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POSTER ABSTRACT

Technological Platform for online training to elderly citizens in Biomedical Engineering and Health Sciences as a tool of self-training to empower them towards an integrated care: HealthTEK case study.

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Begoña Garcia-Zapirain Soto[1], Felix Colás, Amaia Mendez Zorrilla, Jolanta Pauk, Bartosz Sliwecki, Boguslaw Hoscilo, Aline Dupouy, Julien Ramiz, Olivier Larre

1: University Of Deusto, Bilbao, Spain

HealthTEK is a platform for hybrid learning addressed to both elderly people and intergenerational students, interested in engineering and medicine. The rationale between this combination is to create synergies between any age students and scholars from both fields in order to improve the knowlege in future health systems within the European Union, to allow them to be empowered in terms of integrated care to allow them to be more autonomous. The project is funded by the European Commission under the Erasmus+ project and it is based on an online architecture that allows students to access syllabi for the courses of introduction to biomedical engineering and anatomy, including as pedagogical strategy the use of gamified lessons about the project frAAgiLe in the case of biomedical engineering and about several case studies related to the treatment of different health issues. As for professors, families or caregivers they will have access to information about the performance of their multigenerational students and they will be able to modify and add contents to the different lessons. This interactive system will also allow the researchers behind its creation in the universities of Deusto, ESTIA, Bialystok, and Francisco de Vitoria, to collect data and implement AI algorithms that allow the personalisation and improvement of contents.

Within the development of digital solutions for integrated care, this project does not only deal with an improvement and a closer relationship between healthcare and technology, it also works with students and scholars with reduced mobility, in order to make more contents accessible for them. The hybrid online solution that includes gamification is an optimised way to increase accessibility for those with disabilities, and also for those that, due to mental health problems, like anxiety, which is increasingly common in the post-COVID 19 panorama, struggle to get out of their homes or get into social situations like a classroom.

Apart from contributing to the development of digital solutions, HealthTEK also deals with the Integrated Care pillar of improvement of health and health systems, integrated care and empowerment of elderly citizens in particular. Through an improved educative system with hybrid and digital approaches, as well as gamified inclusion of students and scholars with reduced mobility, the future of healthcare can be improved as well. The contents of the units included in HealthTEK have been created by health professionals with the newest methodologies, focusing on recreating real situations and training students in natural environments, showing them the

processes of their future health-related jobs from the beginning until the conclusion of each activity. By always showing these activities from a first person perspective and making them become an active part of the gamified unit, the training ensures the collection of knowledge and skills in a natural manner.

In sum, the HealthTEK is part of the digital development movement for the improvement of health and healthcare systems and its testing and implementation will prove the benefits of creating new synergies between engineering and medicine studies and the appropriate training of citizens to improve their health self-management.