SID-E-VIEW: An interactive web environment to support group collaborative learning

Background/Context
Computer-mediated communication has the potential to augment collaborative learning by bringing students together via the Internet with learning peers from around the world. Geographical distance between students brings different social and cultural backgrounds to the learning situation, while different subject disciplines and experiences of the study area can further widen the learning experience. However, merely providing students with the technology for computer-mediated interaction is not sufficient. This project aims to provide a socio-technical system to support collaborative group learning among higher education students, with special attention to the social psychological processes involved in collaborative work.

A social psychological model of group behaviour in the computer medium (SIDE; e.g., Postmes, Spears & Lea, 1998) drives the design of the prototype collaborative web environment. The SIDE model, which is based on social identity theory, argues that the self is comprised of a range of self-categories including personal identities and social identities. These different identities, which are made more or less salient depending on the social context, influence the communication and behavior of the individual to act in terms of the norms and standards associated with the salient identities. Consequently, the SIDE model does not rely necessarily on the online communication of informational cues between self and others to explain social perceptions and norms, and gives greater emphasis than alternative approaches to specific features of the communication context to predict and explain group behaviour.

Aims and Objectives
The aims and objectives are:

• To provide a specification for the design of an interactive web environment to support group-collaboration among geographically dispersed higher education students, based on recent social psychological theorizing about computer-mediated group interaction and ethnographic study of the problem domain of peer-learning and collaboration.

• To iteratively develop a prototype software system, comprising a series of interactive web pages to support group interaction and the dynamic presentation of information of social psychological significance for the interactions.

• To provide formative and final evaluations of the system prototype through laboratory studies of small group interactions and field studies of international collaboration among higher education students in England and the Netherlands.

Project Design
Initially a specification of the design will be drawn up, based upon general social psychology theory of group interaction, plus theory and data derived from the SIDE model of computer-mediated groups. The specification will then be tailored to the requirements of the domain of application, namely to support collaborative learning within small groups composed of students based at Manchester and Amsterdam, who will interact over a period of six weeks to complete group activities as part of their degree assessments.

Following on from this initial study, the system will be developed in three distinct phases over three years:

• Phase 1 will look at ways to support the formation of the group.

• Phase 2 will aim to support the maintenance of the group as an effective unit.

• Phase 3 will investigate issues relating to the management of collaboration over time.

At each phase, development will proceed through iterative cycles of design and evaluation. It is important to note that the project rejects intuitive, metaphor-driven approaches to the provision of social structures in system design and the mimicry of face-to-face interaction that such an approach implies, in favour of a design approach that is theory-driven and has been empirically tested.

Implications
The project explores important questions, the outcomes of which will be of interest to international audiences in several fields. For example, under conditions where students are visually anonymous and not co-present, how can group cohesion be enhanced? How can support be given to develop appropriate norms and standards for effective communication and collaboration? How can group decision-making and conflict resolution be managed? And how can levels of collaboration be maintained over time to ensure that the group does not break up prematurely or disengage from collaborations?

The answers to these and related questions will have implications for educators developing Internet delivery of their courses; designers of computer-supported collaborative learning and work systems; researchers of computer-mediated communication; and also students and other users or potential users of Internet communication systems.

References