

Neuroscience Research in **EDUCATION** SUMMIT

THE PROMISE OF INTERDISCIPLINARY PARTNERSHIPS BETWEEN BRAIN SCIENCES AND EDUCATION

Executive Summary

One might ask, “What does brain science research have to contribute to the field of education? How can what happens in the laboratory translate to classrooms, curricula, and educational policy?” These are the questions Society for Neuroscience (SfN) President Tom Carew posed to an interdisciplinary group of researchers, educators, and policy-makers at the Neuroscience Research in Education Summit, hosted by SfN, June 22-24, 2009, at the University of California at Irvine. Their responses, discussions, and questions contribute to expanding an important conversation that has been building momentum for several years.

Breakthroughs in educational research and practice and new knowledge in the brain sciences are being shared and communicated in ways that have begun to result in improved outcomes for students. The National Science Foundation’s Science of Learning Centers, The International Mind Brain and Education Society (IMBES), National Institutes of Health’s Blueprint for Neuroscience Research K–12 Education Workshop, and the Dana Foundation have already made significant progress in linking the brain sciences to learning. In addition, individual researchers working through programs like the Institute for Education Sciences of the U.S. Department of Education are contributing to the ground swell of new information.

The summit focused on several key aspects of this conversation: What do we already know about learning and the brain, what do we need to better understand, and how can we communicate this knowledge effectively to multiple constituencies including educators, parents, researchers, and other critical stakeholders?

Why this summit and why now?

The impetus for the summit came in response to an increased public interest in neuroscience research and how it might inform the teaching/learning process. Brain science is a key element in the rich milieu of knowledge contributing to the science of learning. Future research and efforts to translate it and communicate findings for use in practical settings by the education community and others must occur as a multidisciplinary effort.

Successful translation and application of brain science research for use in practical settings has inspired new areas of focus such as neuroethics and neuroeconomics. Like other professionals, educators are eager to harness and decipher findings in neuroscience and related disciplines to inform the design of instructional strategies and learning environments whether it be a school classroom or informal educational setting. With research advances in areas such as memory, attention, and stress, information about how people learn is becoming readily available and educators are eager to translate it for their use.

Throughout the event, candid conversations took place and clear themes and next steps emerged. “We got very messy here and messy’s good,” concluded Carew. “We cannot oversimplify the complexities and challenges we face. But we must remain committed to the common goal of understanding the developing brain, and how it acquires, stores, and retrieves information at different stages of maturation. We can do that best if many disciplines come together and tease apart the specific and most relevant applications to education. Our work must continue — the stakes are very high.”