

Thought Paper 2

Teachers and Neuroscience

ETEC 512

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The role of a teacher is to help students understand a variety of content and assist them in developing their critical thinking skills. An understanding of neurological processes can empower teachers in their decision making.

A main benefit of teachers having an understanding of neuroscience is that it will help them to make better decisions about programs and tools they use in their classrooms. As mentioned by Coch and Ansari (2009), many “brain based” training programs are based on faulty or grossly oversimplified theories. A teacher that has a basic understanding about neuroscience would be able to understand the claims being made about the product and make their own decision about its effectivity.

Used in conjunction with other educational information neurological understanding could also help teachers in deciding what strategies they will use for effective teaching. As demonstrated by the article by Zamarian, Ischebeck, and Delazer (2009) neurological research can help teachers to understand what combination of teaching strategies is most effective and why that is so. This will help teachers, especially inexperienced teachers, choose teaching methods that are more likely to produced successful results. Another benefit would also be a more thorough understanding of learning difficulties (Schunk, 2012). By understanding more precisely where a student is having difficulties, teachers can create strategies to address those areas and help the student with their achievement.

It would be helpful for teachers and neuroscientists to understand each other to help create more effective learning solutions. However, there is a danger that neurological processes would become oversimplified in order to create these strategies and would lump students into pre-arranged boxes. In spite of this danger, there would be benefits to teachers having a basic understanding of neurological principles to help them make informed pedagogical decisions.

References:

Coch, D. & Ansari, D. (2009). Thinking about mechanisms is crucial to connecting neuroscience and education. *Cortex*, 45(4), 546-7.

Schunk, D. H. (2012). *Learning Theories: An Educational Perspective. Sixth Edition* (Ch. 2 – Neuroscience of Learning). Upper Saddle River, NJ: Pearson.

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