

Why should teachers care about neuroscience?

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The study of the brain and how it functions is the focus of much current attention. Newspapers are full of reports covering the latest advances in neuroscience. The current high level of interest in neuroscience comes against the background of significant advances that have been made in understanding how the human brain functions and changes in its structure and function over developmental time.

In education there have been growing calls to use evidence from the study of the human brain to influence what goes in classrooms. It has been argued that the study of how the brain develops and acquires new information has the potential to transform education.

In this talk I will critically examine what role neuroscience might play in education. I will argue that teacher training (at the levels of pre-service and professional development) can benefit from integrating evidence from neuroscience. I will argue that teaching involves changing the brain. It is well known that experiences change both the structure and function of the brain – a process known as neuronal plasticity. Given that teachers can be said to be the orchestrators of neuronal plasticity, it seems a ‘no brainer’ that educators should be familiar with basic concepts in neuroscience, especially those pertaining to neuronal plasticity.

In my talk I will highlight how evidence from neuroscience might influence how teachers conceptualize and think about learners in their classrooms. In this context, I will discuss recent findings that suggest that teaching educators about brain development changes their practice. Furthermore, I will discuss how educating teachers about neuroscience can help to prevent the damaging influence of so-called ‘neuromyths’

I will end my talk with a critical discussion of what neuroscience can and cannot do for education. By doing so, I will highlight that neuroscience is one of many pieces of evidence that can lead to more ‘evidence-based’ practice in education and can help to empower educators to become more informed practitioners.