Dr. Michael Connell - Mind, Brain, and Education Speaker Series - UT Arlington College of Education

Building Bridges in Mind, Brain, and Education: Translating Learning Science into Useable Tools for Educators

Dr. Michael Connell  Harvard University

Wednesday, April 30, 2008
Planetarium Conference Room (CRB 303)
9:00-10:30 am

The Knowledge Design Matrix (KDM) is an example of an educational design tool that is intended to make research on the mind and brain useable by educational practitioners. Although KDM is based on scientific research about how people learn, this approach is not prescriptive. KDM does not propose learning objectives or favor any specific teaching methodology or educational philosophy. It derives its power instead from the principle of internal consistency: the educator must define a set of learning objectives and propose an instructional design, and the science is then used simply to help evaluate whether the proposed design is likely to support the stated learning objectives or not. As such, the KDM can be applied to virtually any content domain, and at the most basic level it requires little or no specialized training to begin using it.

In this workshop, Dr. Connell provided a succinct overview of the KDM, explained how it was derived from research in cognitive and brain science, and engaged participants in some exercises to generate discussion about how the tool could be applied systematically to generate, evaluate, and refine educational designs and teaching strategies.

Dr. Connell holds a Master’s degree in Computer Science from the Massachusetts Institute of Technology and a Doctorate in Education from Harvard University. He has been a Software Design Engineer at Microsoft Corporation, an Instructor at the Harvard Graduate School of Education, and a Visiting Assistant Professor in the Educational Neuroscience program at Dartmouth College. Dr. Connell’s primary research focus is on translating insights from brain and cognitive science into useable knowledge for educators. He has applied insights from his theoretical research to develop applications in a variety of domains, including adult learning, intelligence analysis, the psychology of storytelling, and intelligent tutoring systems for K-12 classrooms. Representative publications include On Abilities Domains (in The Psychology of Abilities, Competencies Expertise, co-authored with Kim Sheridan and Howard Gardner), Individual Cognitive Factors (in A Handbook of the Psychology of Analysis: for Intelligence Analysis, Managers, and Teachers, in press), and Two Motivational Systems that Shape Development (with Kurt Fischer, 2003).