



E-university, web 1.0 and 2.0: guidelines to integrate technology enhanced learning in university environments

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Abstract

This paper presents some strategic guidelines so that e-learning procedures can be adopted in a more productive way in university environments. These guidelines have been identified through researches based upon the technological development of enhanced learning practices in Italian and foreign universities. To facilitate the wealth of information gathered for this paper, the guidelines have been reinterpreted on the basis of some studies concerned with the organizational impact of e-learning 2.0. The “old rules” prove useful to consider whilst evaluating the challenges of web 2.0. Moreover, there are some new perspectives related to the main features of technology 2.0 which seem beneficial because they are focused on knowledge-sharing and creativity and are able to promote organizational, institutional and cultural change in university environments.

1 Technology enhanced learning, teaching innovation and organizational impact

Recent studies and research on technology enhanced learning in universities focus on the impact of e-learning 2.0 in education (eg. Bonaiuti, 2006; Calvani, 2008; Fini, 2007; Mobilio, 2008; Sancassani, 2006) as well as on the development of 3.0 (Rossi, 2008), while the studies on the organizational impact of generation 2.0 are less common (Freire, 2008; Brown and Adler 2008; Koplowitz and Young, 2007). This paper seeks to analyze the organizational implications of e-learning 2.0, so that a strategic area of research, complementary to the studies on the educational and pedagogical implications of technology might be intensified. In addition, this paper considers the results of technology enhanced learning in Italian and foreign universities (Valentini, 2008), identifying barriers¹ and guidelines for e-learning within a university context, reinterpreting them on the basis of some studies regarding the organizational impact of e-learning 2.0.

2 Analysis of the worst practices and Roadmapping: a methodological proposal to identify guidelines

Guidelines have been identified as a result of a 2008 research study conducted by the Department of Sociology and Communication of the Sapienza University of Rome (*Ibidem*). In this study, numerous organizational types of virtual universities² were identified and for each model failures were studied. The term failure has been defined as suspended initiatives and experiences with more modest results than expected. The study of the most disappointing practice was an innovative methodology in relation to the more traditional practices. Comparing the diverse methodologies, critical issues and consequent conclusions were then identified. The second part of the research focuses on a case history. It is the Faculty of Communication Sciences of the Sapienza University, which should not be considered as representative of a best or worst practice but treated as a study to understand the impact of technology enhanced learning in a specific organizational context and to identify useful guidelines for the consolidation of e-learning in a university environment. The methodological proposal selected is Roadmapping because it is able to harmonize a composite set of techniques and procedures by combining different methods and tools. This methodology is able to analyze the status quo of an organization and identify an ideal scenario, which does not always coincide with what is actually feasible, and with the channels available to implement it (CIMRU, 2002).

¹ For further information about barriers and worst practices in e-learning you can read Bacsich, 2005, Paulsen, 2006, Valentini, 2008.

² Virtual universities are institutions in which the integration of technology promotes organizational and educational changes (Ghislandi, 2002; Pettenati and Giuli, 2001).

3 Critical issues and barriers regarding the diffusion of e-learning: a comparison between generations and related open problems

The critical issues which come to light from the worst practice analysis are varied and coherent with those identified by research on the impact of web 2.0 in university environments. They are open problems which were not overcome during the first phase of e-learning diffusion. Thus, it is a foregone conclusion that they will present themselves again when web 2.0 based innovative experiences are developed.

A list of some failure factors for experiences developed by traditional universities such as New York University and its online division and Columbia University's Project Phatom (which in 2003 became the site of an academic public service comparable to the Open Course Ware at MIT) were the following: lack of university policies for effective project management, limited involvement of the university faculty, value sharing and institutional identity, inferior quality of service which was not coherent with standards of the traditional university, lack of public/private strategic alliances and incorrect market research to identify specific targets. Variables which have influenced the failure of the open Danish University are related to the teaching oriented model and to the lack of government support in areas related to the regulation of online courses (Eletti & Valentini, 2006) and financial maintenance. Freire also identifies the absence of incentives and formal recognition as a critical issue for e-learning 2.0. Among the errors which have influenced the failure of the consortium UkeU-United Kingdom e-University Worldwide Limited is the notable investment in the development of a brand-new platform and learning objects, confirmed by studies regarding e-learning 2.0, in contrast to the diffusion of Learning activities and open source platforms in the universities (Valentini, *op.cit.*).

