Fighting for educational neuroscience

It’s time to embrace the interdisciplinary learning sciences

by Annie Brookman-Byrne
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Since the inception of educational neuroscience, there have been debates over whether or not this is a worthwhile pursuit. Many years on, as educational neuroscience researchers press forward with their work, the debate continues. A recent journal article asks critics to embrace interdisciplinary research to make progress.

In 1997, the linking of neuroscience to education was famously labelled a ‘bridge too far’. Nevertheless, seeing that an examination of both brain and behaviour is the best way to find out about how we learn, many researchers sought to make the bridge work. The field of educational neuroscience continues to grow, and all the while, debates about the bridge carry on.

A recent response to the latest critique of educational neuroscience called for an end to the bridge metaphors; the critique asked if neuroscience and education constituted a ‘bridge astray’, and other bridge analogies have been used over the years. The response, from Professor Michael Thomas, argued that references to this ‘bridge’ have been both misleading and unhelpful, and that it is time to accept that interdisciplinary research is the best way to fully understand learning mechanisms.

Changing the conversation, not ending it

Proponents of educational neuroscience have grown used to defending their field. While this has helped researchers to carefully consider their work, there is a feeling among some that this seemingly endless debate is becoming a waste of time. This feeling is amplified when many of the criticisms have already been addressed, and the same conversations are being had over and over. Writing articles for journals takes time, so the time spent on this debate is not negligible.

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Many educational neuroscientists would like to see an end to this debate, focusing their time on forging relationships with teachers and developing research. Calling for an end to the bridge metaphors does not mean asking to be free from criticism. So far, much of the conversation has been concerned with whether or not educational neuroscience should even exist. Educational
neuroscience does exist, and the field is thriving.

There is no intention to shut down all debate, as this is an important part of the scientific process. The conversation should be about how to make educational neuroscience, and teaching and learning practices, better. How can teachers and researchers better understand each other? What role does genetics play in education? How can we involve students in research? Can (and should) electrical stimulation enhance learning? How can teachers be supported to carry out their own research? There are many valid debates to be had.

For the educational neuroscience community, it is clear that neuroscience is of great relevance to education; improving our understanding of learning and helping to inform new developments. Critics of educational neuroscience argue that the science best placed to inform education is psychology, but psychology is inextricably linked to neuroscience; neuroscience helps us to form psychological theories. Anyone seeking to improve education should be asking how they can learn from those outside their immediate discipline. Taking an interdisciplinary approach is the best way to advance the learning sciences.

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