

## Chapter 5.12

# Facilitating Social Learning in Virtual Communities of Practice

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### ABSTRACT

This chapter introduces communities of practice as a means to explore human computer interaction in online collaborative environments. Through a wide review of the literature on communities of practice and their virtual counterparts, it argues that the focus for successful interaction design in these communities lies on those sociability and usability aspects that allow greater participation in social learning. It also argues that the facilitator assumes a fundamental role in guiding a virtual community of practice to accomplish work-related informal learning activities in a climate of trust and collaboration. The author hopes that understanding the special opportunities provided by virtual communities of practice will advocate for their widespread routine use.

### INTRODUCTION

In these unsettled times, the capability of setting priorities, engaging in an activity, reflecting about such activity, welcoming feedback, accepting criticism, and changing one's course of action as a result of it, known as *continuous learning*, is highly prized in that it confers increased adaptability to the environment (Senge, 1990). At the same time, information and communication technology made knowledge creation, storage, and distribution easier. Such proliferating of new possibilities has led to a higher reliance on adult learning, both in the form of distance education and workplace formal and informal online training. That, in turn, posed unexpected human computer interaction challenges (Salomon, 1991).

In the psychological and anthropological fields, theorists maintain that learning *cannot* be

separated from the practices and the contexts in which it occurs (Barab & Duffy, 2000; Lave & Wenger, 1991). Sustained discursive interactions with one another (Bielaczyc & Collins, 1999) as well as careful observation and reflection are pivotal for learners to collaborate and achieve new insights and generate, acquire, and share knowledge. Of the many tools that can be used to facilitate collaborative learning, communities of practice (CoPs) and their virtual counterparts are promising (Lesser & Storck, 2004; Liedka, 1999), especially in addressing *unstructured practices*, impossible to foresee, and too complex to formalize (Allen, 2003). Despite the interaction design acceleration that new forms of collaboration and/or cooperation have put on technology in general and software in particular, user-centered evaluations stress the role of the human factor (Preece, Rogers, & Sharp, 2002).

The remainder of this paper is structured as follows. The next *conceptual foundations* section provides background information on *communities of practice* and their virtual counterparts. Then, the *virtual communities of practice from an HCI perspective* section reframes such literature through the lens of interaction design and highlights the facilitator role in determining the success of these communities. Finally, the *future trends* section discusses the usefulness of this model and its future developments, while the *conclusion* section summarizes the main findings and their consequences.

## CONCEPTUAL FOUNDATIONS

### Communities of Practice (CoPs): Defining the Framework

When trying to define what a community of practice is, one stumbles into at least 11 definitions (Markestijn, 2004). Some of them even come from the same author or groups of authors (Lave & Wenger, 1991; Wenger, 1998; Wenger,

McDermott, & Snyder, 2002), which has been interpreted as *contradictory* (Gourlay, 1999), *confusing* (Cox, 2004), and *hard to grasp* (Johnson, 2001). Nevertheless, the refinement of a concept through iterative cycles of definition, modeling, analysis, and reframing of the problem is consistent with the action research method (Argyris, Putnam, & McLain Smith, 1985), a framework often mentioned in connection with epistemology of this field.

Many authors have tried to describe the characteristics of *communities of practice*. The *structural model* (Wenger et al., 2002) is the most widely adopted and defines a community of practice (CoP) as (a) a *community* composed of any number and type of members; (b) based on a shared *interest* that becomes the topic of most conversations among its members; and (c) engaging its participants into a collaborative *practice* regarding the aforementioned topic of conversation. Any domain of interest is possible, as long as it is related to a practice, intended as some form of *doing* in connection with a topic or an interest, and often but not always related to work (Wartburg, Rost, & Teichert, 2004). Participation in communities of practice is voluntary (Wenger et al., 2002), comes in different kinds (Lave & Wenger, 1991), from participants only engaging in observation to the ones heavily interactive, and is fostered by somebody facilitating the learning process (Johnson, 2001; Rogers, 2000). Opinions differ, even among practitioners, on whether a community of practice can be created via a formal initiative or only exist as a spontaneously emerging entity, most opting for the former (Allen, Ure, & Evans, 2003; Bourhis, Dubé, & Jacob, 2005; Brown & Duguid, 1991, 2001; Liedka, 1999; Wenger et al., 2002).

*Communities of practice* can be put to a number of uses, the main one being tacit-to-tacit knowledge conversion (Hildreth & Kimble, 1999; Preece, 2003) that allows learning of unstructured practices (Allen, 2003; Lesser & Storck, 2004). In this setting, a *community of practice* allows for the knowledge to flow from one member to another

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