Impacting Learning Environments from PreKindergarten Through Graduate School: Technologically Appropriate Professional Development and Classroom Integration Opportunities for Educators

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Professional development has historically been a “one-shot” workshop wherein information barrages the learner in a streaming fashion and little to no information is retained. Even more exasperating is the lack of follow-up support once the workshops have concluded. Due to the desire for technologically appropriate professional development and classroom integration opportunities for educators from the PreKindergarten through graduate school levels, a renewed emphasis upon impacting the learning environments through technologically appropriate professional development and classroom integration opportunities for educators has become an exciting area of growth. This article outlines a pilot study wherein professional development opportunities lead the way towards a highly interactive, supportive learning environment.

The technological redesign of two education courses: a work-in-progress

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Abstract: One of the major obstacles to technology use in K-12 education is the lack of training teachers receive in their university teacher preparation programs. There is a great need for teachers to be technologically literate. This project proposes to redesign two professional education courses (one at the elementary level and one at the secondary level) by creating lessons that model the integration of technology into teaching activities and integrating technologies into requirements for the course.

Bridging the Gender Gap: Girls R.O.C.

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Girls Research Opportunities in Computing (Girls R.O.C.) is a gender equity program for middle school girls designed to increase interest in computer science. This poster session will present an overview of the program and research findings drawn from pre-tests and post-tests administered to the participants from year one of the program.

Use of Web-based tools for Computer Architecture learning

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The Universitat Pompeu Fabra, at Barcelona, has developed a tool to facilitate teaching and learning: the Global Campus. This provides information, communication (e-mail, discussion forums, chats, on-line talks), administrative and academic tasks management, and learning aid. One of its components is the Global Classroom, one for every subject. We have developed Global Classrooms for the Computers Architecture subjects. They provide: - Study and Reference Material: teaching units to give further information and details about the material taught in class, worded problems with answers, other materials. - Exercises and Laboratory Work: to automatically hand in work carried out in the laboratory, to post exercises, instructions for practical work and course marks. - Teaching Methodology: objectives, schedule, evaluation criteria, index. - Communication: interpersonal communication between professors and students. - Functions: administration of notices, unforeseen events, schedule changes, deadline reminders, general news. - Automatic generation of curriculum, professor information, bibliography, students list, …

Hyperarchical Instructional Design For Economics Courses

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Student centered learning requires creative pedagogical approaches for presenting ideas and information that challenge learners to expand the depths of their understanding of and receptivity to the subject matter of academic courses. A hyperarchical course structure provides a self-contained pedagogical framework for focusing student attention on the general nature of a subject and its specific content. Elements from Bloom’s hierarchy, cognitive flexibility theory, and learner control combine to form the conceptual foundation of the hyperarchical approach. At any point in the interface, the center of the learning environment is an economic principle. Each economic principle is connected to the various levels of cognitive achievement. Students proceed through the hyperarchical environment with varying degrees of learner control. The degree of learner control depends on which cognitive domain the student is working in. Learners are encouraged to explore and discover new learning patterns by linking each principle to a repository of economic data and information.

Development of a Comprehensive Multimedia Presentation for New Employees

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This presentation discusses and demonstrates the CD which was developed for orienting new employees at a small community college in Pennsylvania. The comprehensive multimedia CD orientation process is a unique venture and utilizes state of the art technology. Like most corporations and academic institutions, Lehigh Carbon Community College has historically utilized a two day orientation session offered bi-annually. This process while thorough was in need of enhancements since several issues were on-going: (1) the information provided a cursory overview of the operations of the college (2) newly hired employees have varied start dates and often are not exposed to all of the orientation materials until a substantially later time period (3) the two day orientation process is time intensive and therefore costly in terms of lost productivity The CD development process began with a graphical framework designed by the Vice President of Administrative Services and the Director of Distance Education / Instructional Technology. After the initial framework design was established, the CD development process began by utilizing a multimedia authoring tool. Several multimedia