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TOWARDS METHODOLOGICAL IMPROVEMENT IN THE SPANISH UNIVERSITY STUDIES

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The European Higher Education Area (EHEA) has triggered many changes in the new degrees in Spanish universities, mainly in terms of methodology and assessment. However, in order to make such changes a success it is essential to have coordination within the teaching staff as well as active methodologies in use, which enhance and encourage students' participation in all the activities carried out in the classroom. Most of all, when dealing with formative and summative evaluation, in which students become the ones responsible for

their own learning process (López-Pastor, 2009; Torre, 2008).

In this second issue of JOTSE we have included several teaching innovation experiences related to the above mentioned methodological and assessment changes.

In this sense, our first article <u>INTERDISCIPLINARY EXPERIENCE IN THE TEACHER TRAINING COLLEGE OF VITORIA-GASTEIZ: TEACHING PROFESSION MODULE by Camino Ortiz Barrón, Aristizabal Llorente and Zelaieta Anta, presents the set up of a new studies plan in the Escuela Universitaria de Magisterio de Vitoria-Gasteiz de la Universidad del País Vasco. As a matter of fact, it is the first work of multidisciplinary type which has been developed thanks to the coordination within the teaching staff and it is framed in the module of Teaching Profession, the first one that composes the structure of the new degrees in this University. In this sense, it was agreed to assign one credit of interdisciplinary or modular work to each of the subjects involved so as to steadily develop interdisciplinary tasks and in this publication the reader can get an insight into how methodological and assessment issues were dealt with. Challenges emerged when having to design a precise methodology which enabled the acquisition of competences which were set for the module from a multidisciplinary perspective. Not to mention, the need to implement an evaluation system able to provide a module's final mark agreed by all the teachers implied.</u>

Several studies show that encouraging the participation of students in the evaluation process is a way of enhancing their involvement and, thus, improving their own learning process (Nicol & Boud, 2010; Nicol, 2007). One possibility of making students participate more is to use peer-assessment as a strategy to increase student's responsibility and allowing feedback among peers. In fact, this is an extremely useful practice especially in the evaluation of oral presentations, projects or module's final paper as this technique may help in the implication and motivation of students. In addition, by implying students as an assessing agent, teacher's correction tasks may decrease considerably when having numerous students per class. Nevertheless, so as to make students assessing agents it is necessary a previous process of training besides from having clear and objective assessing tools. Our second article: THE INFLUENCE OF SOCIAL STYLE IN EVALUATING ACADEMIC PRESENTATIONS OF ENGINEERING PROJECTS by Ortiz, García-Carrillo and González Benítez comprises an accurate study on the effect of speakers and assessors social style on oral presentation's peer evaluation at the end of the academic year in a subject of Engineering Projects (Masters Level) in the Universitat Politècnica de Catalunya, BarcelonaTech. In this sense, all participants completed a self-evaluation exercise which allowed for the classification of 4 social styles: conductive, expressive, analytic and affable. In this article, the authors show that both the social style of the speaker and the evaluator have a significant effect on the given grades. These results support the need of having to train students as assessors to decrease any bias in peer-evaluation during their academic and professional lives.



Assessment, then, has to be the opportunity a student has to learn during the process and it is, therefore, essential to inform students on their progress so as to give them a chance to correct their mistakes and, thus, improve (Gibbs, 2009). The way in which professors communicate learning results during the learning process is the key issue of the following article FEEDBACK AND FEEDFORWARD: FOCAL POINTS FOR IMPROVING ACADEMIC PERFORMANCE by García-Sanpedro. The author focuses on students and teachers' views on the use of the learning results and the strategies that may, in fact, enhance its potential formative benefit. The results presented are drawn from a case study in 12 degrees from several Spanish universities already adapted to the EHEA (Garcia-Sanpedro, 2010). In this vein, although feedback and feedforward are strategies to inform students on their learning outcome, the results from the present study show that their use in not so generalized and, often, they simply provide grades. Moreover, it is noted the need of incorporating feedback and feedforward systematically in the teaching practice as a way of making the most of the assessment results and orientate students towards further improvement. As a general conclusion, it is made clear that to implement this type of approach on assessment results sustainably, it is required to have students involved in their learning process and to make them aware that they themselves are the main actors in scene. Therefore, the teacher's role goes from accepting the challenge of making the most of the formative potential of results and incorporating those strategies in the teaching practice without becoming mere bureaucratic procedures.

The use of the Information and Communication Technologies (ICTs) may represent an important advance in terms of communicating students their learning results in a more "modern" way, thus, coping with what the present 21st Century society demands. In the last article of this issue of JOTSE (Journal of Technology and Science Education) <u>TECHNOLOGICAL OR TRADITIONAL TOOLS FOR DOCUMENTS' CORRECTION? A CASE STUDY IN HIGHER EDUCATION by Kallas and Ornat</u>, we present the use of a technological correction tool aiming at facilitating student's feedback once their projects have been handed in. In this case, they are students from the second year at the Escola Superior d'Agricultura de Barcelona of the Universitat Politècnica de Catalunya, BarcelonaTech. Such feedback consists in the introduction of the teacher's voice, in other words, voiced comments to improve student's document. If we compare this kind of feedback with previous traditional methods it is rather obvious that this way of conveying information to students is far more efficient in quality and it is much less time consuming (just a few minutes) than the ones used before. In this article, the author analyses students' opinions through a completed on-line survey where the "new" voiced feedback is compared with other two types of traditional corrections, and where factors that might influence the acceptance of these technologies may become more evident.

We hope that JOTSE readers enjoy the contents of the present issue

REFERENCES

Boud, D. & Associates (2010). Assessment 2020: Seven propositions for assessment reform in higher education. Available online: <u>http://www.iml.uts.edu.au/assessment-futures/Assessment-2020_propositions_final.pdf</u>. Sydney: Australian Learning and Teaching Council.

García-Sanpedro, M.J. (2010). Diseño y validación de un modelo de evaluación por competencias en la universidad. Tesis doctoral. Universidad Autónoma de Barcelona. Available online: <u>http://www.tesisenred.net/handle/10803/5065</u>

Gibbs, G., & Simpson, C. (2009). Condiciones para una evaluación continuada favorecedora del aprendizaje. Colección: Cuadernos de docencia universitaria, №13. Barcelona: ICE-UB y Ediciones Octaedro.

López-Pastor, V.M. (coord.)). La Evaluación Formativa y Compartida en Docencia Universitaria: Propuestas, técnicas, instrumentos y experiencias. Madrid: Narcea.

Nicol, D. (2007). Principles of good assessment and feedback: Theory and practice. *REAP International Online Conference on Assessment Design for Learner Responsibility*, 29th-31st May, 2007. Retrieved July 25, 2012, from, <u>http://tltt.strath.ac.uk/REAP/public/Papers/Principles_of_good_assessment_and_feedback.pdf</u>.

Torre, J. (2008). Estrategias para potenciar la autoeficacia y la autorregulación académica en los estudiantes universitarios en la enseñanza universitaria centrada en el aprendizaje. In L. Prieto (coord.), A. Blanco, L. Prieto, P. Morales, & J. Torre (Eds.). Barcelona: Octaedro.

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