Chapter XIII

Relational Online Collaborative Learning Model

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Abstract

This chapter describes an instructional online collaborative learning model that addresses the phenomenon from a systemic human relations and interaction perspective. Its main purpose is to aid students in their social building of knowledge when learning in a CSCL environment. The model argues that knowledge building in a networked environment is affected by the communication conflicts that naturally arise in human relationships. Thus, the model is basically proposing a way to attend to these communication conflicts. In this line, it proposes a set of instructional strategies to develop the student’s meta-communication abilities. The concepts and instructional suggestions presented here are intended to have a heuristic value and are hoped to serve as a frame of reference to: 1) understand the complex human patterns of relationships that naturally develop when learning in a CSCL environment, and 2) suggest some basic pedagogical strategies to the instructional designer to develop sound online networked environments.

Introduction

Computer-Supported Collaborative Learning (CSCL) has been an important emerging research paradigm for the field of educational technology for almost a decade. Through these years, most of the researchers working in this area have been optimistic about its
benefits to education (see Harasim, Calvert, & Groeneboer, 1997; Jonassen et al., 1997; Stahl, 2002b; Willis, 1994). The main purpose of the CSCL field has been to offer innovative instructional strategies to avoid the low-level type of learning related to Internet correspondence courses (Comeaux, Huber, Kasprzak, & Nixon, 1998).

Research results have been promising; the studies made in the area usually show positive outcomes. For example, research has been done to prove that students develop their higher order mental abilities when they learn collaboratively online (Archer, Garrison, Anderson and Rourke, 2001; Arnseth, Ludvigsen, Wasson and Mørch, 2001; Bonk and Reynolds, 1997; Wang, Tseng, & Chen, 2000); other authors have emphasized the collaborative aspects of online communication when students learn asynchronously as opposed to face-to-face learning (Ellis, 2001; Hiltz, 1998; Napierkowski, 2001); others have focused their research questions on administrative variables like the different group compositions, which usually show higher achievement for heterogeneous groups (Bernard and Lundgren-Cayrol, 2001; Lee and Chen, 2000; Nagai, Okabe, Nagata and Akahori, 2000).

Despite these results, Lipponen (2002) has raised some very interesting issues questioning CSCL research; he states that there is no agreement about the concept of collaboration and that “...there exists little research on how students participate in networked mediated collaboration” (p. 75). Specifically, it is not yet clear how students build knowledge collaboratively in asynchronous communication activities.

According to his comments, on the one hand, it is possible that most of the positive results shown so far could just be confirming the collaborative learning’s effects on achievement, whether students are learning or not in a CSCL environment, a result fully documented in the face-to-face collaborative learning literature made available by well-known authors like Johnson and Johnson and Slavin.

In addition, judging from the literature reviewed in this chapter, it appears that not many research projects have considered the importance of understanding knowledge as something that is located in the group as a result of the activities done in the group; that is, knowledge is in the community rather than the individual, as studies done under the social constructivism perspective would suggest (see Imel, 1991; Resnick, Levine,& Teasley, 1991).

Consequently, the group’s shared cognitive processes related with the social building of knowledge in a technologically supported environment are not entirely understood. In order to contribute to this understanding, the present chapter describes an instructional online collaborative learning model that addresses the phenomenon from a systemic human relations and interaction perspective. Its main purpose is to aid students in their social building of knowledge or in their “relational cognition,” a concept that this chapter suggests, that means that cognition is within human interaction when learning in a CSCL-networked environment. To achieve its purpose, the model incorporates the idea that the students’ relational cognition is affected by the communication conflicts that naturally arise in human relationships. Thus, the model is basically proposing a way to attend to these communication conflicts.

For this model, learning happens inside a social environment where learners experience a complex set of different types of relationships when working together to accomplish a common task. Thus, when students build knowledge collaboratively, they are basically
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