The many flavours of STEAM education for an inclusive environment

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STEAM is often seen as the integration of an art form into the teaching of sciences. Although that is not necessarily wrong, it is a very limited view of the powerful tool that STEAM learning can be. Just like a pizza, STEAM education can have "many flavours" and each of these “flavours” can be focused on with different intensities.

POLAR STAR is an Erasmus project that focuses on innovative educational methods. One of its pillars is an innovative STEAM methodology that focuses on delivering an engaging education for a diverse classroom. To make the methodology more understandable, the team has come up with an amusing exercise called “the pizza challenge”. It invites teachers to create a pizza. The aim is to reflect on the fact that even for a specific diet (for e.g., vegan), different people with choose different ingredients and flavours according to their likes and dislikes. Similarly, in a classroom, each student will have their likes and dislikes, their interests, their way of thinking and of working, turning them into unique “consumers”. With this parallel, teachers realize that it is important to offer different “flavours” to different students in a classroom.

The POLAR STAR methodology offers teachers a variety of lesson planners, focusing on the different flavours of STEAM. It guides teachers into reflecting on their students and choosing one or more activity templates for a given lesson. These templates can focus on STEAM (with special emphasis on a science-based activity), on STEAM (with special emphasis on an engineering-based activity) and on STEAM (with special emphasis on an arts-based activity). By diversifying the way they deliver their lessons teachers will be reaching a wider diversity of students and providing them with more engaging, motivational and interactive activities.

POLAR STAR integrates these methodologies in a diverse kit of activities provided for teachers and students, following the different activity templates, in the fields of Astronomy and Polar Science, as well as holistic interdisciplinary learning approach, based on the Big Ideas of Science.

All teachers are welcome in the project and can find more information on the projects’ website: http://polar-star.ea.gr/. During this talk the STEAM methodology to deliver Astronomy and Polar Science interactive lessons will be presented.