education, but also by its demands. Thus, when educators begin using these boundary-spanning technologies to enhance the learning process, it does dramatically require teachers and students to change what they do. The purpose of this paper and poster/demo is to serve as a resource for educators who may be considering incorporating distance education approaches into their courses. In cyberspace, time and place are fourth dimensional. The four dimensions that will be discussed in this presentation are 1) defining the appropriate distance education system, 2) designing the interactive course, 3) developing a virtual learning community, and 4) dealing with technical difficulties.

An on-line introduction to quantitative methods

Moira McPherson, Lakehead University, Canada; William Montelpare, Lakehead University, Canada

This poster/demo describes the development, implementation, and evaluation of an "on-line" introduction to an undergraduate course in quantitative methods. The virtual curriculum modules developed for the course provided a forum in which information, knowledge, expertise, and questions could be explored and updated throughout the course. Working asynchronously, the user completed six assignments. Questions which arose during the user's session were passed to "experts" that provided feedback, electronically. The "question - feedback" loop was a dynamic component of the organizational structure and used different modes of communication, including e-mail, electronic conference rooms, bulletin boards, and on-line help pages. The assignments were submitted electronically to teaching assistants who evaluated the submissions and provided feedback directly to the users. The inclusion of direct feedback communication between experts and users reduced the impersonal characteristics that might arise within an asynchronous learning-environment.

Principles Of Cognitive Evaluation For An Educational CD-ROM For History

Christina Metaxaki-Kossionides, University of Thrace, Greece; Elevtheria Gonida, University of Thrace, Greece; Stavroula Lialiou, University of Athens, Greece; Georgios Kouroupetroglou, University of Athens, Greece

The evaluation of CD-ROMs and multimedia products used in educational environments ,is a major topic. One of the erasing problems is the formation of a set of pedagogical principles or concepts and their technological implementation. We present the formation of a set of cognitive principles. Those are included in the set of evaluation , concerning a CD-ROM developed by us. The topic was a history lesson about the Homer period. We have selected two types of principles which , together with the ones for software development, should form the set for the formative evaluation. The one sub - set included the pedagogical requirements for the lesson of history. The other sub - set included the principles delivered by the cognitive scientists. These last ones were developed for the specific topic. They mainly refer to the nature and processes of learning and instruction. The set of the cognitive requirements were added explicitly as fields for a database for software evaluation.

Authoring Multimedia, Designing Animations for Physics Education

Donald J. Metz, University of Winnipeg, Canada

Computer animations used in high school physics instruction are demonstrated. The programs are written using Asymetrix Multimedia Toolbook and are designed to address the specific needs of the students and their learning environment.

Dynamic Communication Layer Between Virtual Laboratory and Intelligent Agents

Kaufmann Meudja, UniversitT de Sherbrooke, Canada; Roger Nkambou, UniversitT de Sherbrooke, Canada

In the last few Years, virtual laboratory has become an important part in online courses. Some of those virtual labs involve intelligent behaviour. However, this intelligent behaviour is usually hard-coded in the virtual lab and therefore, limit the possibility of using reusable intelligent agents that are completely separate from the virtual lab and which can control most users actions in the virtual laboratory environment. We propose a way to separate intelligent behaviour from the virtual lab by the implementation of a communication layer between the virtual laboratory and intelligent learning agents.

Design, Delivery, and Evaluation of Online Courses: A Primer

Jerold Miller, United States International University, USA

Online learning environments can be highly interactive and student-centered. Incorporating the contributions and experiences of each member of a learning community into the coursework encourages students to contribute more of themselves to the course and allows them to learn more from their teachers and peers. Creation of functional online learning environments is contingent upon the effective design, delivery, and evaluation of online courses. This session will address the design of online courses and adaptation of traditional courses to the online delivery mode. Participants will understand appropriate online delivery methods, explore teacher-centered vs. student-centered learning, understand effective strategies for communication online, know how to adapt content and curriculum for online teaching, discover new assessment strategies for distance learning, and learn how to create an online community of learners.