INTRODUCING THE STEAME SCHOOL OF THE FUTURE

There is a need to evolve and adapt to the changing educational landscape by enhancing creativity into learning programmes of the future

• Professor Gregory Makrides

The project "STEAME: Guidelines for Developing and Implementing STEAME Schools" is ending on December 31, 2021. However, it seems that the ending of this project could be the kick-off of a paradigm shift to Education 4.0, as it provides the steps education systems all around the world could follow in order to escape from Education 2.0, and change to Education 4.0 with learning based on inquiry and project-based learning. According to years of literature and research, it has been proven that this should be the way forward in order to help school students develop the needed competences and skills that appear to lack when they enter higher education (HE) studies, or enter the world of work. With today's development of digital learning, most of the learning needed by school students can be easily accessible or retrieved at any time and place.

STEAME (science, technology, engineering, arts, mathematics, entrepreneurship) has been developed to support European teachers' knowledge and understanding of creating successful STEAME learning and creativity programmes. It offers approaches to teaching, teaching materials, entrepreneurship aspects, organisational suggestions for STEAME-oriented teaching, propositions and analysis of STEAME-oriented curriculum. All the open educational resources (OERs) of the project are available through the STEAME Observatory. As an observatory, it is designed to be adaptive and dynamic, able to support a dynamic and adaptive STEAME curriculum in any school that needs to implement STEAME activities in the learning process.

The process of adding and updating the content is a continuous one, providing the opportunity to all teachers across the EU and beyond, to be up to date and to share and publish their own work if they wish to.

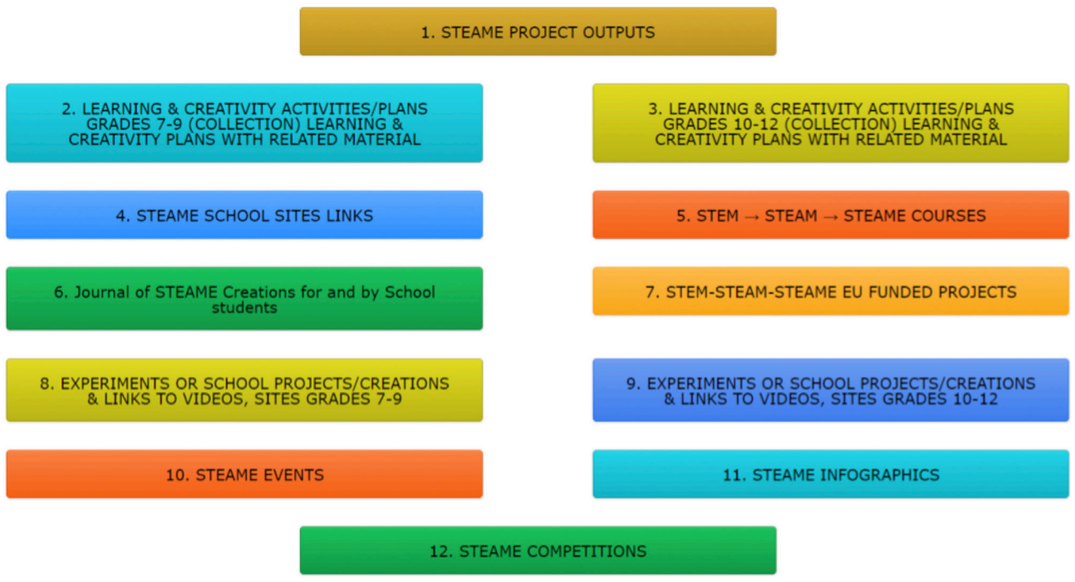

Fig 1: The structure of the STEAME Observatory (www.steame.eu)

