

EUCEET 2018

4th International Conference on
Civil Engineering Education

CHALLENGES FOR THE THIRD MILLENNIUM

Introducing Project Management Processes and Skills on a PBL Subject

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ABSTRACT

There are several types of project work depending on the degree of teacher-centred planning ([1]). The best Project Based Learning should encourage students to explore project management skills leading much of their own learning experience and, so, try to avoid teachers making most of the decisions ([2], [3]).

In the subject ‘Workshop on Water and Environmental Engineering’, taught to students on the third semester of their Master studies, a maturity situation in infrastructure management is considered. Therefore, conservation, maintenance, restoration or dismantling are key points to be considered by civil engineers. Risk evaluation, especially those associated with climate change, is a very useful tool that allows prioritizing investments among the different alternatives proposed to reduce the risk levels of the infrastructure under study.

The subject focusses on the Risk Management Knowledge Area [4] so students need to perform a risk analysis of an engineering system which is generally described at a high level at the beginning of the semester: breakwaters, sanitation systems in coastal areas, etc.

Their first task is negotiating the statement of work after inquiring into the basis of the system under study, data and tools available and risks identification. Thereby, students are responsible for designing and managing much of their own learning

Four deliverables are expected: the project charter (including the negotiated statement of work), a guide for risk evaluation, another guide for prioritizing investments and a case study where they apply the guides. To close the project, students must make an oral presentation to the client. Students are able to develop existing skills including people management, communication with stakeholders and project team, managing conflict among others and acquire new skills as they lead and learn (risk management, scheduling, negotiating, critical thinking or team building).

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