

**The STEAME Facilitators of Learning – the teachers of the future**

**A vision for the paradigm shift of Education**

By Prof. Gregory Makrides\*

It is widely accepted and documented through studies and references that school students lack competences and skills at the completion of the cycle of their school studies. As one of the key factors that can develop competences and skills in school students, especially in grades 6-12, is the known multidiscipline and mutliscience project based learning activity. In the last 15 years we have seen the development from STEM to STEAM and now to STEAME (Science, Technology, Engineering, Arts, Mathematics and Entrepreneurship) becoming the subject set that through project based learning activity of school students, is considered the kinetic energy for producing the creators and innovators of the future. The catalyst in making this a reality are the subject teachers in service and the future student teachers through their initial training at the university level. This can be accomplished through the development of STEAME Teacher Facilitators Academies networked through Europe and beyond. These academies will support the change to the future schools with main actors the teacher facilitators as the future professionals and experts of learning change and facilitators of competence and skills development in youth. As Einstein said many years ago “Imagination if more important than Knowledge”, so one needs to imagine the future of learning with todays’ technologies, which is difficult but necessary in order to bring the changes we need and be ready for the change of school infrastructures to facilitate the new learning environments. Competence and Skills will be in the centre of future schools and future learning communities. Knowledge will be easily accessible and recoverable whenever needed and most important will be the competence to know where to find knowledge and understand how to use it and then one needs the skill to be able to apply knowledge and realize the competence.

The STEAME Teacher Facilitators Academies can support the training of service teachers already in schools and the training of future teacher facilitators produced through Higher Education. At certain stage, the service teachers will serve as mentors of the student teachers throughout a European mobility based system. This can create a networking between school education, university education and industry/business world, working together as co-creators for the sustainable development between teacher education providers with impact on the quality of education in Europe and eventually on the quality of life for every citizen. This will support the continuous professional development of future teachers and they will be laying the ground for the future schools of STEAME project based learning environments for students.

The main innovations vision to be delivered are:

1. STEAME Teacher Facilitators Competence Framework for student and serving teachers
2. STEAME Teacher Facilitators Learning Modules/Workshops
3. International Sharing Observatory for STEAME Learning Facilitators

4. Development of the STEAME Facilitators Community of Practice/Mentoring and Certification Programme

5. Policy Recommendations and the development of a European Federation of STEAME Teacher Facilitators Academies

Most of the above are based on experiences and innovations from 20 completed or running EU funded projects, under the ERASMUS+ KA2 funding Programme. All these 20 projects can share the experience and innovations created utilizing them in making the 5 innovations listed here above a quality innovation for serving the continuous professional development of teachers. This will also enhance the European Dimension and internationalization of teachers, facilitating the European wide mentoring to support mobility of teachers and place teachers in the path to Education 3.0 and 4.0, all for producing the creators of the future.

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