Chapter 7
Technological Literacy in the Profile of Skills of University Professor in the New European Higher Education System

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ABSTRACT

This article describes the new requirements of the European Higher Education Area (EHEA) - international and cross-cultural, Information and Communication Technologies (ICTs) that are important in all fields of university studies and take on a central role for learning and teaching. The literature review showed that, despite the considerable attention focused on the technological know-how of university teaching, few studies have examined the characteristics of these actors. The purpose is to focus more on teachers, clearly defining the technological skills necessary to develop the new European System of Higher Education in order to facilitate the development of skills, general learning, disciplinary, and professional digital education. This paper analyzes why this adaptation is necessary, the difficulties encountered, the objectives, and the response of teachers to these changes. On the other hand, university education acts on three fronts: the integration and use of new educational technologies in universities, the European convergence and application of ICT, the innovation and education needed to bridge the gap between universities, and teachers facing reality, both socially and professionally. This study contributes to the debate on the interactions between academic literacy, technological skills, and employment prospects for university teachers.

1. THE ROLE OF TECHNOLOGIES IN THE NEW INTERNATIONAL AND CROSS-CULTURAL UNIVERSITY

The key challenge for universities today is to respond effectively to all the social changes and developments required by the new European higher education system, both in terms of governance and, cultural policy, which involves a gradual process of integration of a perspective, international, intercultural and/or global in scopes, functions (teaching, research and services) and universities' mission (Knight, 1997). The forces behind this transformation, clearly illustrated by Ward (2000), oblige the various institutions to question tasks, roles, and academic skills and to create learning environments that foster innovative educational and professional perspectives which produce new guidelines, standards, objectives and practices which attempt to secure the interests of all stakeholders and meet the needs of increasingly diversified student populations.

For example, the rapid increase in demand from senior students to access higher education is forcing universities across Europe, often located in a trans-national and trans-cultural region, to confront themselves with cross-curricular courses and unusual educational strategies aimed at curbing the current forms of social exclusion (Ribble & Bailey, 2005; Ribble, Bailey, & Ross, 2004; Underwood & Szabo, 2003, 2004; Van Soest, Canon, & Grant, 2000). On the other hand, the emergence, alongside the more traditional functions, such as education (construction of knowledge and skills) and research (production of knowledge and competence), of lifelong learning, perceived as a "continuous process by which every human being may extend and adapt his/her knowledge and skills, the ability to give an opinion and act on it" (Knežević-Floric, 2008, p. 201), should enable individuals throughout their lives to pursue virtuous learning paths and continuously update their cultural and professional profiles (Cranton, 1996). According to Knezevic-Floric (2008), in fact, the first step in lifelong learning is made when a more flexible understanding, assessment and enhancement of various forms of education and training is obtained.

In this sense, the technologies from an educational point of view are considered appropriate means to provide university teaching staff with the opportunity to prepare appropriate educational activities and actions to ensure a quality education to all categories of subjects (Alkan, 2005). For this reason, Europe has made a long-term commitment to press universities for technological innovation (Distance Education Report, 2000), especially with reference to teachers' competences (Aho Report, 2008) that could determine a multiple access to higher education by those segments of the population traditionally excluded from the university (Galliani, Zaggia, & Serbati, 2011), that obliges us to rethink teaching and research in a new way. However, if it is true that learning is the prevailing paradigm of the new cyber communities (Haterick, 2000), it is unthinkable that, as a consequence, teaching does not need to develop multimodal strategic interventions intended to effectively meet the emerging training needs of those populations, thus allowing academics to take charge of specific responsibilities towards the teaching offer.

It is well known, however, how the new technological equipment and infrastructure require highly qualified personnel both from a technical and pedagogical point of view ; in higher education contexts which are constantly evolving, this would necessarily shift the "teaching mediation" paradigm with a direct fallout on the development of cognitive processes, the reflection of the conditions that characterize the teaching-learning processes, assessment of learning contexts (Quellmalz & Kozma, 2003) or educational equipment, with the prospect of matching the new trans-national needs in terms of means and tools, for the development and coordination of the ever- increasing activities at different academic, educational and research levels.

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