

## Editorial

Broadly speaking, socio-cultural theory informs a great deal of our understanding of teaching and learning in music. To grasp this understanding and unpack the layers of experiences requires countless hours of observing, listening, questioning, analysing, interviewing, notating, consulting, verifying and at times, becoming as one with the research participants in order to capture their experiences at first hand. In so doing, we generate research that builds knowledge, deepens understanding and extends theory. Invariably, it is a slow process.

There is something terribly attractive, then, about being able to measure the immediate impact of a particular phenomenon, initiative, or action on a human subject at the touch of a button. In many ways, measuring impact in all the direct and indirect ways possible, and the attendant concept of causality, is something of a holy grail in educational research. Indeed, if we could capture the essence of a particular process, object or intervention and produce the associated watertight evidence as to its perfect alignment with whatever factors went before – thus verifying the effects – then we would have succeeded in cracking one of the most difficult nuts in research.

One could be forgiven for thinking that neuroscience seems to be that nutcracker. The language speaks of the biological impact of a particular intervention on the nervous system in randomised controlled designs. Something of the fuzziness of educational research is sharpened when the findings are reported in succinct and pithy statements such as, ‘Music strengthens reading skills’, or ‘The brain continues to profit into older adulthood – 40 years after music lessons stop’ and ‘Regular music making strengthens non-musical brain functioning’. The work by Nina Kraus and her team at Northwestern University can be credited with a good deal of this body of work (Kraus *et al.*, 2014). It would be misleading to suggest that such research processes occur at the touch of a button, but much of this kind of research is beyond the reach of most music education researchers not only because of a lack of access to neuroimaging resources but more importantly, to the unsuitability of laboratories for research in educational contexts. Although neuroscientific research is most worthwhile, and certainly strengthens advocacy arguments for music, some researchers believe that education and neuroscience are not easily reconciled even if psychology can provide an intermediary between the two (Bruer, 1997). More recent scholars argue for the ongoing dialogue in the interdisciplinary realm called educational neuroscience (Goswami, 2006), whilst others argue that we should be looking at ways in which neuroscience can inform teaching and learning more directly (Dubinsky *et al.*, 2013).

This awareness of the importance of teaching and learning and the socio-cultural context prevails in a report about understanding the brain from the OECD (OECD-CERI, 2007). While recognising the potential for neuroscience to dispel certain myths about learning, the report also recognises that nurturing is crucial to learning, and emphasises the need for holistic approaches which acknowledge the interdependence between the physical and intellectual, the emotional and cognitive. In terms of research, it notes that: ‘Much more is needed on what type of learning requires the interaction of others and on the role of cultural differences.’ The report goes on to say that: ‘This should be further broken

down in terms of student demographic (especially gender) and socio-cultural differences, but it is also a minefield for misinterpretation. Neuroscience should certainly not be brought into the service of racist or sexist stereotypes' (OECD-CERI, 2007: 12).

More recently, socio-cultural theorists have cautioned that neuroscience provides no magic bullet in terms of our research endeavours, and that uncovering the meaning of what we do and why we do it involves prolonged engagement to refine our understandings. In their words, 'we cannot use psychology, philosophy or even neuroscience alone to provide us with the answer to life and how we learn. As we search for meaning in our experience we develop theories, not facts; hypotheses, not truth' (Hall *et al.*, 2014: 10).

Lastly, it is good to remember that music teachers are always central to our music education research, and are key to mindful learning – as the neuroscientists themselves note, in saying that: 'Teachers are excellent cognitive enhancers because they change brains in ways that last a lifetime. (By contrast, coffee only temporarily improves attention!)' (Dubinsky *et al.*, 2013: 325).

In the meantime, there are a lot of music teaching endeavours awaiting our investigations. We still wonder about classroom music, music teachers, and about their practices, experiments and journeys of self-discovery. Are the patterns of engagement still the same as ever? Are music educators becoming more reflective, inquiry-oriented practitioners who continually examine their practice? Are they improving on what has gone on before, and impelled to share their new knowledge in the public space? If so, we would like to hear about the mechanisms for gathering evidence, the ethical dilemmas, the eureka moments and the emerging hypotheses, however tentative. We hope that activity in the nurseries, classrooms and centres for community music continues to generate insightful research and sharp debate on these matters.

As the current issue shows, there are many research studies that build incrementally on our understanding of learning in diverse cultural contexts. In examining early childhood teachers' musical beliefs, **Nicola Swain** and **Sally Bodkin-Allen** from Aotearoa/New Zealand draw attention to the phenomenon of 'tone-deafness' and to teachers in early childhood settings who self-identify as 'tone-deaf'. The authors discuss the ways in which socio-cultural influences, the illusion of talent, and the experience of negative reactions to one's singing all contribute to self-perception of tone-deafness. Building on the body of research on this topic, the authors suggest that music teachers and family members can contribute to the development of beliefs about singing for early childhood teachers. Given the influence of the latter on the next generation of emerging musicians, it is vital that greater attention is paid to music education in this sector.

In a Korean study of music acculturation through primary school activities, **Jeong Ha Kim** examines the links between the content and pedagogy of the music curriculum during Japanese colonial rule of Korea (1910–1945) and the subsequent influence on children's later life and cultural identity. Her account is generated from semi-structured interviews with mainly elderly Korean men aged between 75 and 90 years. While this study focuses on a discrete time period, musical acculturation through curriculum is both a widespread as well as a contemporary phenomenon, yet it often escapes our attention.

**Sigrun Lilja Einarsdottir** uses grounded theory to uncover 'leaders', 'followers' and collective group support in the process of rehearsing and performing the Mass in B Minor by J.S. Bach in an amateur choir in England. Through participating in the singing and

experiencing the choir at first hand, Einarsdottir provides both an emic and etic perspective of how singers experience the work.

We then follow **Johanna Maria Roels** and **Peter Van Petegem**'s study from Belgium that emerged from a two-year experimental collaboration with pupils in a piano class. Child-centredness and creativity provide a theoretical underpinning to many classroom music-making endeavours, but are reported less often in individual instrumental tuition contexts. The pedagogy presented by Roels and Peter Van Petegem enables an alternative approach to typical piano methods in that it uses visual expression as a starting point for composing and visualising music-theoretical concepts. Moreover, the approach enables the integration of a range of dimensions of musicality such as listening, creating, noting down and performing.

From Spain, **Amalia Casas-Mas**, **Juan Ignacio Pozo** and **Ignacio Montero** grapple with three music learning cultures simultaneously, encompassing formal, non-formal and informal settings: Classical, Jazz and Flamenco, respectively. Using quantitative methods to investigate the approaches employed by 30 guitarists, the authors identify similarities and differences among the three styles in terms of their conceptions of learning, teaching and evaluation.

Our final paper draws from a study based in the USA where **Adam Patrick Bell** provides a detailed account of his experience of teaching an adolescent with Down syndrome to play the guitar. His selection of teaching approaches and tools are presented in great detail while his research methods succeed in providing a highly nuanced account of the challenges for both teacher and pupil in learning the guitar. Despite the enormous popularity of the guitar worldwide and its strong cultural capital, Bell closes by problematising the guitar as disabled, in refusing to adapt to the needs of players of varying abilities.

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