“Narrative-Centered Learning Environments”

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Harrington Tower 617

Abstract
The long-term goal of the intelligent tutoring systems community is to create adaptive learning technologies that bring about fundamental improvements in education. For the past several years our lab has been investigating a family of intelligent tutoring systems that have a dual focus on learning effectiveness and student engagement: narrative-centered learning environments. Narrative-centered learning environments integrate the inferential capabilities of intelligent tutoring systems with the rich gameplay supported by commercial game engines. In this talk we will introduce the principles motivating the design of narrative-centered learning environments, describe their roots in interactive narrative, explore the role of computational models of affect recognition and affect expression in their interactions, and discuss their cognitive and affective impact on students through empirical studies conducted in public school systems.

Biographical Note
James C. Lester is Distinguished Professor of Computer Science at North Carolina State University. He received his B.A. (Highest Honors, Phi Beta Kappa), M.S.C.S., and Ph.D. in computer science from the University of Texas at Austin. He received his B.A. in history from Baylor University. His research focuses on transforming education with technology-rich learning environments. Utilizing artificial intelligence, game technologies, and computational linguistics, he designs, develops, fields, and evaluates next-generation learning technologies for K-12 science, literacy, and computer science education. His work on personalized learning ranges from game-based learning environments and intelligent tutoring systems to affective computing, computational models of narrative, and natural language tutorial dialogue. He has served as Program Chair for the International Conference on Intelligent Tutoring Systems, the International Conference on Intelligent User Interfaces, and the International Conference on Foundations of Digital Games, and as Editor-in-Chief of the International Journal of Artificial Intelligence in Education. He has been recognized with a National Science Foundation CAREER Award and several Best Paper Awards.