EVAINU Research: 
New Virtual Learning Environments for Educational Innovation at University

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EXECUTIVE SUMMARY

New virtual learning environments for educational innovation at the university of the present-future—EVAINU—is a research project financed by the Autonomous University of Barcelona as part of its support for emerging research groups. The project came about as a result of the growing presence of the ICTs in the higher education system and has focused on identifying typical cases, which use these media at the Autonomous University of Barcelona (UAB) involving some form of curricular innovation or improvement in accordance with the European convergence processes, which the Spanish university system is currently undergoing. As a result, three case studies of different qualifications were carried out in order to investigate their potential for improving university education. One of these cases—Virtual Veterinary Science—is described in this study. Among the preliminary results of this research so far, of particular interest is the fact that while the ICTs are clearly an important opportunity to make a qualitative leap and to go beyond teaching outlooks based on exposition, passive reception, and memorising, more institutional support is necessary in terms of working strategies, which promote new ways of organising teaching, the development of ICT skills among teaching staff and students, and the creation of incentives for teacher training, among other initiatives.

Keywords: active learning; case study; education research; higher education; instructional materials; student-centred learning; teaching strategies; Web based curriculum

ABOUT EVAINU

New virtual learning environments for educational innovation at the university of the present-future—EVAINU—is a research project financed by the Autonomous University of Barcelona as part of its support for emerging research groups. The problem considered in the project arises from the increasing and sustained presence of information and communication technologies (ICTs) in the higher education system where they play an increasingly major role in teaching. The problem also arises as a result of the opportunities, which these technologies give to the European convergence processes that are now being implemented, as they may favour
teaching methodologies that are less centred on the teacher and content, and more centred on students and on carrying out activities or projects. At university, the ICTs may involve the entire teaching process as they do at the Open University of Catalonia, or just a part of it, covering specific aspects of education. This is the case at various universities in Spain, which complement traditional face-to-face teaching with the use of various electronic environments such as the Autónoma Interactiva (at the Autonomous University of Barcelona) or the UB-Virtual (at the University of Barcelona). These two schemes enable both subjects and training courses of various types to be taught either partially or completely by means of distance learning, using an electronic medium based mainly on WWW (World Wide Web) applications.

The purpose of this research project is therefore to identify new methods of training at a university involving the use of ICTs in order to investigate their potential for improving university education (i.e., for becoming educational innovations beyond the limits of the technological innovation that these tools already represent).

The initial hypothesis is based on the conception that integration of the ICTs and possibly the change involved in non-attendance of regular classes or the means of gaining access to information does not necessarily entail innovation and an improvement in teaching and learning processes. Any educational innovation starts with the inclusion of a new item in the curriculum, but it is still difficult to change the way teaching staff and students see teaching and learning processes, and the organisational and symbolic structure of the institution (Bosco, 2002; Hargreaves, Earl, & Ryan, 1998; Sancho et al., 1998; Stoll & Fink, 1999, 2000). In general, approaches to learning remain more centred on teachers than on students. Knowledge continues to be seen as something that is given and which is external to the students, and not as a construction, which takes place and, which the student must understand. Assessment is still synonymous with examinations and testing and relationships with the community as a factor encouraging learning that is more significant are still scarce (Hargreaves et al., 1998; Sancho & Hernández, 2001).

The specific objectives of the research in its exploratory phase are:

- To identify, describe, and interpret some of the typical educational approaches that have been completely or partially implemented using the various services made possible by the ICTs at the Autonomous University of Barcelona.
- To identify, describe, and interpret the potential of these approaches for educational improvement and change, emphasising the role of teachers and students in the process, ways of representing knowledge, the type of assessment they lead to, and the relationship they establish with the wider community of which they form a part.

Methodology

The study is carried out from the qualitative perspective of educational research, as it aims to find a significance and an interpretation, taking into account the context of the various activities, which teachers and students carry out using these new learning environments. These studies have a curricular or theoretical-contextual focus in terms of research into methods (Area, 1991). The object is thus investigated in an interactive, continuous, and flexible manner in its “natural” context, accepting the complex scenario in which it is located. The inductive route, based on evidence, is used to construct its conceptions and theories.

As a result, case studies have been selected as the methodological strategy as they enable in-depth study of one or more units, which represent the subject being researched (Stake, 1999). In fact, this is a design with many cases in which each case is an example in action, and it therefore allows us to “illustrate” the problem for which it is the focus of examination and study (MacDonald & Walker, 1977). For this reason, three typical cases have been selected based