



Contribution ID: 167

Type: **Oral presentation**

Flexible learning environment for the DigCompEdu competences development of STEM teachers

Tuesday 1 July 2025 10:00 (20 minutes)

The digital competences of teachers, as defined in the DigCompEdu framework, play a key role in the digital transformation of education. The SELFIEforTeachers tool enables the assessment of teachers' preparedness to develop pupils' digital competences. The educational environment in schools should create conditions for active pupil learning, targeted competence development, and creative teacher work. The internet, digital technologies, and artificial intelligence are significantly changing the position and role of teachers in education. Teachers should be specifically prepared and supported to address these new challenges. Based on an analysis of the state of STEM classrooms in Slovakia and in relation to the FCL standard, we present our recommendations for transforming the learning environment. The multifunctional STEM classroom we propose, consisting of learning equipped with digital technologies and teaching tools, serves as a training center for the preparation of pre-service teachers and for the professional development of in-service teachers in line with the DigCompEdu framework. In this paper, we map initial experiences from teacher training and their attitudes towards the use of learning zones in school practice.

Education level

Pre-service and in-service teacher education

Physics topic

Full curriculum

Research focus

Lab course design

Research method

Practitioner's Inquiry / Action Research (Qualitative research)

Organizing preference criteria

Research focus

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