



ELITe project – Development of inquiry-based meta-training for STEM teachers

QED'17 UNESCO International Workshop: Children in the Digital Era

September 21, 2017 Sofia, Bulgaria

Abstract

The overall goal of the ELITe Strategic Partnership is to support teachers' professional learning for competence development, targeting specifically in-service educators in the STEM domain.

Challenges and the according implicit requirements for addressing the overall goal of the Strategic Partnership are:

- From a conceptual perspective, general guidelines about the competences required for teaching are usually embedded in the national curricula and autonomy is then left to university or college providers to develop and apply detailed competence requirements in teacher education programs accordingly. Efforts to stimulate teachers' competence development through professional learning opportunities need to be place-based, taking into consideration the various interpretations and understandings.
- From a methodological perspective, current prevailing approaches in teachers' training programs focus on subject knowledge, pedagogy and practice (classroom-based training). Such approaches are highly influenced by the way teachers have received training themselves. There is a need for providing flexible professional development opportunities in which the training methodology has a prevailing role, which sees teachers as reflective practitioners, responsible for their own learning.
- From a domain specific perspective, STEM education is currently defined as *creative education to foster the future needs of society* (Sutcliffe, 2011). The thematic of the professional learning activities for STEM in-service teachers need to reflect current policy orientations under the RRI agenda on the role of STEM education and help teachers to model key competences required (knowledge, skills and attitudes) in order to help students to acquire them.

Target Audience

STEM teachers, parents

Length

1 hour and 30 minutes

Workshop Objectives

Introduction in the ELITe project goals and current condition. Familiarizing with current results related to the teachers competences development needs according to the school managers,

teachers, teachers’ educators, parents and other stakeholders. Introducing the ELITE platform for e-inquiry education. Generating ideas for particular inquiry-based learning scenarios for teachers’ competences development.

Workshop Format

Presentation, demonstration, group work, practice

Preliminary Program

9:30 – 9:50	ELITE project – goals and current results	Nikolina Nikolova
9:50 – 10:10	Group work – generation of ideas for thematic and pilot scenarios of teachers’ competences development: in general teaching/learning issues, in STEM related issues, and in teachers-parents relating issues	Moderators: Nikolina Nikolova Pencho Mihnev
10:10 – 10:20	Participants’ results presentation	
10:20 – 10:30	ELITE e-inquiry platform demonstration	Pencho Mihnev
10:30 – 10:50	Practice in ELITE e-inquiry platform	Moderators: Pencho Mihnev Nikolina Nikolova
10:50 – 11:00	Summary	Nikolina Nikolova

Note:

For comfortable practical work, the participants can use their own laptops or tablets. There will be several tablets for common use also.

Expected results

Educational scenarios’ ideas for meta-trainings for STEM teachers, which to be implemented during the further professional competence development courses.