LITRE: Researching Use of Innovative Technologies to Promote Student Learning

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Abstract

Learning in a Technology-Rich Environment is a research program aimed at enhancing learning with technology at North Carolina State University. Over the past 3 years, LITRE projects have researched the impact of technology on student learning. This presentation focused on LITRE findings to date and the current projects:

- **A)** Thoroughly Modern MILLIE (Methods of Incorporating the Latest Learning Innovations in Education) uses new technologies to update the traditional lecture/lab-based course. Video or podcasts provide course materials. Embedded questions provide feedback. Faculty freed from 3 hours of lecturing hold three one-hour seminars with smaller groups.
- **B)** Virtual Online Learning and Teaching investigates immersive 3D multiuser environments as a teaching/learning platform. Effect on student learning, social presence, student attitudes, peer interaction, and instructor attitudes are investigated.
- **C)** Computer-based Modeling for Engineering Project develops curricula to educate students to model problems, solve them using modeling tools, and analyze the solutions through decision support. A series of in-class labs using laptops integrate the traditional lab and lecture.

Outline/ Presentation Notes

See PowerPoint presentation:
http://conference.unctlt.org/proposals/presentations/conf4/762_LITRE UNC TLT.mov

URLs

Information on LITRE: http://litre.ncsu.edu/index.html
Information on the three projects: http://litre.ncsu.edu/dfiles/Big3.html
Student Learning Tool Kit: http://litre.ncsu.edu/sltoolkit/ToolKitEntry.html

Bibliography/ References

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Wolcott, S. K. *Steps for Better Thinking: A Developmental Problem Solving Process* (Online). Available at: http://www.WolcottLynch.com. February 9, 2006. [Model evolved from ideas presented in King and Kitchener's (1994) reflective judgment model of cognitive development and Fischer's (Fischer and Bidell, 1998) dynamic skill theory].