# Chapter 3.2
# Augmenting Collaboration with Personalization Services

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## ABSTRACT

Collaboration is considered as an essential element for effective learning since it enables learners to better develop their points of view and refine their knowledge. Our aim being to facilitate communities of practice members as learners, we argue that collaboration tools should provide personalization features and functionalities in order to fit the specific individual and community learning requirements. More specifically, we propose a framework of services supporting personalization that being embedded in collaboration tools, can act as catalysts for individual and community learning. The proposed set of services has derived after the careful consideration of a generic learner profile, developed to formalize human actors in settings where learning takes place.

## INTRODUCTION

As organizations start to acknowledge the significance of communities of practice (CoPs) in helping them meet their business needs and objectives, new efforts to better facilitate the process of learning in these communities are constantly emerging

(Quan-Haase, 2005). CoPs, also referred to as "knowledge networks," is a term commonly used to identify institutionalized, informal networks of professionals managing domains of knowledge (Gongla & Rizzuto, 2001). Such communities are formed by groups of people who share an interest in a domain of human endeavour and engage in a process of collective learning (Wenger, 1998). It is this very process of collective learning that creates bonds between them since such communities are formed by groups of people who are willing to share and elaborate further on their knowledge, insights, and experiences (Wenger & Snyder, 2000). Being tied to and performed through practice, learning is considered of premium value by practitioners for improving their real working practices (Steeples & Goodyear, 1999). Situated learning in particular, that is learning that normally occurs as the function of an activity, context, and culture, is closely related to the social interactions in the community context.

Above and beyond learning situated in explicitly defined contexts such as the school classroom, seminars, or even e-learning approaches, modern learning theories strongly support the value of communities and collaborative work as effective settings for learning (Hoadley & Kilner, 2005). More specifically, they emphasize on collaborative learning work that refers to processes, methodologies, and environments, where professionals engage in a common task and where individuals depend on and are accountable to each other. When speaking about collaborative learning, we espouse the Wenger's perspective of learning as a social phenomenon in the context of our lived experience of participation in the world (Wenger, 1998). As regards to it, an especially valued activity involves information exchanges in which information is constructed through addition, explanation, evaluation, transformation, or summarising (Gray, 2004; Maudet & Moore, 1999). Discoursing, in particular, is considered as an essential element for effective learning, since it enables learners to better develop their points of view and refine their knowledge. This is because, in discoursing, participants focus on the same issues, share their knowledge, and learn to negotiate conflicting opinions in order to reach a commonly accepted solution (Veerman, Andriessen, & Kanselaar, 1998).

Still, it is generally acknowledged that traditional software approaches supporting collaboration are no longer sufficient to support contemporary communication and collaboration needs (Moor & Aakhus, 2006). Research findings on the usage of collaboration tools show that learners are not sufficiently supported in expressing personal ideas and opinions, nor are provided with adequate means for the articulation and sharing of their knowledge. Taking this into account, our work concerns the design of tools that enable discoursing to support collaborative work, emphasis given to aspects, such as the sharing of knowledge and the building of trust. We envisage collaboration tools that can promote learning and encourage creative, parallel, and lateral thinking during collaboration. Towards this, we argue that personalized services can be of great value, as they as they enable the provision of services tailored according to an individual's (or community's when applicable) skills, needs, and preferences. In this paper, we present a set of personalization services that has been developed to address the requirements for efficient and effective collaboration between CoP members who can act as catalysts for individual and community learning. Thus, we first performed a comprehensive literature and practice survey of related issues regarding communities of practice, collaboration, and learning. Then, we developed a generic Learner Profile model to formalize CoP members as human actors in settings where learning takes place. The Learner Profile proposed in this paper contributes to the proper user modelling required for the development of virtual environments for collaboration.

The remainder of this paper is structured as follows. The following section discusses

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