

ED 400 799

IR 018 153

AUTHOR Wells, F. Stuart; Kick, Russell C.  
 TITLE Enhancing Teaching and Learning in Higher Education with a Total Multimedia Approach.  
 PUB DATE 96  
 NOTE 3p.; In: Proceedings of the Mid-South Instructional Technology Conference (1st, Murfreesboro, Tennessee, March 31-April 2, 1996); see IR 018 144.  
 PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.  
 DESCRIPTORS Artificial Intelligence; Classroom Communication; Computer Assisted Instruction; \*Computer Software Development; Higher Education; \*Instructional Development; Instructional Materials; \*Intelligent Tutoring Systems; \*Multimedia Instruction; \*Multimedia Materials; Optical Data Disks; \*Teacher Student Relationship

IDENTIFIERS Computer Based Educational Software System; Interactive Computer Systems; \*Tennessee Technological University

## ABSTRACT

If multimedia technology is to be successfully employed to enhance classroom instruction and learning, the full capabilities of the technology must be used. The complete power of multimedia includes high quality graphics and images, sophisticated navigational techniques and transitional effects, appropriate music and sound, animation, and, increasingly, 3-D modeling and virtual reality. Two multimedia-based software tools to enhance MIS (Management Information Systems) and higher education in general were developed by faculty at the MIS program in the College of Business Administration at Tennessee Technological University. "The Interactive Presenter" is a multimedia classroom software program designed to provide a high level of interaction between instructor and students within the context of a multimedia presentation. "The Intelligent Tutor" is a CD-ROM supplement to a MIS course textbook which incorporates artificial intelligence with multimedia to provide students with a personal tutor and progress tracking capability, in addition to a virtual classroom environment. (Author/SWC)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

## ENHANCING TEACHING AND LEARNING IN HIGHER EDUCATION WITH A TOTAL MULTIMEDIA APPROACH

**F. Stuart Wells**

**Associate Professor of Decision Sciences  
Tennessee Technological University 38505  
615-372-3160**

**Russell C. Kick**

**Professor of Decision Sciences  
Tennessee Technological University 38505  
615-372-3160**

Multimedia technology has been employed to augment classroom instruction for several years. Some initial success has been dampened as students find that very often multimedia presentations are no more than glorified transparency-based presentations. If multimedia technology is to be successfully employed to enhance classroom instruction and learning, the full capabilities of the technology must be used. The complete power of multimedia includes high quality graphics and images, sophisticated navigational techniques and transitional effects, appropriate music and sound, animation and, increasingly, 3-D modeling and virtual reality.

An ancient Chinese proverb states:

“If you tell me I’ll forget,  
if you show me I’ll remember,  
if you involve me I’ll learn.”

Classroom interaction between instructor and students can be linked to this proverb as follows: lecture me and I’ll forget, use multimedia technology in the “glorified transparency mode” and I’ll remember, employ the full features of multimedia technology in the classroom and I’ll learn. Since the de facto goal of the classroom process is for the instructor to teach, and for the student to learn, it stands to reason multimedia capabilities which enhance the teaching and learning process should be used.

The MIS (Management Information Systems) program in the College of Business Administration at Tennessee Technological University has been using multimedia in the classroom for several years. Faculty members, having experienced the multimedia learning curve, are engaged in a research and development activity the purpose of which is to enhance MIS education. Another goal of the research is to produce tools and methodologies which have general applicability to higher education.

“PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

Lucinda T. Lea

ED 400 799

018153

Software authoring tools such as Macromedia's Director and Oracle's OMO have been used to create multimedia software which can be employed in the classroom and by the student in the one-on-one tutorial session mode. The classroom software, designated The Interactive Presenter, has been designed for the entry level MIS course required of all College of Business students and has been tested in the classroom and at professional meetings. The primary goal of the prototype software is to provide a high level of interaction between instructor and students within the context of multimedia presentation employ the full power of multimedia technology. Periodically, questions are displayed on the screen, and the instructor queries students for a response. Based on student response, the navigational stream of the software takes the audience to an appropriate visual and audio feedback segment of the presentation. The software is designed to be user-friendly, interactive, and instructional. Presentations to date have validated that research goals have been met.

A second multimedia-based software tool prototype is being developed. This software would reside on a CD-ROM and would supplement the course (MIS) textbook. This software, called The Intelligent Tutor, is artificial intelligence as well as multimedia-based. Students using The Intelligent Tutor would have a personal tutor and progress tracking capability as expert systems software is integrated into the interactive process. The software also creates a virtual classroom environment which can be viewed as the teaching-learning environment of the future.

Feedback has been very positive on the two multimedia-based software tools developed. Students, and audiences in general, enjoy what is being presented and are eager to participate in the process. And as the ancient Chinese proverb states, "If you involve me I'll learn."



**U.S. DEPARTMENT OF EDUCATION**  
*Office of Educational Research and Improvement (OERI)*  
*Educational Resources Information Center (ERIC)*



## NOTICE

### REPRODUCTION BASIS



This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.



This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").