Chapter 19

Towards a Model of a Didactics of eLearning:
An Application to Education for Sustainable Development

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ABSTRACT

In this paper our aim is to analyze and discuss some of the problems that Higher Education Institutions are facing with the change in the profile of students who reach this level of education. In this context issues related to the implementation of several professional knowledge areas (conceptual, pedagogical and technological) acquire a new dimension due to the need of transpose them into online learning environments. This starting point is a deep understanding from the analysis of three theoretical perspectives: digital natives and social and cultural settings, models of didactic transposition, and education for sustainable development. The last one was selected as a model to exemplify. Thus, it is our goal in this article to discuss a first draft of a didactic transposition model adapted to eLearning that answers the needs of this specific public.

INTRODUCTION

As the French philosopher Bernard Stiegler (2010) argues, "education is our name for transmitting the social competency that produces responsibility; that is, that leads to 'maturity'" (p. 2) and we all agree that higher education institutions have always played a crucial role in shaping the way by which future generations learn and will approach the world complexity, the phenomenon of globalization, the remarkable changes in economic and social spheres, the unprecedented crisis, and

many other problems of our world. Nussbaum (2010) goes even further and states that "radical changes are occurring in what democratic societies teach the young" (p. 2), and there will be severe consequences of that. At this very moment, we are in the middle of a silent crisis in education.

If we focus the analysis of the problem inside of HEI, we can consider - without any doubt - that: i) there is a new audience of students who come to these institutions and, at the same time, they have a distinctive profile; ii) the technologies are already an inalienable part of educational tools and they are in rapid evolution; iii) the mode of functioning of our brain is undergoing changes due to intensive and continuous use of new tools, not only in school spaces but mainly out of it. This is our starting point. Probably the largest problem we have to face is the existence of a kind of suspension of attention that made appear a new research field, the "attention economy", and more recently, the "ecology of attention" (Citton, 2014). This author considers that scholar institutions need to move from "asymmetrical" instructional teaching and restore the "symmetry" that was lost, a kind of upgrading of Socratic pedagogy for today.

These problems have an increased significance in eLearning contexts, where digital competencies are inherent to the learning environment which the students are immersed in. In parallel, the constant technological upgrades, as well as the educational possibilities opened by each new tool that appears on the market, require a frequent change of teaching strategies. In this work, we aim to discuss a theoretical framework that would support the foundations of a didactic eLearning model. This model of didactic transposition (DT) will be explained using as example the domain of Sustainable Development. Sustainability is an important issue for all society areas and in particular for the training of young people, who will be the citizens of tomorrow.

This paper is structured as follows: in a first theoretical phase we discuss issues relating to

changes in technological societies. In this context, we even approach a range of didactic transposition and specify with more detail the problems of Education for Sustainable Development. In the second part, we propose a DT model for the eLearning and exemplify it from the framework of Education for Sustainable Development.

BACKGROUND

This topic is divided into three themes: "New students in a changing society," "Models of didactic transposition," and "Education for Sustainable Development." The goal is to develop a theoretical framework which could support the DT model that we propose later.

New Students in a Changing Society

Since the beginning of XXI century, all international institutions and great enterprises have been drawing our attention to the young population. Reports about 21st-Century competencies, which make reference to the skills and competencies that this population group should acquire, have been multiplying. All of these reports have the following question in common: What kind of competencies[1] will enable individuals to compete successfully in the global economy? In response, lists of competencies have been appearing that include references to such as: critical thinking, problem solving, decision making, flexibility and adaptability, understanding of ICT operations and concepts, appreciation of the role of digital citizens, and so on. According to Ananiadouk & Claro (2009):

The information explosion triggered by ICT requires new skills for accessing, evaluating, and organizing information in digital environments. At the same time, in societies where knowledge has a central value it is not enough to be able to

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