May 1988, a proposal, “The AT&T Teaching Theater: An Environment for Collaborative Learning and Research,” was submitted to the AT&T Affiliates Program by Ron Weissman. The project was funded, and following a June workshop on “Collaborative Learning Classrooms,” a steering committee was set up to design a state-of-the-art classroom under the direction of Walter Gilbert [1]. In the Fall of 1990, the first electronic, collaborative classroom was opened at a total cost of $1.2 million.

The classroom hosted 20 student desks with AT&T 25MHz, 386-based computers. Each computer had a 17” high-resolution color monitor, keyboard, and mouse. Windows 3.0 was the normal operating environment. The instructor's console had two computers. All of the computers were attached to the Campus network.

All video images (NTSC) could be projected on either or both of the two 4.5’ x 6.0’ rear-projection screens. The image from any computer in the room could be projected on the screens up to XGA resolution. The instructor could switch the image from any student monitor to the front and switch the instructor's monitor to any of the student screens.

The AT&T Teaching Theater hosted courses across the disciplines and has served as a model for additional teaching theaters at the University of Maryland exploring the concepts of collaboration and interactivity over its 25-year history and into the future. As mobile computing with laptops and tablets has emerged, the over-built and wired design of the classroom has shifted to a more flexible wireless paradigm for students and high-tech classrooms focus on supporting instructor presentations.

HyperCourseware
In 1990, little or no comprehensive educational software existed for computer classrooms. However, considerable research had explored multimedia and hyperlink navigation. The idea of linking lecture notes, readings, assignments, seating charts, student profiles, exams, and grades was envisioned in the HyperCourseware prototype [2]. HyperCourseware was originally written in HyperCard™ and WinPlus™. Over time it transitioned to HTML and Javascript running on a Mac OS-X Apache server and a FileMaker Pro™ database. All course materials, assignments, and discussions were linked and interactive from a homepage and associated modules.

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Over its 25 continuous years as a prototype, HyperCourseware has hosted nearly 100 classes in a dozen subjects in one of the Teaching Theaters at Maryland. Numerous enhancements and experiments have been implemented building a wealth of knowledge and experience in interactive and collaborative classrooms.

ACCOMPANYING VIDEOS

PAPERS