

Chapter 27

Adapting a Face-To-Face Competence Framework for Digital Competence Assessment

Teresa Torres-Coronas
Universitat Rovira i Virgili, Spain

M. Arántzazu Vidal-Blasco
Universitat Rovira i Virgili, Spain

ABSTRACT

In the present landscape of technological change there is increasing awareness of the need to support the acquisition of digital competences. In this paper, the authors address how digital competences can be developed through formal learning. The authors examine and demonstrate the design of a web 2.0 learning experience implemented at the Universitat Rovira i Virgili, which developed both digital competences and management knowledge. The authors argue that higher education academics should continue to expand their awareness of web 2.0 applications and the role they can play in optimizing learning and knowledge creation among students, the digital workers of the future.

INTRODUCTION

Information and communication technologies (ICT) are currently playing a key role in the education arena, from primary school to higher education and adult learning. This development was labelled under the now commonly accepted term e-learning, which is evolving to new models such as mobile learning.

The European e-Learning Action Plan 2001 (European Commission, 2001) defines e-learning as the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration. This requires new e-interaction and e-communication competences and a reorganization of e-learning structures. The components of these structures include content delivery in multiple formats, learning management, and a networked community of learners (Gunasekaran, McNeil, & Shaul,

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2002). Internet/World Wide Web have meant that opportunities have been identified for developing distance learning activity into a more advanced online environment known as Virtual Learning Environment (VLE). Higher education institutions devote substantial resources to providing students with access to internet-based information, VLEs and other forms of e-learning. These efforts are predicated upon the assumption that “university students are inherently inclined towards using the internet as a source of information within their day-to-day lives and, it follows, disposed towards academic use of the internet” (Selwyn, 2008).

In a fast moving technological environment, the traditional approach to e-learning is currently changing from the use of VLE to learning 2.0, an approach that combines complementary tools and web services—such as blogs, wikis, podcasting, videoblogs, and social networking tools—to support the creation of ad-hoc learning communities. In this context most of the current research tends to be concerned with the potential of the worldwide web and other internet applications to accelerate university students’ learning and knowledge-building, and support interactivity, interaction and collaboration (Selwyn, 2008).

This paper aims to provide an introduction to the application of web 2.0 tools and social software on the learning process. Social software has emerged as a major component of the web 2.0 technology trend. But, how can social software play a role in higher education? To answer this question, this proposal focuses on the role of web 2.0 technologies in promoting learning and the development of digital competences among students. A pedagogical application at Universitat Rovira i Virgili (URV, <http://www.urv.cat/>) which stems from the provision of collaborative knowledge discovery, is discussed in depth. At the same time, the paper explores the concept of digital competence from the perspective of the competence needs of the labour market and, the role that social software plays in the learning process. Finally, conclusions and some suggestions are made for future research in this field.

BACKGROUND

Social Media and Learning 2.0

The term social media includes a large number of web 2.0 tools used for online communication (instant messaging, weblogs, wikis, social network services, virtual worlds, etc.). O’Reilly (2003) describes web 2.0 as an “architecture of participation” in which collective intelligence generates a “network effect” leading to websites that become more valuable as more people participate. For McGee and Begg (2008), web 2.0 “represents a group of web technologies with a user-centric focus that actively change and evolve with user participation.”

The educational potential of these changes require a “thorough rethink of both the individual and collective dimension of the teaching-learning processes, rhythms of learning, new ways of structuring information for the construction of knowledge, and the tasks and competences of teachers and students” (De Pablos, 2007). The use of Web 2.0 tools and social software at the University is a strategy for a change towards the continuous improvement of education and a new culture sustained on the connectivism developed by Siemens (2004), in which knowledge is generated by means of a participatory culture or 2.0 learning. 2.0 learning takes place within a socio-cultural system in which people use technology to interact and learn collectively bargaining, thus encouraging lifelong learning.

In short, as Maenza and Ponce (2008) point out, these new environments are contributing to an educational transformation which implements, with no major problems, Piaget’s concepts of constructivism and Vigotsky’s social interaction: permanent, collaborative and active learning, in which learners are responsible for their own learning. The new technologies make a new university model possible which promotes 2.0 learning.

Esteve (2009) expressed himself in similar terms and pointed out that the Spanish university, in the middle of the process of adapting to the

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