Mind, Brain and Education (MBE) is a cross-discipline of neuroscience and education. These fields are considered to be a natural ‘fit’ with expectations that blending them will result in a ‘roadmap’ to more effective pedagogy. The theory is that by cross-training educators with neuroscience research and neuroscientists with educational practices, neuroscientific findings should inform on exactly how we are to adjust pedagogical practice. However, Coch and Ansari (2009) warn "While there are often great expectations for direct application of neuroscientific data to pedagogy, we believe that very few findings from neuroscience are directly applicable in a broad educational context".

The work by Zamarian et al. (2009) is an example of cross-discipline research in MBE. In their study, they monitor brain activity as it learns arithmetic and identify which approaches are more more effective. Like Coch & Ansari (2009), these researchers offer the same warning and further add "...high expectations and lack of understanding have also led to neuroimaging findings to be overly simplified and misunderstood".

Both articles clearly state that no 'magic bullet' can be had from the field of MBE; so we then must question the merits of simply increasing pre-service training with neuroscientific ‘facts’. The Zamarian et al. article is a somewhat sophisticated read and an example of how educators may be ill equipped to navigate and use this kind of information. However, if through MBE findings we can identify qualitative principles in relation to brain function and learning, then educators will be equipped to identify best practices in curriculum design and delivery. The key is to understand that neuroscience is but one source towards better practice. Hence, I agree that neural understanding will empower teachers, as they will have an improved framework to draw from and thus better equipped to evaluate, design and deliver their educational programs.
References
