Chapter 7

Multi–Perspective Concept Mapping in a Digital Integrated Learning Environment:
Promote Active Learning Through Shared Perspectives

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ABSTRACT

Improving higher education requires a pedagogical transformation of the trainers but also of the learners committed in their learning activities. In the framework of distance learning and WIL, learner-centered pedagogical approaches are useful. Thus, the Conceptual Map Project (CMP) is proposed with the support of Perspec-Map, a software aimed at strengthening the knowledge acquisition in automatic control of the audience in WIL. Perspec-Map is a web application promoting reflexive learning based on the sharing of users' point of view, thanks to multi-perspectives. It is an additional support for collaboration and blended-course momentum, changing the behavior of all the parties involved. On the basis of an evaluation with users, several improvements are envisioned: easier map design; management of the trainer-perspective for an improved reference map enriched by the peer reviews; availability of a digitally assisted trainer dashboard for map quality assessment, skills recognition, and facilitated guidance. These last issues demand an ethics and learning analytics.

INTRODUCTION

In the framework of Long-Life Learning (Yang, Schneller, & Roche, 2015), Higher Education Institutions (HEI) are deemed responsible for the triangle of learning performance of the training offer (see Figure 1) for the satisfaction of the audience based on an appropriately chosen pedagogy for the learning goal. Thus, the triangle of operating and economic performance (learning outcomes, resources, results) is widened for overall coherence (purposes, culture, structure).

The European Standards and Guidelines by ENQA (2015) demand a pedagogical U-evolution of the trainers for commitment in a shared culture (Sharmer, 2009; Lave, 2014). The support of their organizations is the underlying requirement (Kanuka, 2010). Solutions are mainly based on blended-courses, reflexive pedagogy and pedagogical device hybridization, integrating classical and digital tools to create new collaborative Integrated Learning Environments (ILE). ICT should be mobilized (Albion, Tondeur, Forkosh-Baruch, & Peeraer, 2015) to promote the "future work skills" (Davies, Fidler, & Gorbis, 2011): meta cognitive abilities, collective and social intelligence, a capability for virtual collaboration, computational thinking, cognitive load management and design mindset, in addition to the acquisition of knowledge and the ability to use it to pursue specific goals. This scenario promotes

Figure 1. Global learning performance
Based on Gartiser et al. (2004) and Gibert (1980)
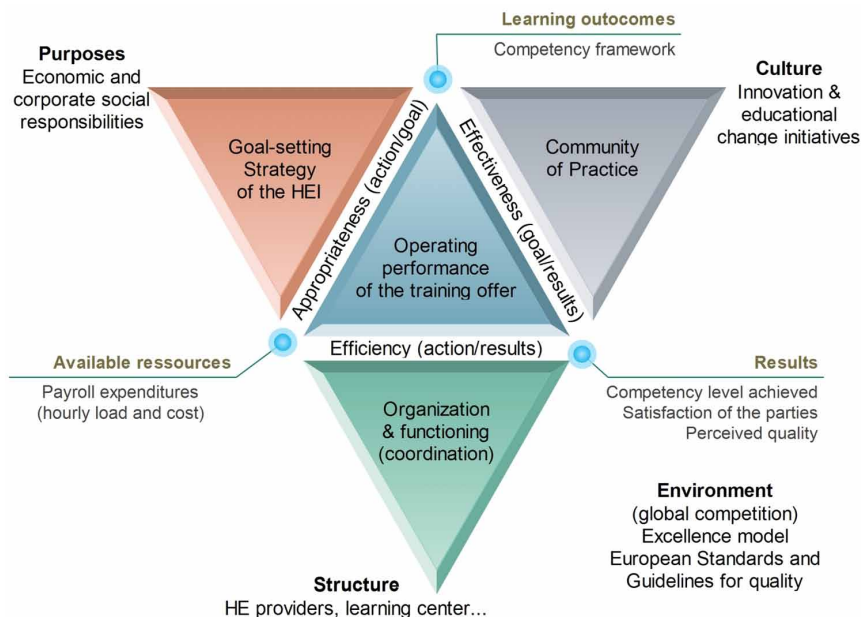
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