Models for the Development of Learning Contexts: Managing Learning and Knowledge in Virtual Environments through Learning Communities

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Abstract
This project addresses the design of a framework for the development of learning contexts through virtual learning communities, based on the development of learning activities.
It endeavours to establish a framework to rethink the management of learning and knowledge as processes of social participation within virtual contexts of collective learning. It builds on the conviction of the importance of creating a model that may represent a guideline for the design of systems for the management of knowledge and learning in educational sites and, ultimately, for building learning contexts for virtual environments.

Introduction
We are now evolving towards a different level of consciousness and understanding of human development, human motivation and human learning, brought up, in part, by the development and dissemination of new information and communication technologies, mainly driven by the internet in all its forms. Our main interest, within the scope of this project, is the web and its potential as a medium for the promotion and development of a new educational paradigm, assuming that the development of web-based educational servers represents one of the most significant contributions of information technologies to the transformation of the processes of knowledge representation and of learning itself [1].

How can the web be more than just another way of delivering content to students? How can mankind profit from existing millions of bytes of information? How can we give a human touch to the technological world? Probably the answer is not easy to find, but it may lay somewhere in the articulation of pedagogic, psychological and sociologic theories, along with the contribution of organisational practice and theory.
In an attempt to find an answer to these and other questions, this project addresses a framework for the development of virtual learning communities, based on the development of learning activities. It endeavours to establish a framework to rethink the management of learning and knowledge as processes of social participation within virtual contexts of collective learning, that is, to build a model that may represent a guideline for the management learning in educational sites and to build learning contexts for virtual environments.

With these background ideas, we will be able to: state strategies required for the construction and management of virtual learning communities; clearly identify the roles and responsibilities of the members; identify and promote the structures involved in the construction of collective knowledge; develop the activities necessary for the management of knowledge/learning and for the construction of learning contexts.

Discussion of issues
Recent practice in organisations is showing that learning communities are privileged contexts for the acquisition and creation of knowledge, and the development of decentralised information resources encouraged by information and communication technologies are bringing a new light on this issue.
This reflection supports the view that individuals learn when engaged in communities in which knowledge is built through interaction (within collaborative activities, either social exchange activities or self-discovery activities), discourse and consensus. Thus, learning communities constitute an important alternative to traditional learning and organisational contexts, supported by new information and communication technologies, and are becoming more tangible today than a decade ago. In this way, the concept of learning communities emerges as an alternative to traditional teaching/learning models, under the shape of decentralized groups of people that self-organize as functional and stable communities with the aim of scaffolding each other in the development of constructive learning activities [2].
It might be said that the greatest advantage and the biggest challenge of web-based learning is that of building context rich virtual communities that foster individual and collective learning, where learners are responsible for the collaborative construction of a culture where collective knowledge develops. If we accept that web environments are new tools for the creation of this kind of communities, and that psychological tools deeply
influence the sense we make of the world, it’s crucial to recognize the need for a new perspective on the creation of learning contexts [3]. In fact, researchers rarely pay attention to the framework of the learning contexts and activities, or to the social interactions they promote. This may be because defining context is neither easy nor consensual. Thus, the need of developing research on this domain is getting clearer every day.

The development of virtual learning environments through sophisticated technologies supporting learning seems to be increasingly gaining shape. However, solutions that have been deployed until now carry a perspective of learning and education that emphasizes content neglecting, almost completely, context. These solutions lack the capacity to set free from learning paradigms inherited from the mechanistic tradition of Industrial Society that still rule over the majority of the initiatives taking place to improve learning and education. We consider that part of the solutions for open learning will concern the development of learning activities – that is, of contexts – that provide sense and structure to content.

Methodological issues

Influenced by these ideas, one can no longer neglect the role of context in any attempt at building web-based learning environments for e-learning. There lays the importance and urgency in discussing the concept of and construction of learning contexts, in what may be a contribution to understanding the influence of contextual issues in learning. Our interest lies in the interactions among members, and between them and the context itself: how do they relate and develop, how to they influence learning, how can we foster their creation?

There are several strategies for the study of contexts. The one we intend to use consists on creating systematised contexts and acting within them, in this way important elements might be provided by context itself, through the interactions between members and between these and the system. To this end, learning communities are, in themselves, the object and the process of research.

This research will contemplate theorization about learning contexts and learning communities, the identification of roles and responsibilities, the classification of learning contexts according to different variables, and the design of learning activities for the construction of learning contexts.

The first goal is the creation of a framework for the development of virtual learning communities. In this area, alongside work previously completed, there is plenty of literature available from consolidated domains such as Organisational Learning, Knowledge Management, Flexible Cognition, Situated Learning, Communities of Practice, and so on. This literature will be reviewed and analysed, in order to consolidate the theoretical reflection on learning communities and learning contexts.

Following the principles of distributed constructionism and the socio-constructivist models for instructional design, as well as other psycho-pedagogic learning theories, we have proposed earlier [4] some models for the management of learning in virtual environments, based on three kinds of strategies: interaction, action and presentation. The use of these strategies is illustrated through a variety of concrete learning activities that might promote the construction of contexts for collective learning.

The project will resource to diverse methodologies, considered suitable for its different features: a)action-research in all phases to ensure a reflexive evolution; b)case studies for those phases focusing on existing communities; c)action-research in the community to be developed.

Concluding remarks

This reflection suggests that individuals learn when engaged in communities in which knowledge is built through interaction, discourse and consensus. They constitute an important alternative to traditional learning and organisational contexts, and are more tangible today than a decade ago.

The challenge underlying the project of building learning contexts is that of achieving a balanced combination of all the dimensions and components of the learning architecture, where the need for one dimension cannot be fulfilled at the expense of the others. A framework for the design of learning contexts is needed to provide a deeper understanding of how a specific design serves the different requirements of the learning architecture of a learning community.

Having in mind situated learning, where learning is viewed as a social process and conceived as a situated activity, the main characteristic of the framework is the underlying conviction that individuals engage in learning communities, looking for participation in their social practices. It focuses on the crucial relationships between incoming members and existing members, as well as on the existing interactions between activities, artefacts, knowledge and practice.

This project is still at an early stage, namely the analysis of cases and the conceptual construction of the framework; by the time this conference takes place we believe there will be some results and improvements to share with the audience.

References


* For further references, feel free to contact the author.