EUCEET 2018

4th International Conference on Civil Engineering Education

CHALLENGES FOR THE THIRD MILLENNIUM

The Group of Projects: designing different footbridges for the same site.

Juan José Jorquera-Lucerga*

*Civil Engineering School. Universidad Politécnica de Cartagena (UPCT)
Alfonso XIII, 52. Cartagena, 30203 Spain.
juanjo.jorquera@upct.es – www.upct.es

ABSTRACT

This paper deals with the experience of the first author, who created the so-called "group of projects" at the Civil Engineering School of UPCT. The group was composed of five students (four graduate and one undergraduate) who wrote their thesis during the same term advised by the author. All of them designed a footbridge over a channel in Cartagena for their thesis. The main feature of the group is that all the projects were built on the same site, but all their structural typologies were different.

Since a small footbridge had already been built recently on the same site, actual data were available, such as topography, geotechnical reports or the location of existing sewage networks.

As a result of this strategy, the group developed a very inspiring and hard-working collaborative spirit that lead the students to develop jointly a lot of documents, design techniques, specific software, technical detailing, drawings, etc.

Besides, since the office hours were for the all the students simultaneously, the advisor could save time in the common tasks and devote more hours to the specific aspects of each project, such as the conceptual design.

As an additional consequence of this novel approach, the students could focus on the structural aspects of their projects, allowing them to achieve better results when understanding and designing complex structural typologies.