Introduction to the Technology-Supported Learning Minitrack

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Learning takes place in many contexts; sometimes even in school.
- Anonymous

Little is known about how new technologies can be wielded to improve learning, but researchers in many countries are now beginning to investigate the possibilities. The papers in this year’s minitrack on Technology-Supported Learning address learning contexts as diverse as bureaucracies, classrooms, and courtrooms. The authors offer a lively mix of topics, methods, and epistemological approaches to understanding and improving the learning process through technology. Some address organizational and societal issues, while others address the individual learner. Each offers us an intellectual challenge.

In their paper, “Using Virtual Reality for Distance Teaching a Graduate Information Systems Course,” McBride and McMullen describe the development and use of a MUD/MOO to support real-time class interaction among geographically distributed students and their instructor. Participants were students who were moved by their employer before they had completed their degrees. This paper compares the results for students working in cyberspace to students working in a standard classroom.

Qureshi takes an interpretivist approach to investigating information transfer within a bureaucracy in her paper, Learning in the Network Form: Implications for Electronic Group Support. The paper begins with a discussion of network-form organizations, then describes the creation of an electronic social space. It tracks the behaviors of participants in the social space, and draws implications for learning from the results.

Walsh, Briggs, Ayoub, Vanderboom, & Glynn detail a year-long case study implementing a new pedagogy based on group support systems in their paper, Learning with GSS: A case study. In this study the students in a Nursing Management course used group support systems to tackle complex, ill-structured problems during class time to test their understanding of information they had gathered outside of class. The instructors role changed from information deliverer to problem poser. Students in the class performed better on a standard final exam than did students in traditional classes.

In their paper, Improving Student Processing and Assimilation of Conceptual Information: GSS supported Collaborative Learning vs. Individual Constructive Learning, Leidner and Fuller compare collaborative case analysis to individual constructive learning. The paper found that collaborative learners were more interested, while individual learners performed better.

Massey and Lobert, in their paper, The anatomy of the Internet in the classroom, put the Internet to use for cross-cultural student teamwork between Polish and American graduate MIS students. These teams worked for five weeks to resolve a business case. The authors report on the student perceptions and outcomes of this project as well as their own experiences in conducting this distributed learning environment.

Brandt & Lonsdale report on a year-long case study using GSS to support Cooperative Learning in their paper, Technology-supported Cooperative Learning in Secondary Education. This paper presents details of online activities, results of interviews and observations, and end-of-the-year test results.

In his paper, Sim8086 - A computer-aided learning tool for supporting the teaching of assembly language programming, Williams presents a case study on the development and use of the Sim8086 computer-aided learning system. He describes some useful lessons learned in the process of developing software around a set of specific learning objectives.

Boyd, Wood, Adkins, & Mittleman explore the role of learning in the courtroom in their paper, Investigating the Impact of Advanced Technology on Trials: The Courtroom as Classroom. In this ground-breaking paper the authors offer a method for examining how much learning takes place in the courtroom, and what impact technology might have on the outcomes of litigation.

The final session in this year’s minitrack will include a time set aside for spirited discussion of theory and methodology for investigating technology-supported learning.