

Chapter 40

The Sense of e-Learning Community Index (SeLCI) for Computer Supported Collaborative e-Learning (CSCeL)

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ABSTRACT

The aim of this research is to shed light in collaborative e-learning communities in order to observe, analyse and support the e-learning participants. The research context is the Greek teachers' e-learning community, started in 2003 as part of a project for online teachers' training and aimed at enabling teachers to acquire new competencies. However, these aims were not met because of passive participation; therefore this study aimed to enhance the Greek teachers' social engagement to achieve the new skills acquisition. Therefore, the initial sense of community identification was based on empathy; however, because it was inadequate to fully describe the context, a Sense of E-Learning Community Index (SeLCI) was developed. The new SeLCI attributes were: community evolution; sense of belonging; empathy; trust; intensity characterised by e-learners' levels of participation and persistence on posting; collaborative e-learning quality measured by the quality in Computer Supported Collaborative eLearning (CSCeL) dialogical sequences, participants' reflections on own learning; and social network analysis based on: global cohesion anchored in density, reciprocity, cliques and structural equivalence, global centrality derived from in- and out-degree centrality and closeness; and local nodes and centrality in real time. Forty Greek teachers participated in the study for 30 days using Moodle and enhanced Moodle with to measure participation, local Social Network Analysis and critical thinking levels in CSCeL. Quantitative, qualitative, Social Network Analysis and measurements produced by the tools were used for data analysis. The findings indicated that each of the SeLCI is essential to enhance participation, collaboration, internalisation and externalisation of knowledge to ensure the e-learning quality and new skills acquisition. Affective factors in CSCeL (sense of belonging, empathy and trust) were also essential to increase reciprocity and promote active participation. Community management, e-learning activities and lastly, the technology appear to affect CSCeL.

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INTRODUCTION

This chapter introduces the sense of community in Computer Supported Collaborative e-Learning (CSCeL). In this chapter, a community is a group of people who consciously share a sense of belonging anchored in common interests and enhanced by social interactions facilitated by information and communication technologies. E-Learning describes learning via the Internet, intranet, and extranet (WR Hambrecht and Co, 2000:8). In order to facilitate research and analysis, Teasley and Roschelle proposed a distinction between cooperation and collaboration clearly suggesting the importance of roles as division of labour in such distinction (1993):

Collaboration is a coordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem... Cooperative work is accomplished by the division of labour among participants, as an activity where each person is responsible for a portion of the problem solving. Teasley & Roschelle, 1993:235

UNESCO's definition suggests that collaborative learning takes place:

when learners work in groups on the same task simultaneously, thinking together over demands and tackling complexities. Collaboration is here seen as the act of shared creation and/or discovery. Within the context of electronic communication, collaborative learning can take place without members being physically in the same location. Technology & Learning definitions, UNESCO (n.d.)

The freedom that e-learning offers and the increasing number of online courses provided by educational organisations offer new opportunities for personal and professional development in a life-long learning course. Nevertheless, teachers'

education has been severely criticized on the grounds of both quantity and quality (Thompson & Schmidt, 2007). To support this life-long learning context, Learning Management Systems (LMS) have been used for online teachers' training. A number of projects have addressed it using LMS successfully, for example, the international project 'Tapped In' on a voluntary basis (Schlager & Fusco, 2004), the Australian National Quality Schooling Framework (NQS) (Hartnell-Young, et al, 2006), or the European projects 'Implementing Standards for European e-Tutor Training' (2006-2007) and 'E-Learning Fundamentals' (started in May 2007). However, not all projects are successful; an example that failed to engage teachers in an e-learning community is the European Minerva Project 'Star Science' aimed at collaboration between science teachers from Ireland, UK, and Bulgaria (Harvey, 2003). In short, e-learning outcomes seem to be unpredictable.

In Greece, teachers' training is mainly onsite and organised by the Greek Pedagogical Institute in collaboration with the Greek Ministry of Education and Religious Affairs. There are also courses provided by Greek teachers' associations (e.g. GAPMET in music) as well as the Greek School Network (GSN), the main governmental educational ICT provider. GSN uses Moodle; however, Moodle@GSN appears not to have worked in that there has been a high level of passive participation, which is absence of posting, for more than three years (1077 days on the 13/10/2006 according to the log files). This absence of collaborative learning was the initial motivation to increase participation and influence e-learning quality. Therefore the hypothesis was: *If the Greek teachers' participation in e-learning was increased then participants can experience collaborative learning and sense of community which will lead to e-learning quality.* The proposed Sense of e-Learning Community Index (SeLCI) incorporates the previous concepts aiming to provide in-depth insights in CSCeL and a roadmap to ensure e-learning quality.

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