

Bringing innovation in sustainable product design in the digital era

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The current COVID-19 pandemic brought unexpected changes to teaching and learning practices and raised challenges as the Higher Education Institutions (HEIs) were forced to change their pedagogical practices. The improvement of digital teaching skills and the promotion of a better framework for the guidance of students were essential in order to give the students the opportunity to continue their education in the digital era.

From the advent of the pandemic outbreak and based on the *Ecotrophelia competition*, an e-lab course for the development of eco-innovative food products (from raw materials to market launch) was developed and introduced to the teaching curriculum of the integrated master Food Engineering program. This e-lab course project effectually fits to the concept of the Erasmus+ project “Digital transformation of project-based learning guidance in agri-food Higher Education Institutions - DigiFoodEdu” and is planned to be included in the white book to be developed by this project.

The students are divided into groups and motivated to develop their eco-innovative food products. Each group of students is assigned to a trainer (teacher/pedagogical staff) who remotely guides and supports them throughout the development of their product. At the end of the semester, the students present their eco-innovative food product and submit their final technical file in which the product’s profile is presented accompanied with the product innovative characteristics, a general description of the proposal, the necessary technological studies (e.g. formulation process, manufacturing diagram, corresponding regulatory issues), a market analysis and the product environmental impact and all sustainable development aspects. This e-lab course-based project is innovative and paves the way to the modernization of pedagogical practices (e-learning, e-teaching), building a solid foundation for high-quality digital education. During the project development, training sessions are performed between the trainers and the students that resort to project-based learning approaches. Moreover, questionnaires are created and used to collect the feedbacks of the project participants. The obtained results will assess the benefits they brought to the teachers, the pedagogical staff, the students and even the organisations as well as the agri-food sector (human resources employees).

As part of the Erasmus+ project “DigiFoodEdu” is expected that this kind of e-learning approaches will give the opportunity to create a white book with new pedagogical practices that may be adopted in cases where distance learning is obligatory, including either situations like a pandemic or complementary to regular or e-learning programs of HEIs.

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