Implementation of New Teaching Methodologies. The Case of Building Engineering in Jaume I University in Castellón, Spain

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Abstract

The aim of the Bologna Process is to create a European Higher Education Area based on international cooperation and academic exchange that is attractive to students and staff universities. Consequently, many changes in the Spanish university system are required. Old degrees are being replaced with new ones, and the methodologies applied to education must be reviewed.

Regarding teaching methodologies, this paper shows the case of the old Technical Architecture Degree (TAD) and the new Building Engineering Degree (BED) at the UJI (Universitat Jaume I) in Castellón, Spain. The TAD started in 2005, and from the very beginning, the people involved in preparing the Studies Plan were aware of the imminent wind of change in European Universities. This allowed structuring topics from a new point of view in order to be prepared for the new situation. In this context, Project-Based Learning (PBL) is the tendency to follow hereafter. Implementing PBL was not a very difficult task because of two main reasons. On the one hand, the UJI is a small university and, on the other hand, the Castellón School did not have the inertia of other more established degrees in Spanish universities.

The three academic years of the TAD were planned from this perspective. So every year, students worked with a common project in which different topics were involved. This was called 'Prácticas Dirigidas' (Guided Practices). The idea was to link different topics to obtain not only the assumed knowledge, but also professional skills. Besides knowledge in construction issues, students acquire competences such as working in groups, time management, oral presentation skills, etc. This methodology was continued after implementing the BED in 2008.

This paper summarises the main aspects of the methodologies developed in the TAD at the UJI and the inferred conclusions after their application in the BED.