

# Informal Communication in Virtual Learning Environments

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## INTRODUCTION

Learning environments increasingly become more diverse by the use of information technology. Thereby, the share of face-to-face situations between students as well as between students and mentors becomes smaller, while the share of encounters in virtual space is growing larger. Thus, computer mediated communication (CMC) is growing in importance in all learning environments.

Since standard learning environments involve both formal and informal communication, it seems reasonable to claim that without informal communication students and faculty would have difficulties in sustaining the learning processes. Beyond the ever-growing exchange of formal content, the opportunity of informal communication appears increasingly essential for the successful pursuit of online studies.

Informal communication may help students get a quicker grasp of the issues of their studies. It can provide opportunities to find fellow students or friends and, beyond the framework of serious learning, enable contacts to potential partners in pastimes like sports or games. What makes the issue difficult to recognize is that informal communication does not usually present itself as a separate activity; rather, it is folded into a variety of interactions within groups and between individuals.

In virtual environments, students and their teachers are usually separated in time and space. What is lacking is the easy everyday exchange of social cues known from brick-and-mortar institutions and present in traditional environments. The course of interactions is broken up, and therefore needs to be supported by CMC in new ways. Our extensive analysis of elements in learning environments suggests that informal communication is generally undervalued.

For a meaningful discussion of the value of informal communication in learning, we sketch out a theoretical background. This framework is derived from the constructivist understanding of learning, extended by requirements of self-organization. Then, we quote acknowledged characterizations of informal aspects and discuss the conflicting consequences of our demands. Finally, we try to provide some perspectives for finding solutions, and summarize the analysis.

## CONSTRUCTIVISM AND SELF-ORGANIZATION

The constructivist approach to learning—following the path of Dewey, Piaget, Bruner and Vygotsky, among others—includes an understanding that involves interrelations as well as a relevant context of the learning matter (for an introduction, see Goldhaber, 2000). Constructivism assumes the individual's active construction processes within mental models, whereby knowledge is conceived as the result of construction processes performed by individuals. Knowledge is regarded as being tied to the individual and inseparable from the act of learning and "... is principally bound to situations" (Gruber, Law, Mandl & Renkl, 1995, p. 170). In addition, proponents of the so-called moderate constructivist approach attach great importance to social components for learning processes (see Gräsel, Bruhn, Mandl & Fischer, 1997; Alavi, 1994; Gruber, 1995).

Initially, hypermedia technologies were regarded as the perfect means for implementing constructivist ideals. Today, the Internet and its various services are favored as the ideal working and learning environment.

Many design proposals for online learning environments claim that their goals are based on constructivist

learning theory (see Goldhaber, 2000; Duffy & Cunningham, 1996). When such projects are implemented, however, the requirements that result from a strictly constructivist approach are frequently of no consequence whatsoever. Either the didactic design of the projects provides only a passive part to the learners, or teamwork and other social interactions are not really considered.

We often observe that in many projects explicit claims and concepts are worlds apart from their actual implementations. This suggests that in today's academic discussion on computer-supported learning constructivist ideals in a way constitute a dogma, while traditional concepts of teaching and learning still govern the imagination of the architects of learning systems.

Apart from that gap between claims and achievement, the constructivist-learning concept is criticized for being deficient in several ways. As constructivism takes as its sole starting point the present market situation and the demands being made on labor, it confines also the range and validity of learning situations. In addition, under the constructivist perspective, the learning situation itself is mostly disregarded. "There is (almost) always a gap between computer-based learning environments and reality and therefore a lack of authenticity" (Gruber et al., 1996, p. 181).

In this view, the constructivist-learning concept in itself does not appear to be sufficient as the sole basis of a concept of computer-supported cooperative learning. Therefore, we will widen the scope of our investigation to include the notion of self-organized learning.

The concept of self-organized learning (see Knowles, 1975; Wenger, 1998) refers to various basic values and assumptions in formulating its objectives. The concept's central hypothesis consists of the belief in responsibility and autonomy of human beings who, by pursuing autonomous learning activities on their own responsibility, develop independence of both thought and action. The learner's competence of self-determined study should be developed. In addition, social competences should also be developed with the help of the concept of self-organized learning. Other objectives are the reinforcement of the self-confidence and self-awareness of the learners, who through self-organized learning should be prepared for lifelong learning.

The idea of self-organized learning brings about a definite shift of the dominant role from the teacher to the learner, as the learners themselves take all decisions pertinent to the learning process. It can be argued that

any reduction of heteronomy by the same token means an increase in autonomy and emancipation and, as such, owns a sociopolitical dimension. In this context, the idea of self-controlled learning is to be understood as an ideal involving increased self-determination.

The concept of self-organized learning also constitutes a more comprehensive approach than that of constructivist learning. However, both approaches overlap to a great degree and are descendants of the same academic tradition. This becomes particularly evident when one focuses on the concept of learning as an active process and the action-oriented character of the two approaches.

On first glimpse, computer-aided learning environments provide more degrees of freedom than traditional learning arrangements. Ironically, the gain in flexibility in time and space is accompanied by novel rigidities; namely, new coordination requirements for organizing learning. Learners suddenly face an increased demand of self-organized action in order to get together in virtual space.

On the other hand, all these activities leave data traces in the learning environment. Learning could be subject to even stricter control than in traditional settings. As a consequence for our aim of supporting self-organization, attention has to be paid to the aspect of how control is exerted in communication channels provided to the students.

## **INFORMAL ASPECTS OF COMMUNICATION**

Following the distinction made by Kraut, Fish, Root and Chalfonte (1990), we designate formal communication as institutionally planned and intentional, and informal communication as opportunistic and spontaneous. Bismarck, Bungard and Held (1999) identify further characteristics: factual and relational levels, informal language and missing documentation.

As for the consequences of informal communication processes, Kraut et al. (1990) list three possibilities. They distinguish between the task-related communicative function that supports problem solving, the social function that gratifies the demand for human contact at the workplace, and the dysfunctional function that may degenerate into a "gossip factory."

Communication covers cognitive and social aspects as well. We will discuss both sides, though social as-

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