

TO: The Faculty Research Grant Committee
FROM: Drs. Morgan M. Jennings and Stephen C. Bronack
DATE: September 29, 1998

Please find enclosed a proposal requesting support from the Faculty Research Grant Committee. We feel the activities described within this proposal are worthwhile and important to the continued development of a collaborative research agenda emerging between the College of Education and Human Service's Educational Technology and the Technology-based Teacher Education programs. Receiving seed money through a university grant will leverage the opportunity for external sources of funding for further research in this area.

The use of desktop video conferencing as a collaborative tool is likely to increase within higher education. The proposed pilot study included here provides a first step in further research related to both the use of desktop video conferencing and the emerging collaborative efforts between educational technology and teacher education. We appreciate your consideration of this proposal as a unique opportunity for students from our respective programs to collaborate in meaningful activities via a virtual environment.

Background

A renewed commitment to innovative approaches that support the development of beginning teachers must emanate from the university and college level. One of the most popular approaches currently under exploration is computer-based technology -- more specifically, use of the Internet -- as a mode for extended communications. All told, 95 percent of all public schools in the United States will be online by end of century (Department of Education, 1997). It is important that our beginning teachers have an understanding of the effective use of a technology that will soon be as commonplace in the schools as a blackboard or overhead projector.

Many technology infusion efforts in teacher education, however, have not focused on the use of networked technologies to broaden time and space boundaries and to enable enhanced learning environments (Chizmar & Williams, 1996). As Koschmann (1996) notes, technological innovations in education are often "technology-driven rather than theory-based," resulting in environments that are "designed to exploit the capabilities of the technology rather than designed to meet an instructional need." Such approaches do not reflect recent insights into the social nature of learning, and are proving less than effective means of encouraging and supporting developing teachers' abilities to teach effectively during their initial classroom endeavors.

In many ways, the preparation of beginning instructional designers also has been hindered by an over-emphasis on technological processes, rather than instructional needs. Connections to real-world situations that provide a basis for developing skills in designing instruction are often lacking. According to Kovalchick, Hrabe, Julian, and Kinzie (1998): "The range of problems that instructional designers face require that they consider multiple points of view and predict alternative courses of action, often in ill-structured and unpredictable contexts." Instead, the use of various technologies to support developing designers is more likely to be successful when their use is *transparent*, addressing actual needs and grounded in sound theoretical understandings. Transparent technologies are convenient, accessible, familiar, enable meaningful communication otherwise unavailable, and allow the focus to lie on the content of the communication, rather than on the technology that enables it.

Desktop video conferencing, for example, provides an opportunity for collaborators to interact with one another, and to utilize tools such as document sharing, to meet and collaborate virtually on various types of projects. For example, during a virtual meeting, collaborative brainstorming sessions could be conducted because of electronic white board capability. Word and Excel documents could be shared and edited together. The tools that enable such collaborations are relatively cheap and accessible. As a result, desktop video conferencing as an alternative means of synchronous (same time/different place) communication is quickly becoming a viable option for providing meaningful learning experiences for students. Space and time no longer deter real time collaboration and communication.

Purpose

The purpose of this study is to examine the impact of a real-world context for designing instruction on beginning instructional designers' ability to consider multiple points of view and propose appropriate courses of action. In addition, the collaboration

will provide a unique experience for intern teachers, who generally do not experience the process of instructional design or the application of technology in the design and development of a rich learning environment. These two groups, with similar missions, rarely have the opportunity to work together face-to-face because of time and access constraints. This pilot test provides a first step in determining whether virtual collaboration via desktop video conferencing provides an effective means for enabling such an experience.

Method

A total of four students will participate in this study: two from educational technology and two from teacher education. Each will be paired with a partner from the other program, resulting in two ID-Intern teams. The participants will receive training on the use of the equipment as well as help installing it on their computers. They will also receive guidelines for completing their projects, as well as a suggested time table for completion.

Various types of data will be collected throughout the pilot. Pre- and Post-intervention case analyses will be used to evaluate beginning instructional designers' ability to consider multiple points of view and propose appropriate courses of action. Participants' satisfaction with the collaborative process will be assessed via journal entries and a questionnaire submitted by each participant after each collaborative session—providing insight into the interns' changing perceptions of the instructional design process and the meaningful application of technology. The questionnaire will include questions that address the collaborative process as well as the video conferencing medium. In addition, the researchers will observe at least two meetings in order to include any problems or issues not covered in the journal or questionnaire. The results of the students' collaborative experience and the use of this unique medium will be examined, analyzed and then written up for publication within professional journals.

Anticipated outcome

We expect the beginning instructional designers' to exhibit a richer understanding of the multiple perspectives associated with a learning environment. We also expect the instructional designers to propose courses of action that are more reflective of the actual characteristics of real-life instruction. In addition, we anticipate intern teachers to develop a richer appreciation for the instructional design process. Finally, we expect all participants to appreciate the benefits of the collaborative process.

Budget

	Price	Units	Subtotal
Software	\$50.00	2	\$100.00
Cameras	\$150.00	6	\$900.00
Training & Support Services	\$50.00	4	\$200.00
			Total: \$1200.00

References

Chizmar, J. F. & Williams, D. B. (1996). Altering time and space through network technologies to enhance learning. CAUSE/EFFECT, 19(3), 14-21.

Koschmann, T. (1996). Paradigm shifts and instructional technology: An introduction. In Timothy Koschmann (Ed.) CSCL: Theory and practice of an emerging paradigm. Mahwah, NJ: Lawrence Erlbaum Associates.

Kovalchick, A.E, Hrabe, M. E., Julian, M. F., & Kinzie, M. B. (1998). ID case studies via the world wide web. In P. Ertmer & J. Quinn (Eds.) The ID casebook: Case studies in instructional design. Upper Saddle River, NJ: Prentice-Hall, Incorporated.

U. S. Department of Education. (1997). Advanced telecommunications in U. S. public elementary and secondary schools, fall 1996. Washington, D. C.: U.S. Government Printing Office.