-term mobility as a form of HEI collaboration.

#### Partners

**Stellenbosch University**  
**University of Eastern Finland**

Development of digital STEAM literacy includes the production of digital materials and virtual STEAM workshops delivered by the participating institutions. Digital open access STEAM materials are produced in Finnish, English, Afrikaans and isiXhosa to benefit the pedagogical development of STEAM teachers and student teachers in Finland and South Africa (SA). Afrikaans is the majority language spoken in the Western Cape, the western part of South Africa, with isiXhosa the second most common language, followed by English. Finnish affords resources to teacher education in Finland and English to wider audiences.

Short-term mobility in between South Africa and Finland promotes exchange and sharing of resources for the STEAM teachers and students from University of Helsinki (UH), University of Eastern Finland (UEF) and Stellenbosch University (SU), South Africa. The mobility periods facilitate project participants to develop competencies in interdisciplinary digital STEAM literacy, design thinking and critical reflection, and promote the 21st century skills through information exchange and internationalization.

As a result, DigiSTEAM provides resources for educators to develop critical and creative thinking, effective communication and collaboration, reflective teaching culture and pedagogical practices that extend beyond the classroom. Educational resources produced during the project will be openly available during and after the project. Evaluations of digital STEAM literacy are also implemented through the project development process. The evaluations include bibliographical analysis of STEAM, workshop participants pre-knowledge of STEAM education and experiences from the STEAM material implementation during the project, which provide material for MA theses completed at the participating HEIs.