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CHALLENGES FOR THE THIRD MILLENNIUM

## **The improvement of Collaborative project work using oral presentations: the experience with road engineering students**

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### **ABSTRACT**

A successful road engineering project is often a highly collaborative team-based activity, and the engineering education community must therefore prepare graduates to work in this type of environment. A large body of research has demonstrated the considerable benefits and minor organisational problems of collaborative work in engineering education. However, there are only a few case studies reported in the literature that evaluate the positive and negative experiences encountered by students when undertaking group projects. The prevailing scientific view is that the “soft skills” derived from collaborative learning through teamwork are obtained automatically by the students once the project work is finished, but some “soft skills” are not obtained at all. The ability to express orally oneself and defend technically the solution adopted by the team, is a “soft” skill which is not enough trained in most of the cases.

This paper contributes to this limited literature by assessing previously methodologies applied to group projects with students enrolled in the “Roads” course (Civil and Territorial Engineering degree at the Madrid Technical University -UPM). Results obtained through a survey campaign to student have led to analyze the reasons why a panel of oral presentations (focused on the project work technical solutions) at the end of the course of “Roads”, could improve the learning and the acquisition of some “soft” skills. Attending the results of this study, oral presentations will be incorporated in the academic year 2018-2019.

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