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# Retrospective Vision of a Long Term Innovative Experience

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**Abstract**

The purpose of this paper is to look back on a long term informal innovative experience carried out during the last nine years until the present one, and try to discern, with a retrospective and a long time vision, whether it has been as beneficial as expected once it has concluded. This experience has taken place in the University College of Engineering of Vitoria (Basque Country University, Spain) since the year 2.004, and it has been accomplished in the subject Company Networks of Technical Engineering in Management Computing. After the analysis of a number of data collected along these years, we found that we have reached the initial objective of increasing the enrolment in the subject that has driven the project, and other unexpected ones that are more important from a long time point of view. Once that nine years have lapsed and the project is going to be finished, we conclude that it is a very positive experience and we recommend doing the same with the new degrees of the European Higher Education Area (EHEA), as we plan.

*Keywords:* Company Networks, Active Learning, Educational Innovation Project, Cooperative Learning;

Introduction

Active Learning is a wide learn philosophy which groups several methods, all of them based on the responsibility and the involvement of the learners in their learning (Bonwell, C. & Eison, J., 1991) and (Felder, R.M.

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& Brent, R., 2009). One of them, named Cooperative Learning, is a paradigm in which the learning activities are planned looking for positive interdependence of the learners (Felder, R.M. & Brent, R., 1994) and (Felder, R.M. & Brent, R., 2001). In this paper authors describe an informal educational innovative project in the field of Company Networks based on both active and cooperative learning. This formal project is motivated by a simple objective: the necessity of increasing the number of enrolments in that optional subject. The structure of the paper is the following. The second section describes the context in which the educational innovation project is developed, paying attention to the syllabus and the institutional context. The third section introduces the educational innovation project itself, while the fourth section discusses the results achieved along it, focusing specially on the long-time achievements. Finally, the last section gives our conclusions.

## 1. Global framework

### 1.1. Syllabus context

This experience has taken place in the University College of Engineering of Vitoria (Basque Country University, Spain), and it has been accomplished in the subject Computer Networks, inside the curricula of Technical Engineering in Management Computing. This is an optional subject, and this means that only enrol student who want to do it. The subject is located in the last year of the studies, after having passed a compulsory subject named Computer Networks, and this was a weighing circumstance since this one was a hard subject and makes that students were afraid of continuing its knowledge branch. Due to this fact the enrolment in the Company Networks subject was very low. The learning method in both subjects was the traditional based on expositive master classes, as in the remaining subject of the syllabus in 2.004 that was the year in which the authors started this informal project. This is the last in which the subject is offered because the studies of Technical Engineering in Management Computing are going to extinguish as planned by the University.

### 1.2. Institutional context

The educational innovation project was developed informally along a number of years. This means that when it started the Bologna Process was a very far process, but today the first generation of the degrees has been released. Along this time the learning methodologies have changed and the authors have profited from a structure and a number of services that Basque Country University UPV/EHU (Spain) has been established, which contribute to create a global framework that encourages this kind of projects and that we are going to explain in this section. The Vicerectorship for Teaching Quality and Innovation is structured in four main areas:

- Quality Cathedra: Contributes to the knowledge, implementation and improvement of quality management in all areas of the organization of the university, helping to achieve the highest standards of excellence.
- Institutional Evaluation Service: A service of the university which aims to guide and promote the process of evaluation, verification and accreditation as well as those related to improving the quality of higher education. It also works with reference quality agencies in developing their programs in the university.
- Faculty Evaluation Service: A service dedicated to promote, design, develop, advise, facilitate and train faculty evaluation process with the desire to contribute to the improvement of teaching quality.
- Educational Counselling Service: It is a service which manages courses and training according to the needs of the faculty. It puts in place processes to gather information about which are the formation necessities.

All these areas converge towards a methodology named IKD-Ikasketa Kooperatibo eta Dinamikoa in Basque (Dynamic and Cooperative Teaching-Learning in English), characterized by the following principles:

- Active Education: IKD invites students to become the architects of their own learning and an active element in the governance of the university. To get this, it encourages learning through active methodologies, ensures continuous and formative evaluation, articulates the acknowledgement of its previous experience (academic, professional, vital and cultural), and promotes mobility programs (Erasmus, SENECA) and cooperation.