Thought Paper 2

A Circle of Understanding

Donald M. Adams

ETEC 512 66A: Applications of Learning Theories

to the Analysis of Instructional Settings

University of British Columbia

June 16, 2013

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Educational Neuroscience explores the relationship between neurological processes and education. It brings neuroscientists and educationalists together to discuss how the brain learns and ways to inform and improve education. And while some may dismiss educational neuroscience as the latest fad panacea, it has the potential to empower teachers.

Neuroscience views the brain as constantly changing and developing. It explains how environment and structure prepare the brain for learning and promotes the role of experience in neurological development. It explains how cross-curricular skills like: understanding, applying, analyzing, evaluating, and creating are reflected in neural pathways and networks supported and shaped by neurotransmitters. Neuroscience rounds out our mentalist view of these skills by explaining their development through and in tandem with coordinated structures in the brain.

These ideas can profoundly influence the work of a teacher. Challenging the view that successful learning results solely from good content and effective teaching, neuroscience reminds teachers to consider factors related to students. It questions the training and recitation approach to learning, deconstructs the view that brain and learning ability are hard-wired, and affirms the day to day observation that all students can learn and succeed. With every lesson, teachers have the opportunity to support the development of the brain by involving students in deep and meaningful activities, like: inquiry and constructivist learning. Neuroscience encourages a firmer grasp on the “how” and “why” of teaching and provides insight into the dynamic nature of learning occurring in classrooms.

Educational neuroscience provides a lens for insight into teaching and learning. Its focus on learning bridges the gap between the natural science of neurology and the social science of education. Marrying theory and practice, it promotes the reciprocal relationships between good teaching, good learning, and good brains: a circle of understanding that can result in greater satisfaction and success for teachers.

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