

# Chapter 9

## Good Teaching Practice and Quality Indicators for Virtual and Blended Learning: Project M.A.T.R.I.X

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### ABSTRACT

*The M.A.T.R.I.X (Modalities of Telematic Learning and Inter-university Results that can be Extrapolated to Blended Learning)<sup>1</sup> project identified and described the diverse teaching methods and practices applied in a representative sample of virtual and blended learning degree courses taught at different Spanish Universities using the G<sup>2</sup> Shared Virtual Campus. The purpose was to extrapolate the experiences considered as “good practice” in the new blended learning contexts and methodologies proposed by the EHEA, using as indicators the quality of the learning design as assessed by experts, the satisfaction level of the students taking the courses, their effective contribution to attaining specific and generic competence in different subjects.*

### INTRODUCTION

Innovation involves deliberate and systematic changes to achieve objectives more effectively (Hannan & Silver, 2000). The use of technological tools can facilitate this process of innovation,

since they offer new possibilities when planning and effectuating the teaching-learning processes.

The “hybrid” concept of organising learning (Marsh, 2003) in which virtual and traditional learning are combined, with virtual elements complementing the face-to-face part of the process, can facilitate this process.

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So, following on from the experiences and studies on blended learning in different courses or subjects (Koochang, 2009; Allen, Seaman, & Garrett, 2007; Clark & Mayer, 2007; Bliuc, Goodyear, & Ellis 2007; Graham, 2006; Oliver & Trigwell, 2005; Cox, Carr, & Hall, 2004), the SWOT technique was used to study the efficacy of technological resources in the attainment of learning objectives, within the courses included in the M.A.T.R.I.X project, with the final aim of ensuring that students' cognitive activity enabled them to transform information into knowledge.

Similarly, there have been many studies focusing on the effectiveness of teaching and its relationship to learners' satisfaction, such as the work done by Durkin, Simkin, Knox, and Conti-Ramsden (2009), Lin (2008), So and Brush (2008), Burnett, Bonnici, Miksa, and Kim (2007), Lin and Overbaugh (2007), Pascual (2007), Love and Scoble (2006), Molero and Ruiz (2005), Chang (2005), Beran and Violota (2005), Apodaka and Grad (2002), and Tejedor (2002).

Students' opinions on their learning experience provides us with a wealth of information that allows us to learn more not only about the success of learning and teaching changes themselves but also about learners' own demands, as inferred from their ratings and assessment.

## **DESCRIPTION AND METHODS**

### **Context**

The M.A.T.R.I.X. project was financed by the Ministry of Education (Spain) under the Research and Analysis Programme and it was carried out during the 2007/2008 academic year, with the involvement of some twenty researchers. A sample of fourteen different degree courses were assessed, all taught totally or partially on the G9 Shared Virtual Campus (SVC), by the five Spanish Universities of Oviedo, Navarra (Public), Basque Country, Extremadura and Zaragoza.

### **Aims and Stages of the M.A.T.R.I.X Project**

To identify technical and instructional quality indicators to be taken into account in the design of virtual and blended courses (see Table 1), based on:

**Aim and stage 1:** The creation of a map showing the diversity of teaching and learning practices in the M.A.T.R.I.X courses, according to the descriptive reports given by teachers, clarifying their technical and methodological criteria.

**Aim and stage 2:** Qualitative analysis of the sample of fourteen courses (virtual and blended learning) by experts in e-learning project design and implementation, in order to extrapolate those experiences considered as "good practices", - both for the quality of their technical and pedagogical design, and for their effective contribution to the development of generic and specific skills in each degree course -, in the new learning contexts proposed by the European Higher Education Area (EHEA), characterised by the use of blended learning methodology and/or blended learning supported by the use of virtual environments.

**Aim and stage 3:** The appraisal of a sample of 290 university students who attended courses in the G9 SVC, and their level of satisfaction with their virtual learning environments (VLE), gathered via an opinion questionnaire. Proposals for improvement being inferred from users' own demands.

Given the above, different activities were undertaken in the M.A.T.R.I.X project, revolving around three basic action lines:

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