4 Guidelines for e-learning 1.0 and 2.0 integration in university environments

The following are some indications which have been identified in research activities which have been presented and conclusions which derive from studies regarding the organizational impact of e-learning 2.0. It is important to:

1. Establish policies to promote the development of e-learning whereby goals, targets and activities can be identified. One such policy has been proposed for the Sapienza University³ and its faculty of Communication Sciences⁴ and

³ Mario Morcellini and Elena Valentini have proposed some guidelines to the Rector.

⁴ Some of these purposes have been identified by Mario Morcellini, Bruno Mazzara, Alberto Marinelli, Valerio Eletti, Ida Cortoni, Veronica Mobilio, Elena Valentini.

it is characterized by the following proposals (some of them are related to the peculiarity of specific areas and the organizational context):

- improve efficiency of facilities and faculty members;
- encourage training programs directed to the off-campus student;
- enhance the value of the university environment as a setting for adult training and vocational learning;
- while still encouraging workshops and teaching/research unity, integrate the residential courses with the online ones in order to guarantee more flexible opportunities to students registered in master programs;
- support the development of training programs in academic departments where resources have not been adequately expanded.

Activities coincide with the other guidelines listed below.

2. Create a work group which can coordinate activities and offer guidance to promote synergic actions among the different structures so that specific contributions can be developed and skills adequately integrated.

3. Coordinate activities among different faculties which mirror actions proposed by the university, share information with members of the educational process (professors, students and administrative staff) utilizing a specific area on one's own website, as some universities have already been doing. Some studies about web 2.0 suggest an "open platform" whereby specific characteristics should be achieved in terms of knowledge-sharing between different protagonists, also the external ones, permitting a community to negotiate an "open collaboration" of information-flow, thereby generating new ideas and stimulating creativity (Freire, *op.cit.*). The circulation of information should be an integral part of business communication at various levels to promote the involvement of the stakeholders.

4. Establish rules for the creation, production and transmission of online courses. Universities should provide guidelines so that online work developed by teaching staff can follow parameters based on common standards (1 hour online equivalent to 4 hours face to face work). Rules protecting the copyright of educational material, access in restricted areas to said material and DRM systems should also be defined.

5. Train staff corresponding to and in accordance with different levels of the e-learning chain.

6. Promote innovative training experiences and redesign the existing ones on the basis of student feedback and develop comparative studies of external undertakings. Past studies on e-learning 2.0 underline the contributions of professors which students are able to furnish. This conclusion is coherent to the 2.0 approach which emphasizes that the creation of new contents can be developed when user participation and peer to peer relationships exist.

7. Promote the use of open source platforms. "Open access and use of

contents” (Freire, *op.cit.*) and Creative Commons licenses have become terms frequently used in relation with web 2.0.

8. Develop strategic and virtuous alliances with private partners, particularly in areas where post-graduate courses are offered.

9. Strive for qualitative material, content and processes. The use of technology requires that the utmost attention be given to guarantee that it will not depreciate but enhance the effectiveness of each training program.

10. Combine teaching activities with e-learning research to sustain the Humboldtian concept of teaching/research unity, which characterizes the identity of the European universities vs teaching oriented models.

Conclusions

Web 2.0 represents a “Trojan horse” (Freire, *op. cit.*) for a “new social and cultural paradigm” (Shirky, 2008) to support institutional and organizational changes in the universities, characterized by a certain capacity to promote collaboration and share-oriented approaches. However, the process should also be considered with equilibrium as opposed to unconstrained enthusiasm regarding its advantageous contribution in the field of education. Thus, before an adequate evaluation can be given, it is essential that research continues, focusing not only on the cognitive and social consequences of technology and its relationship to teaching methods but also on the organizational dynamics of the process.

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