Chapter 3

Application of Social Presence Principles to CSCL Design for Quality Interactions

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ABSTRACT

Social presence is a key approach to activating interactions in Computer-Supported Collaborative Learning (CSCL), but its approaches, definitions, and evaluations have not been coherently presented in previous research. This chapter provides practical suggestions and implications regarding CSCL to help motivate social interactions among students and ensure effective and attractive learning. Three major approaches and focuses are discussed first: features of communication media (e.g., Short, et al., 1976); interaction and the learner’s perception of interaction (e.g., Gunawardena & Zittle, 1997; Tu & McIssac, 2002); and learner’s ability (e.g., Garrison, et al., 2000; Garrison & Anderson, 2003). Integration and refinement of the central concepts are then illustrated. Conditions to establish social presence are introduced, using three steps for both individuals and groups: expression, perception, and recognition, which are all applicable to CSCL design. Media features are also explored as determinant factors when promoting social presence in a learning community.

INTRODUCTION

A trust relationship among members is generally an important factor contributing to smooth communication in a community or group. This is true for communities within the field of Information and Communication Technology (ICT) as ICT advances and the pedagogical paradigm shifts from teacher-oriented to learner-oriented, interest has grown in using computer networks and social media for collaborative learning. This approach is called Computer Supported Collaborative Learning (CSCL).

CSCL is defined as a collaborative learning environment based on a social constructivist approach (Vygotsky, 1978), in which learning
is regarded as cognitive change promoted by interaction and activities among group members (King, 2007). Goldman, Digiano, and Chorost (2009) point out the potential of ICT applications to create powerful learning environments that support distributed, interactive, collaborative and constructive learning and learning assessment. Learners benefit from collaborative learning using social media, because electronic collaboration tools provide them with opportunities to solicit and share knowledge while developing common ground or intersubjectivity with their peers and teachers (Hara, Bonk, & Angeli, 2000).

Successful CSCL requires quality interactions; quality interactions need social interaction to establish a group culture, and an exchange of experiences as a foundation for knowledge production (Reneland-Forsman & Ahlbäck, 2007). One of common concerns in CSCL is how to support learners’ social interactions, (i.e., how to best activate collaborations in a learning community). Social presence, an approach intended to resolve this concern, focuses on quality interactions using CSCL structures as a framework.

Social presence is a concept related to one’s perceptions of oneself and others, and to social interactions in a community which could promote a trust relationship and play an important role in promoting CSCL. Social presence was originally defined as the “degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationship” (Short, et al., 1976). Social presence seems to increase the learners’ satisfaction with learning (Gunawardena & Zittle, 1997) and with social interactions, which are the foundation of social learning (Tu, 2000). Garrison and Anderson (2003) redefined social presence as “the ability of participants in a community of inquiry to project themselves socially and emotionally, as ‘real’ people, through the medium of communication being used” and introduced the indicators of social presence such as “self-disclosure” and “quoting from other’s messages.” Social presence is also related to cognitive skills. When social presence is established, cognitive presence, a condition of higher-order thinking and learning, is enhanced and sustained (Garrison & Anderson, 2003). However, there is no consistent agreement on concepts and approaches to social presence among researchers. This is due to the broad diversity of social media, including social software such as Facebook, and Twitter, and to the many mobile devices now available. Further, new research methodology and data analysis methods related to social networks have been introduced, and possible ICT applications to educational settings have been widely expanded in response to research findings and the implications of Computer-Mediated Communication (CMC) associated with CSCL.

This chapter introduces social presence theory as a framework for the design and application of social software for learning, and organizes conditions to promote social presence in the use of social software in educational settings. The intent is to identify major issues of existing social presence theories and to refine concepts of social presence in ICT learning environments, taking currently available social media tools into consideration. We wish to discuss essential conditions and approaches which foster the establishment of social presence for collaborative learning. This work is intended to help instructional designers and developers refer to the conditions and technologies that promote social presence for quality interactions in CSCL.

**BACKGROUND**

The importance of interaction and collaboration are strongly emphasized for effective and meaningful learning, as a result the current pedagogical paradigm shift to constructivism, social constructivism, and situated learning. Research and practice on CMC for CSCL have increased sharply. CSCL is an interactive learning environment based on the principles of social construc-