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Technology plays an important role in facilitating teaching and learning and many teacher preparation programs have made a commitment to prepare graduates to utilize it effectively. An essential element in this process is the identification of methods that allow both students and colleges to demonstrate that prospective teachers have indeed mastered the necessary knowledge and skills. One approach utilized at the University of Nebraska-Lincoln has been the creation of a Web-based technology skills certification course. The course has evolved over a three year period and has been offered to over 250 students. This session will describe and demonstrate the development, content, delivery, and management strategies utilized in the course.

Approach/Design Issues

Several factors were considered during the design of the course:

(1) The Web site uses a project-based approach to demonstrate competencies. The emphasis is on the products that teachers create rather than a specific strategy or step-by-step approach to learning a skill. Students use the tools at their disposal to complete the projects. The projects are designed to relate to tasks that teachers perform rather than specific equipment or software.

(2) Emphasis is on both fluency with software and hardware and the integration of technology in both teaching and learning. In addition, social, ethical and professional issues are addressed.

(3) The technology available to teachers changes continuously as new tools and new ways of applying them are developed. The ability to teach themselves how to use new software and hardware is more important than the specific steps in using one particular piece of software. Resources are provided in each module as a starting place but the emphasis is on activities that encourage the use of available tools for learning the technology. These include built-in help, manuals, and Web-resources. They may also include others with technology expertise, including other members of the class.

(4) Teachers College operates under a Scholar-Practitioner Model. The class represents our efforts to learn how to use the Web to teach. We are attempting to be innovative while seeking to improve. We ask for feedback on both learning and on the strategies and approaches that are being implemented and we are developing systems that allow us to continuously improve the resources and activities of the course.
Course Content

Participants must complete a series of nine modules designed to develop skills and demonstrate competencies related to the National Educational Technology Standards (NETS) adopted by the International Society for Technology in Education (ISTE). Each module contains an overview of the module, requirements for completing the module, a mastery project, and a set of resources and support for completing the project, and a reflection on the module activities. Modules are created around the following topics:

(1) Basic Computer Operations and Communication Tools
(2) Basic Productivity Tools
(3) Integrating Basic Productivity Tools in Instruction
(4) Instructional Support Tools – Multimedia and Instruction
(5) Integrating Instructional Software and Learning Tools
(6) Application of Telecommunication Tools in Teaching
(7) Technology and Assessment
(8) Social, Ethical and Human Issues
(9) Technology for Professional Growth

The session will highlight and demonstrate sample components and mastery projects from the modules.

Management Issues

Because the course is Web-based it has allowed us the opportunity to design strategies for tracking student progress, displaying student work in ways that are convenient for the instructor and the student, and providing students relevant feedback on their work. We are currently investigating strategies for implementing self, peer and instructor feedback relative to student work on the mastery projects.