Keynote Address

How the Brain Learns: New and Exciting Findings

Abstract

This lively and interactive keynote explores exciting new discoveries that neuroscience is revealing about how the human brain grows, develops, and learns. Some of this information has important implications for what educators do in schools and classrooms. In this keynote, we look at brain plasticity as well as recent studies of attention and memory systems. We also review new ideas about giftedness and its relationship to higher-order thinking skills. New research into whether technology is changing how we learn is another area of great research interest.

Here are some of the fascinating questions we address:

How the Brain Grows:
- Why is an infant born with many more neurons than it needs?
- How important are the first four years of growth?
- Does the brain ever grow new neurons, and if so, what can we do to encourage and nurture that process?

How the Brain Develops:
- How does brain development explain pre-adolescent and adolescent behavior?
- Is it true that the capacity of working memory is changing, and if so, what does it mean for teaching and learning?
- Is there a difference between intelligence and creativity?
- Is the exploding influence of "social media" really developing social skills, or is it just the opposite?

How the Brain Learns:
- Do boys and girls learn differently, and if so, in what subject areas, and does it really matter?
- Are the new technologies affecting how we learn, and if so, how?
- Does using higher-order thinking skills while learning really matter?
Implications for Teaching:
  • Can we improve our memory?
  • Can intelligence and/or creativity be taught?
  • Is there really such a thing as multi-tasking, and if so, what are its pros and cons?

Come to this cutting edge keynote to find out. There will certainly be some surprises!