

**8TH INTERNATIONAL CONFERENCE ON UNIVERSITY TEACHING AND INNOVATION (CIDUI):
FLEXIBLE TRAINING MODELS****Organizing Committee CIDUI**

CIDUI

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The Organising Committee of the 8th International Conference on University Teaching and Innovation (CIDUI) wishes to thank the Editorial Board of the Journal of Technology and Science Education (JOTSE) for publishing this special issue.

Since the year 2000, a new CIDUI conference has been held every two years. Today, it is a well-established event that provides an opportunity to share advances and innovation in the field of higher education.

Like the previous editions, this one was also committed to fostering an especially participatory working dynamic and to promoting different points of view. The programmed debates were complemented by contributions from recognised specialists regarding the main topic of the conference: Flexible training models: a response to current needs. In relation to this general subject, papers were specifically focused on one of the four thematic axes proposed for this edition:

- Flexible models in the organisation of education
- Emergent educational programmes
- Student participation and contribution to university life
- Innovative methodologies in teaching-learning processes.

The organisation offered the authors of the highest-rated communications the chance to submit papers to the Journal of Technology and Science Education (JOTSE). A set of nine papers was finally selected for publication in JOTSE. The contribution "[Problem posing as a didactic resource in formal mathematics courses for future high school mathematics teachers](#)" analyses the results of an exploratory study conducted with future high school mathematics teachers, in which problem-posing tasks were introduced. These tasks were implemented in formal mathematics, specifically in the subjects of abstract algebra and real analysis. Some evidence was found to indicate that instruction involving problem-posing tasks has a positive impact on student understanding of definitions, statements of theorems and exercises on topics of formal mathematics, as well as their competence in reflecting on mathematics.

The article, "[EXPLORE: an action to bring science and technology closer to secondary school](#)" presents the experience of an initiative, the EXPLORE courses, designed to bring science and technology closer to secondary schools. Based on a combination of face-to-face and online learning, the courses' programme uses an interdisciplinary approach, integrating the fields of Science, Technology, Engineering, and Mathematics (STEM) and STEAM (STEM + art).

The contribution, "[Problem-based learning online](#)" describes the results obtained from the evaluation of students after the experience of using PBL for 10 years. The contribution also provides information about different tools like OpenMeetings in Moodle 2.0., to support the PBL methodology.

"[Automatic evaluation of practices in Moodle for self learning in Engineering](#)" focuses on the need to apply automatic evaluation to facilitate the correction of exercises outside the classroom and describes a first experience using surveys in Moodle 2.0 in order to automatically evaluate practices in Engineering.

The article "[Generic skill development and learning/assessment process: use of rubrics and student validation](#)" analyses the implementation of rubrics in formative/summative assessment. The students' perceptions of the

teaching/learning process were collected, analysed and compared to the academic marks. The teaching experience indicates that rubrics are useful as an assessment tool, but in order to increase their utility as a tool in the process of learning, the future challenge will be to modify some aspects of the validation queries and process.

The contribution "[The use of Google+ in the development of practices in cooperation among universities](#)" is based on the proposal of a methodology for exchanging practices in laboratories using social networks. Google+ was used to share academic materials and to support communication among the different universities participating in the project.

The contribution "[Evaluation of project-based learning in the area of manufacturing and statistics in the industrial technology degree](#)" analyses the results of two projects related to manufacturing, measurement of parts and the statistical treatment of data, placing emphasis on cross-curricular issues, recording oral presentations and how this helped improve quality, as well as evaluation of the subject by the students by means of questionnaires and open-ended questions.

"[The evaluation of social competencies in chemical engineering: Application and results of the pilot test](#)" describes the results of a pilot test in which a methodology for 360° assessment of students' social competencies has been implemented in the Bachelor studies of Chemical Engineering. The results indicate that it is possible to objectively obtain a student's competency level by distinguishing between different social competencies, as well as among different students in the same team. The application of this tool fosters the development of specific educative actions to help students with low competency profiles to reach acceptable levels for successful insertion into the labour market.

Finally, "[Interdisciplinary project of robotics in the first year of engineering](#)" discusses the importance of using interdisciplinary projects to support the acquisition of skills for professional development. We would like to thank Dr María Martínez (UPC. Barcelona Tech). We appreciate the opportunity to collaborate with JOTSE for this special issue.

ORGANISING COMMITTEE

The 8th International Conference on University Teaching and Innovation (CIDUI) was celebrated at the Universitat Rovira i Virgili (URV), Tarragona. CIDUI has worked with scientific and organising committees that make sure the conferences meet quality standards. The members of these committees are made up of university professors from different scientific areas and with extensive experience. The organising committee consists of teaching staff, academics and administrative staff specialists in the organisation of university training and educational innovation activities.

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