

Scrum Challenges and Mitigation Practices in Global Software Development of an Integrated Learning Environment: Case Study of Science, Technology, Innovation, Mathematics, Engineering for the Young

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Abstract : The main objective of STIMEY (Science, Technology, Innovation, Mathematics, Engineering for the Young) project is the delivery of a hybrid learning environment that combines multi-level components such as social media concepts, robotic artefacts, and radio, among others. It is based on a well-researched pedagogical framework to attract European youths to STEM (science, technology, engineering, and mathematics) education and careers. To develop and integrate these various components, STIMEY is executed in iterative research cycles leading to progressive improvements. Scrum was the development methodology of choice in the project, as studies indicated its benefits as an agile methodology in global software development, especially of e-learning and integrated learning projects. This paper describes the project partners' experience with the Scrum framework, discussing the challenges faced in its implementation and the mitigation practices employed. The authors conclude with exploring user experience tools and principles for future research, as a novel direction in supporting the Scrum development team.

Keywords : e-learning, global software development, scrum, STEM education

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