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GOING THROUGH CLASSROOM WALLS: learning based on real projects with the collaboration of senior professionals, role plays and ICT applications for the acquisition of professional skills and improvement of employability

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The European Higher Education Area (EHEA) promotes the acquisition of professional skills associated with solving real problems through the use of teaching methodologies in which students acquire a leading role (Sáiz - Manzanares et al., 2010; McKenna et al. , 2013). The development of these competences constitutes a complex process that involves connections between different topics and systemic relationships. The aim of this work is to present a teaching innovation project of the University of Córdoba (Spain) to develop professional competences of engineering and mathematics teaching through: i) the use of real professional proposals; ii) using environments recreated in immersive worlds and iii) paying attention to the importance of interaction with professionals from different sectors.
A series of role-playing games for specific cases of participation in public contracts, technical assistance and curricular designs were prepared by a teacher group with the help of professional staff. In each role play, students had to interact as the different stakeholders of the process, working on the corresponding documentation associated to their professional role. This was supported and assessed by the teachers and the invited expert professionals. In addition, the handling of different tools and technologies of information and communication (immersive worlds, webs, softwares) for the presentation of the technical-administrative documentation of the activities was required as methodological improvement for the students. The preliminary results of the experience as well as the impact indicators will be presented in order to underline its suitability.

REFERENCES

A. F. McKenna, B. Yalvac, G. J. Light. J. of Engineering Education 2013.98/1: 17-26

E.L. Sáiz-Manzanares, E. Montero-García, M. J. González-Fernández, F. Aguilar-Romero, J. Peláez-Vara. An Analysis of the Meta-Cognitive Approach and Support for Information Skills with Industrial Engineering Students. Ways to the Convergence of European Higher Education. Proceedings of the 1st international conference on European transnational education (ICEUTE 2010), Burgos (Spain), University of Burgos, 2010, 18–25.

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