
Sesión

S.Oral 2.2

Hora:

**Miércoles, 09/07/2025:
15:00 - 16:30**

Ponencias

Interdisciplinary and Collaborative Faculty Development through Social Innovation and Prototyping Practices

Óscar O. Santos-Sopena

Universidad Politécnica de Madrid, España

This project promotes transdisciplinary faculty development through innovation-driven methodologies and participatory practices. At INNOVA HUB ETSIDI, faculty collaborate across engineering, design, and urban development to address global challenges (EELISA European project). Activities include prototyping, AI-driven community engagement tools, and faculty-centered workshops. The collaboration with MIT City Lab enhances this initiative, fostering professional growth and global research exchange.

New learning methodologies applied to general chemistry for engineers: Incorporation of the puzzle approach to improve academic performance

Eva Gallego, Antonio Gámez

Universitat Politècnica de Catalunya, Espanya

The present study aims to evaluate the possible positive effects in university engineering students' subject of Chemistry of applying of the puzzle methodology at the end of each topic of the course. Preliminary results from the evaluation of four student groups (23-24 and 24-25 academic courses), two applying and two not applying the puzzle methodology, are presented. The use of the puzzle technique has found to be useful for improving both marks and students' satisfaction with the subject.

"By failing to prepare, you're preparing to fail". Looking for the roots and consequences of our students' disengagement from reading and homework

Susagna Tubau, Laura Gimeno-Pahissa, Montserrat Capdevila-Batet, Clara Román-Vanden Berghe

Universitat Autònoma de Barcelona, Espanya

This contribution presents 2 teaching innovation projects implemented at the UAB during the academic year 2024-2025 that are interconnected and represent two sides of the same problem. Their common aim is to find strategies to encourage reading and revision both in literature and language subjects, as well as to discover the reasons why many students are neither reading the assigned primary texts nor doing their homework. As the two projects are in progress, some preliminary data are presented.

Design and implementation of a protocol for the analysis of higher education students' feedback internalization process

Maite Fernández-Ferrer¹, Elena Cano², Maria-del-Mar Suárez²

¹Universitat Oberta de Catalunya; ²Universitat de Barcelona, Espanya

This study explores the internalization of feedback in higher education, focusing on how students interpret and use it to enhance learning. Using a mixed-methods approach, this research project presents a process to capture internal feedback through co-design sessions, reflective tasks, and longitudinal interviews. The study examines self-regulation, self-efficacy, and evaluative beliefs as key factors as a result of engaging with feedback.

Combining three innovative teaching methodologies to engage and motivate students reading a Human Reproduction module

Marc Yeste, Ariadna Delgado-Bermúdez

Departament de Biologia, Universitat de Girona, Espanya

We describe an experience that implemented three innovative teaching methodologies (problem-based learning, English as a medium of education, and virtual exchange) in an optional module about Human Reproduction imparted at the University of Girona. The module was delivered in English, problem-based activities were compulsory, and virtual exchange was optional. The students found that these innovative methodologies had a positive impact on their learning process and evaluation outcomes.

EVALUATING PERCEPTIONS OF ENGLISH AS A MEDIUM OF EDUCATION: KEY INSIGHTS FROM STUDENT AND TEACHER QUESTIONNAIRES

Julie Waddington, Glòria Mateu-Figueras, Pere Pons, Norbert Blanco, Dankmute Pohl, Ingrid Vila, Marc Yeste, Ariadna Delgado

Universitat de Girona, Espanya

This study details the development of questionnaires designed to assess perceptions of English as a Medium of Education (EME) at the Universitat de Girona (UdG), and present preliminary findings. Two questionnaires were created through a process involving question formulation and a pilot study. Preliminary results provide valuable insights, but further data collection is required for a more comprehensive analysis. The findings will help identify needs and gaps in EME implementation at UdG.

Recommendations for designing effective flipped classroom scenarios in flexible education

Paloma Sepúlveda-Parrini¹, Shatha N. Alkhasawneh², Ingrid Noguera¹, Davinia Hernández-Leo²

¹Universitat Autònoma de Barcelona, Espanya; ²Universitat Pompeu Fabra, Espanya

This study offers recommendations for designing effective flexible learning scenarios, drawing on the Learning Design for Flexible Education (FLeD) project and the Flipped Classroom model. Key actions include: providing flexible options, ensuring inclusivity, promoting self-regulation and diverse feedback, fostering active collaboration, and utilising digital tools. These strategies guide educators in creating adaptable, student-centred, and engaging learning experiences.

THE EDUCATIONAL USE OF DIGITAL TWINS IN CHEMICAL ENGINEERING LAB PRACTICE. CASE STUDY: SHELL AND TUBES HEAT EXCHANGER APPARATUS

Jordi Bonet, Ruben Cabello, Pau Folch, Alexandra Plesu, Ricard Torres, Rodrigo Soto, Bernardí Bayarri, Roger Bringué

Universitat de Barcelona, Espanya

This study focus on digital twin technology in chemical engineering labs, specifically with a heat exchanger. Digital twins are used in chemical industries, so students need to get used to them. Traditional lab work is limited in its ability to show complex processes. A digital twin of a lab heat exchanger is created using ANSYS Fluent to overcome this. A real-time and interactive way to see inside the unit is provided. This supplements hands-on experiments and helps to understand key concepts.

GENERATIVE AI IN HIGHER EDUCATION: A STUDY OF FIRST-YEAR STUDENTS' VIEWS ON USE AND REGULATION

Davinia Hernandez-Leo, Marta Manzanares, Marina Velasco, Patricia Santos, Rosa Milà, Maria Gundín, Robert Castelo, Elisabeth Moyano

Universitat Pompeu Fabra, Spain

The access to Generative AI tools in university settings prompts discussions on appropriate strategies. Based on a survey of 272 first-year students at a Catalan institution, it explores their familiarity and attitudes towards a "learning agreement for GenAI use". The findings show high GenAI usage and acceptance, emphasizing the need for strategies that maintain student agency, and the importance of ongoing dialogue and structured frameworks to address GenAI's educational impact.