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Attracting European Youths to STEM Education and Careers: A Pedagogical Approach to a Hybrid Learning Environment

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Abstract : To bring science and society together in Europe, thus increasing the continent's international competitiveness, STEM (science, technology, engineering and mathematics) education must be more relatable to European youths in their everyday life. STIMEY (Science, Technology, Innovation, Mathematics, Engineering for the Young) project researches and develops a hybrid educational environment with multi-level components that is being designed and developed based on a well-researched pedagogical framework, aiming to make STEM education more attractive to young people aged 10 to 18 years in this digital era. This environment combines social media components, robotic artefacts, and radio to educate, engage and increase students' interest in STEM education and careers from a young age. Additionally, it offers educators the necessary modern tools to deliver STEM education in an attractive and engaging manner in or out of class. Moreover, it enables parents to keep track of their children's education, and collaborate with their teachers on their development. Finally, the open platform allows businesses to invest in the growth of the youths' talents and skills in line with the economic and labour market needs through entrepreneurial tools. Thus, universities, schools, teachers, students, parents, and businesses come together to complete a circle in which STEM becomes part of the daily life of youths through a hybrid educational environment that also prepares them for future careers.

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