Chapter XI

Problems and Opportunities of Learning Together in a Virtual Learning Environment

Thanasis Daradoumis  
Open University of Catalonia, Spain

Fatos Xhafa  
Polytechnic University of Catalonia, Spain

Abstract

This chapter explores new ways of collaborative learning in a virtual learning environment based on our acquisition of knowledge from previous experience. We identify both the problems faced in real collaborative learning practices and the ways these problems can be overcome and turned into opportunities for more efficient learning. These issues concern pedagogical, organizational, and technical elements and constraints that influence the successful application of collaborative learning in distance education, such as efficient group formation, the nature of collaborative learning situations that promote peer interaction and learning, the student roles and tutor means of supervising and guiding the learning process, and an effective assessment of group work. The proposed methodology not only achieves better learning outcomes but also contributes to the tutor’s professional development in a networked learning environment that facilitates social interaction among all participants while building on existing skills.
Introduction

One of the basic requirements for education today is to prepare learners for participation in an information society in which knowledge is the most critical resource for social and economic development. Moreover, contributed expertise and networked activities more and more characterize the emerging work environment. Elaborating, managing, and extending knowledge while productively collaborating with others and functioning within networks of experts will be essential for interactive and open organizations of the future.

Besides this generic objective, in the context of distance learning, one of the fundamental issues is to provide quality teaching and learning. This fact is even more imperative today when the rapid development of the information and communication technologies has initiated a shift away from conventional distance learning to networked learning. The result of these technological advancements has given rise to virtual learning environments or virtual campuses where the communicative process is crucial. In this line, the Open University of Catalonia (http://www.uoc.edu) has built a large and complex organizational virtual campus that provides an innovative pedagogic model for distance learning and teaching.

In this broad networked learning community infrastructure, our work seeks to investigate and facilitate learning and social interaction. In particular, we have started exploring the possibilities for new forms of learning and teaching by proposing the design of a methodology that promotes and encourages learning and collaboration through smaller communities of learners working together. Our involvement in this project has given rise to different methodological approaches to and practices of networked collaborative learning, depending on several factors such as: the nature of the experience (the type of virtual collaborative learning activities), the individual and group objectives, assessment issues, the tutor and student roles and commitment level, and the technology used for the implementation of the different practices.

In this chapter, we describe a methodological framework that uses existing technology, the Basic Support for Cooperative Work (BSCW) system (Bentley, Horstmann, & Trevor, 1997), and applies an innovative scenario for developing a Project-Based Collaborative Learning (PBCL) practice that is adequately embedded in a real practical educational context. In this context, we examine the conditions and methods that influence and enhance active learning through collaborative project development in shared workspaces, as well as some methods for triggering collaborative processes. Our approach brings new expectations and requires changes in attitudes and reward structures for both the learners and the teachers, such as new roles, different pedagogic and learning methods, and technological and training supports that enable learners to build up social structures, encourage learning, and develop critical thinking skills.

From a methodological point of view, this allowed us to identify that the lifecycle and progress of learning groups in a virtual environment goes across four critical processes (or phases) that require defining specifications that are quite different from those applied in individual learning in virtual environments. These phases are: Group formation, consolidation, development and closing (Daradoumis, Marquès, Guitert, Giménez, & Segret, 2001).
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