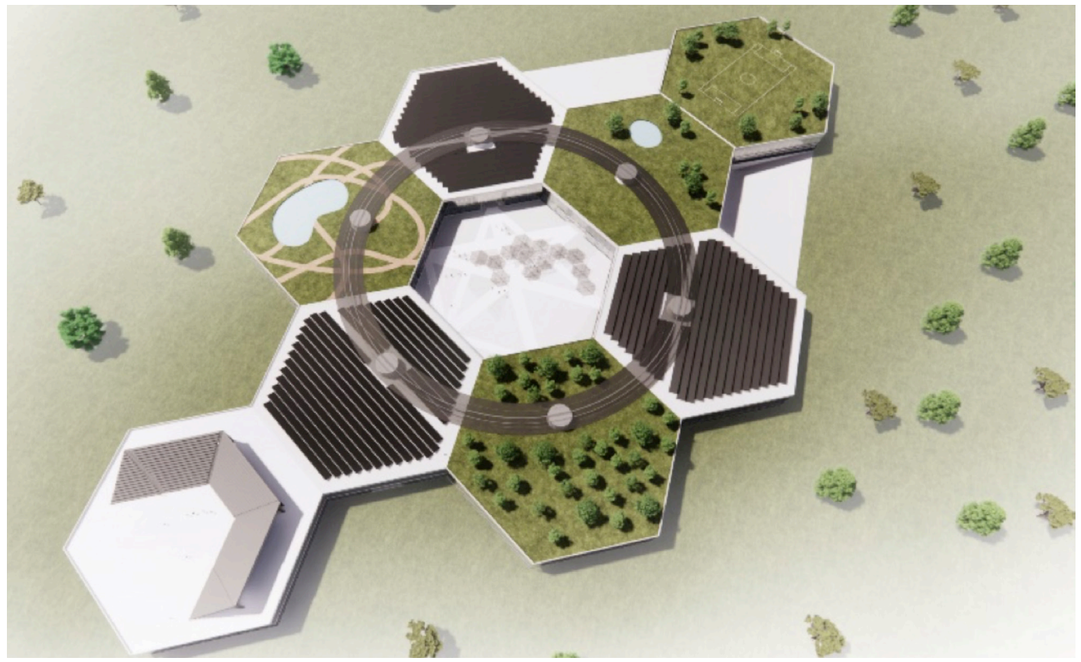

Fig. 2 : A top view of the design of the school fully energy self-sustainable with photovoltaics

The STEAME Framework consists of the following elements:

1. Learning and creative methodologies (PBL-IBL-PSL)
2. Guide to science communication as a skill for students
3. Guide to learning and creative (L&C) plan development, including a And L&C plan template
4. Evaluation rubric for implementing of a project
5. Observatory (guide to dynamic and adaptive STEAME material)methodologies adopted by the STEAME framework (PBL, IBL, PSL)

The following three methodologies are adopted by the STEAME framework:

A. Project-based learning methodology (PBL)
B. Inquiry-based learning methodology (IBL)
C. Problem solving learning methodology (PSL)
D. A guided method to L&C Plans development with an 18-step prototype procedure in supporting project-based work of student groups, moderated and supported by at least two teachers of different disciplines.

The project, based on an international investigation, a European wide survey and based on focus groups with teachers and experts, associate partners and through its consortium creative work, has developed guidelines for STEAME school organisation structures covering actions for existing schools and actions for future schools. Below we present indicative photos of the design of the STEAME School of the future. The project, before the end of 2021, will publish on its website ***www.steame.eu***, a fully-detailed content and designs of the STEAME School of the future.

The basement main content is a full set of STEAME Laboratories, VR rooms and entrances to the main amphitheatre and sports centre.

Fig. 3: A side view of the school one basement, ground floor, first floor and roof

The ground floor contains mainly satellite laboratories, open work space, learning stations and base entries into the small amphitheatres, reception entrance and main dual reception of the sports centre, one entrance for the school students during the day and another entrance for the community during the night, the access to the internal yard and cafeteria and more.

The first floor contains open work space, learning centres, learning rooms, a slow-moving train with space for group student work, entry into amphitheatres and more.

The roof contains photovoltaics, pool recreation area, circular sports field, sports courts, roof cafeteria and restaurant and more.

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