Chapter 2
Negotiations of Meaning with MOODLE: Concept, Implementation and Experiences

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ABSTRACT
In this chapter we present a design for an e-collaboration environment and its implementation with MOODLE within the context of a research knowledge network at our university. In the first part, after a short introduction of our constructivist knowledge model, we present our idea of what we call a “design for meaning”, explaining its theoretical foundation and developing its conceptual features. In the second part we show how we have implemented this concept with Moodle for supporting a community-based knowledge network of researchers at our university and reflect on the experiences that we have collected during this 3 years pilot project.

INTRODUCTION AND BACKGROUND
For many years after its foundation in 1998, research activities at our university – the Swiss Distance University of Applied Sciences (FFHS) – have been too much isolated in the departments; at the same time human resources were dispersed, research knowledge did not flow enough, projects were small and less recognised, know-how got easily lost and research tools’ development was too slow. In fall 2005 FFHS appointed me as director of the research department with the most urgent task of solving this problem.

One of the first activities of my team was a simple, but powerful analysis that consisted in distinguishing defects, their causes and measures leading to these causes (Fig. 1); this tool gave us a very helpful insight in some essential reasons for the defects and lead to a set of hypotheses for a possible solution.

We found that what we had to focus on as a primary source of the defects, was the combination of 3 elements that were characteristic for our academic institution: traditional hierarchical structures,
functional divisions based on course subjects and a radically decentralized organization characterized by weak ties (Granovetter 1973, 1983). By generating a highly dispersed set of "knowledge islands" (Probst et al. 1999) this combination had negative consequences on the flow of knowledge and this again was to a large extent responsible for the insufficient level and quality of research performances.

Based on this defects analysis, the first hypothesis was that if we could increase and improve the knowledge flow, then also research performances would improve. But how to make knowledge flow better under conditions of weak ties and given a traditional structure of the organization with hierarchical levels, functional divisions and a conventional "command & control" approach to corporate governance and management?

The objective of this chapter is to sketch the solution that we developed, an e-collaboration environment, by focusing on its central design principle and by presenting several examples of its implementation.

The discipline of Knowledge Management (KM) has been dealing with the issue of knowledge flow for almost 20 years since the end of the 1980’s decade and particularly the domain of knowledge networking seemed at first sight to be most suitable to our configuration as a radically distributed organization. After some pioneering publications and many implementations in the second half of the 1990’s (Schmitz & Zucker 1996), Knowledge Networking became a focus of research in the beginning of the new millennium (Graggober et al. 2003; Lembke et al. 2005; Back et al. 2006); this work covered a wide range of issues like for example: the proposal of global knowledge networks as a way to a more equitable society, the investigation of how to institutionalize knowledge networks in companies, the analysis and design of innovation networks, the role of ICT for enabling and the collection of best practices for facilitating knowledge networks.

Unfortunately in all these and similar investigations an essential component was missing or not explicitly stated and discussed: the fundamental principle or view that every person is inseparably bound to his or her (tacit) knowledge (Bettoni & Schneider 2002, 2003, Bettoni 2005).

The problem of "knowledge islands" is usually considered a very common and well known problem. Conventional organizations rely on two complementary ways for doing well their job: hierarchical levels (task subordination) and functional sectors (task domain). Their combination leads to clearly separated organizational entities (OE): these individual entities are valuable for accomplishing tasks and limiting information overflow but they also limit (and hinder) the knowledge flow. The problem seems to be clear and knowledge networking seems a good solution; but all approaches that have been proposed have failed in recognizing one essential aspect of this problem: that tasks and information can be easily separated from a person but tacit knowledge is inseparably bound to his or her owner. As a consequence, when the dominant approach to management is transferred to knowledge networking, it creates a fundamental conflict that it cannot resolve: "How can the employee pawn his knowledge to the enterprise without doing harm to himself?" (Bettoni, Clases & Wehner 2004).

Figure 1. Defects analysis (⇐ is caused by; has consequence ⇒)