TRENDS IN NEUROSCIENCE AND EDUCATION

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DESCRIPTION

*Trends in Neuroscience and Education* aims to bridge the gap between our increasing basic cognitive and neuroscience understanding of learning and the application of this knowledge in educational settings. It provides a forum for original translational research on using systems neuroscience findings to improve educational outcome, as well as for reviews on basic and applied research relevant to education.

Just as 200 years ago, medicine was little more than a mixture of bits of knowledge, fads and plain quackery without a basic grounding in a scientific understanding of the body, and just as in the middle of the nineteenth century, Hermann von Helmholtz, Ernst Wilhelm von Brücke, Emil Du Bois-Reymond and a few others got together and drew up a scheme for what medicine should be (i.e., applied natural science), we believe that this can be taken as a model for what should happen in the field of education. In many countries, education is merely the field of ideology, even though we know that how children learn is not a question of left or right political orientation.

Contrary to the skeptics (who claim that "brain science [...] is not ready to relate neuronal processes to classroom outcomes ", Cf. Hirsh-Pasek K, Bruer JT, 2007), we believe that we know today more about the neuroscience of learning than Helmholtz et al. back then knew about the body. In fact, from our perspective very little was known, as cellular pathology, microbiology and pharmacology hardly existed as domains of scientific investigation, let alone as tools for physicians. But the very idea - medicine is applied science - caught on and led to unprecedented and dramatic improvements in medicine.

In our view, this is precisely what we must do in order to make progress in education. "You claim all learning is taking place in the brain. If that's so, which type of preschool is most effective? " - From a medical perspective, it is obvious that a neuroscientist cannot answer such questions alone. But it is just as clear that the answers will come from research informed by developmental cognitive neuroscience. Trends in Neuroscience and Education will foster activities on the translational research that is needed.

**Neuroscience** is to education what biology is to medicine and physics is to architecture. Biochemistry is not enough to cure a patient, and physics is not enough to build a bridge. But you cannot perform great work, neither in medicine nor in architecture, against the laws of physics or biology. And in fact, they will inform you about many constraints and rule out a great many of projects right from the start as failures.
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