Journal of Cases on Information Technology
Volume 18 • Issue 4 • October-December 2016

Use of Symbaloo Edu for Improving Information Management Processes in Work by Modules

Pilar Biel, Department of History of Art, University of Zaragoza, Zaragoza, Spain
Ester Pérez, Department of Applied Mathematics, University of Zaragoza, Zaragoza, Spain
Carmen Rodrigo, Department of Applied Mathematics, University of Zaragoza, Zaragoza, Spain
Ana Serrano, Department of Design and Manufacturing Engineering, University of Zaragoza, Zaragoza, Spain

ABSTRACT

The case presented in this paper is framed within the context of Work by Modules taken during the first year-first semester of the Industrial Design and Product Development Engineering Degree at the University of Zaragoza, and its objective is to improve the processes involved in information management required to perform this work. For this purpose, the design of a personal learning environment (PLE) is proposed, using Symbaloo Edu. This tool provides methodological support to select and organize information sources, and its use favours collaborative work while helping to develop digital competencies, providing students with an environment that complements formal learning. Results show that between 70 and 75% of the students viewed PLE as a tool that made them feel more active and autonomous in their learning process.

KEYWORDS

Active Methodologies, Digital Competences, Informational Competences, Personal Learning Environment, Symbaloo Edu, Work by Modules

ORGANIZATION BACKGROUND

The University of Zaragoza (http://www.unizar.es/) is a public research and higher education institution whose history spans almost five hundred years. Situated in the autonomous region of Aragon (in the north-east of Spain), it is the only public university in the region and is also the region's most important technological innovation centre. Its main mission is to create and transfer knowledge and culture, thus contributing to the innovation, transformation and progress of the society where it is located, as well as to the comprehensive training of people with technical capabilities, a constructive critical spirit and a sense of responsibility.

The academic activity at the University of Zaragoza is based on 13 Faculties, 3 Schools and 57 Departments, in agreement with the different scientific, technical or artistic specialities. The Institute of Education Sciences (ICE) and the Modern Languages University Centre (CULM) also form part of the University.

Today, the University offers a total of 53 degrees, 54 university masters degrees, 43 Ph.D. programmes and 88 proprietary studies in all its teaching areas: Arts and Humanities, Experimental

DOI: 10.4018/JCIT.2016100102

Sciences, Health Sciences, Social and Legal Sciences, and Engineering and Architecture. During the 2014-2015 academic year, there were almost 30,000 students enrolled on degree courses, and first and second cycle studies. On the other hand, during the same academic year, the University of Zaragoza had a staff of 3,382 professors, 61% of whom worked full-time and 39% part-time. The human resources of the University were completed with almost 2,000 members of administration and services staff (PAS).

The University of Zaragoza is committed to internationalization based on mobility, and as such, it is one of the top Spanish universities in the ranking of students' participation in international mobility programmes. During the 2014-2015 academic year more than 2,000 foreign students attended the University of Zaragoza and about 1,900 students from the University of Zaragoza travelled to foreign universities, thanks to the bilateral agreements established with institutions all over the world (34 European countries, United States, Canada, Australia, South America, Asia and Africa).

Furthermore, the development and promotion of research is an essential function of the University of Zaragoza. Research activity is mainly carried out by the Departments, Research Institutes, and Research Groups that are funded through regional, national and European programmes. The University has a total of 10 University Research Institutes supported by laboratories and workshops where research can be carried out in different fields of science.

During the 21st century the most important change undergone by the University of Zaragoza, in particular, and European universities, in general, has been their incorporation into the European Higher Education Area (EHEA), which has paved the way for the new University model in European university systems. The EHEA among other things has brought about proposals for new educational methodologies, with special emphasis on learning-based models rather than teaching-based models. The University of Zaragoza has skilfully adapted to these new changes, incorporating important innovation and teaching improvement techniques that include, among others: teaching innovation projects for groups of professors, strategic innovation programmes at centres and on degree courses, and the organization of teaching innovation conferences. All of these changes have been backed by extensive use of Information and Communication Technologies (ICT). The University of Zaragoza has placed a Teaching Digital Ring (ADD) at the disposal of the degree programmes and their teaching staff, which groups together different platforms and technological tools to support teaching activity, as well as different teacher training programmes in technologies applied to teaching. During the 2014-2015 academic year, a total of 278 teaching innovation projects were financed, with a total of 2,077 participants.

Within this context, the School of Engineering and Architecture (EINA, http://eina.unizar.es/), responsible for teaching Engineering and Architecture at the University of Zaragoza in this province, has implemented important structural and methodological changes in its studies. Today, this School delivers a total of 9 degree courses, 10 university masters degrees and 15 proprietary studies. The first degree that the University of Zaragoza implemented in engineering in the new framework of the EHAS was the Industrial Design and Product Development Engineering Degree (GIDIDP), which was first taught during the 2008-2009 academic year. Consequently, that Degree was a pioneer in applying the new changes that the University of Zaragoza had to implement in order to adapt to the EHAS standards.

The GIDIDP is presented as a highly creative, technical degree, including both scientific and humanistic and artistic contents in the syllabus. The GIDIDP studies at the University of Zaragoza are taught over four academic years when students must pass 240 ECTS (European Credit Transfer System), 60 of which correspond to core subjects, 138 to compulsory subjects, 24 to optional subjects, 12 to cross-curricular subjects and 12 to the final year projects or dissertation. The Degree is organized into six-monthly modules featuring subjects in different areas of knowledge, which are coordinated to achieve defined educational objectives and common learning results. It is a degree that offers 75 new places every year and that is in high demand (much higher than the available places for students), meaning it is the engineering degree at EINA requiring the highest entrance requirements.