### Chapter 56

## eLearning Project Management for Innovation Management: Team Project-Based eLearning and Assessment at the IT Institute

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#### **ABSTRACT**

The global crisis led educational institutions to adjust their curricula, pedagogical methodologies, and use of tools to the new alternate external environment. ITIN is a French IT Institute which has based its entire structure on dealing with such challenges by changing its pedagogical educational settings as well as its evaluation methodologies. One major change is related to Team Project-Based eLearning (TPBeL) utilization in order to advance students' knowledge, team skills, and collaboration in authentic working environments via Computer Supported Collaborative eLearning (CSCeL) for the Innovation Management eCourse. This book chapter discusses the TPBL and CSCeL approaches and presents a case study with 43 ITIN students. To achieve triangulation, diverse research methods were employed, including: individual questionnaires, thematic discussion analysis, and social network analysis. The results showed that the students' perceptions on teamwork skills developed within a Team PBL were positively increasing and they used several team work techniques simultaneously such as group co-construction of their assignments as well as the puzzle method. An interesting result suggests an absolute difference about what happened in teamwork and how the students perceived it; most students did not develop a group perceptive on their teamwork despite the fact that the group assignments were successfully completed. Lastly, they suggested that they enjoyed working very hard in an intensive eCourse, although it was the first time they used the Moodle Learning Management System and its integrated tools to collaborate for learning purposes.

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# INTRODUCTION: THE ITIN STRUCTURAL CHANGE TO MATCH PROJECT BASED LEARNING

In this era of a global crisis (Roubini, 2010), or era of global reconfiguration (Duchesne 2011; Morris 2010), educational institutions are obliged to propose solutions to students in order to support them in acquiring knowledge, skills and competencies to overcome it, while participating to the emergence of a digital humanism (Kroker 1995; Doueihi 2011). For this reason, ITIN, the IT Institute which is located at Cergy, Paris, France, established a generic Entrepreneurship oriented curriculum, evaluation and implementation, with an Innovation Management e-course to promote 21st century skills for global collaboration to promote creativity and innovation for the students of different technological subjects. The new market reality reflects new competencies needed by university students powered up by co-creativity and innovation co-construction (Leadbeater, 2007). According to Benkler (2006), we are now entering the era of peer production which is a more productive system for immaterial value which can be extended the market-based ones. This is also stressed by the European Qualification Framework (EQF, 2008http://ec.europa.eu/education/pub/ pdf/general/eqf/broch\_en.pdf).

Learning outcomes are specified in three categories – as knowledge, skills and competences. This vision is also based on intrinsic positive motivation and synergetic co-operation (Benkler, 2006) as approach that is integrated in the Innovation Management courses at ITIN.

ITIN's main mission is to prepare excellent technical engineers, who are also project managers capable of working efficiently within intercultural teams (Boyer, 2011). Therefore, ITIN's main role is to help students develop their knowledge and their knowledge about their knowledge (metacognition, Morin E., 2000). In the case of a professional establishment, the role is two-fold: working

towards knowledge acquisition but also building students' individual and collective expertise, skills and competencies (Cormier, 2008; EQF, 2008; Siemens, 2006). Observing the economic globalization (Naghshpour, 2008) as well as Information Systems globalization (C.I.A., 2010; Raivola, 2001), it is vital to prepare the students to become actors of international value chains and intercultural team projects. For this reason, the e-courses in ITIN are also oriented towards developing their soft skills needed for this economic globalization; such skills are essential for the 21st century. Among all, ITIN focuses on developing entrepreneurial attitude and competencies. One has to remember that structural changes have to be done also outside the universities in order to support entrepreneurship and innovation (Aghion, 2008; Van der Ploeg, 2008; West et al., 2004).

In ITIN Master M2i curriculum, one semester is dedicated to Entrepreneurship i.e. 10 modules of one full week each. The first 2 modules form a crash entrepreneurship seminar, during this seminar students works within an international team on the value creation (Ruckenstein, 2011) and Business plan of an innovative company (they have to bring the concept of a new product or service) and at the end they have a first oral defence before a jury. Then the following 8 modules are specialized (innovation management, finance, marketing, etc) with lecturing during 4 days and 1 day to improve the chapter of the Business plan (i.e. How to organize innovation in the startup company at year 0, 1, 2 etc...). At the end of the 10th module they have a second Oral defence before investors. By doing this we hope that they will create companies (entrepreneurship) or activities (intrapreneurship) and at least be interested by the course contents (because IT geeks are very dedicated to IT and often blind to everything else). This is ITIN overall entrepreneurship project for 2012.

The innovative aspects of the Innovation Management eCourse as such are the following:

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