ABSTRACT

Many people who care deeply about the improvement of education believe that research ought to be able to provide some of the intellectual resources needed by practitioners and policy makers. Many people are also sceptical about the power and purpose of contemporary educational research and point to the chasms separating the producers and intended consumers of research on learning. In the last few decades, hopes have been raised, periodically, by the promise of a more scientific basis for educational theory and practice – whether through the use of computational modelling, randomised controlled trials or cognitive neuroscience. When people are anxious to find firmer ways of resolving recurrent, ‘wicked’ educational problems, it is not surprising if they try to push the science faster and further than it can reasonably go.

It is against this backdrop of unmet demand for robust answers that I want to examine some of the ways that educational practice can, and should, respond to insights emerging from brain research. I will develop three main arguments. First, that there are some particular areas of educational practice that offer a more congenial home for the application of research-based evidence about the brain, mind and learning – my example will be design for learning. Second, that brain research is inspiring some deep reconsideration of how we should conceive of human competence – such that a number of prevailing assumptions about assessment and curriculum will be severely tested. Third, that the increasingly complex networks of digital and other tools and resources, which are bound up in many productive human activities, also need to be understood, as part of any serious attempt to reconfigure assessment, curriculum or learning environments.

FROM BRAIN RESEARCH TO DESIGN FOR LEARNING: CONNECTING NEUROSCIENCE TO EDUCATIONAL PRACTICE

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