

Editorial – Welcome to Volume 26 Number 2

Welcome to this special issue of the *International Journal of Innovation in Science and Mathematics Education* on supporting Indigenous student engagement with STEM in Higher Education.

It is with great honour that we present this collection to you; a collection that brings insights and ideas from across the globe, from the snowy reaches of Canada, the warm lands of Africa, to our homelands of Australia and New Zealand. While the trend is to cherry-pick papers of interest from an edition, I invite you dear reader, to sit back with a notepad and a beverage and come on an inspired and insightful journey with us. The notepad is critical, so you don't just read about indigenous knowledge practices, but engage in them a little via experimenting - applying your own ideas to some of the teaching activities that may need a little tweaking. Perhaps a bit of emotion and/or connection to the external in a hands-on fashion could be the key. As our first two papers describe, building a strong trust between educator and student can be the key to opening a wealth of learning experiences for both students and those who are facilitating their learning. These papers, like others, provide ideas and insights to facilitate the education, not just of indigenous students, but also any student who is perhaps not thriving in a traditional didactic non-emotive atmosphere that characterises some STEM classes (although perhaps not those of readers of IJISME who are well versed in novel, engaging practices and ideas!).

Once you have some ideas about design and importance of relationship-building, you are ready for some great practical ideas and framework from Natalia Bilton and her friend Henry the erythrocyte. Once the ideas on the practical side flow, you are ready for the cultural context tips and tricks from Hiria McRae and Muzwa Mukwambo et al. Hiria also shows a glimmer of hope, noting how inclusion of indigenous ways of approaching STEM can be included in the broader national education framework. While putting this edition together, the relevance of cultural knowledge became readily apparent – as Muzwa and colleagues described the lightning avoidance practice by some villages that involved planting a certain bush, this editor, using her concept of bush (about 1-3m with small limbs and leaves) was wondering where such an old wives tale originated (yep wrong assumptions in so many ways), but then thought if this idea has been followed for so many generations I must be missing something. I was! See his Figure 1.

After this example of 'context helping teaching' you are nearly ready to jump in and try the ideas – but what about your own assumptions and biases? Well, thankfully we have two papers written by four generous authors who have laid bare their journeys, warts and all, into various aspects of working with indigenous communities and knowledge. Saiqa Azam and Karen Goodnough from Canada provide unique lenses as they reflect on the issues faced, relative to their own life experiences, in a way that helps them develop ways to train others to work with indigenous students – in this case with the lofty aim of not just educating, but helping tackle bigger social issues and reducing truancy and juvenile crime.

Finally, when you wonder what is possible beyond your own subject level, you come to the invited paper by Professor Tim Wess and Mal Ridges (Tim at the time of writing was Dean of Science at CSU, but by the time you read this will be Deputy Vice Chancellor at the University of the Sunshine Coast). Here you can see the journey these men have gone on and the questions they have had to ask themselves, and the biases and assumptions they have had to tackle. They provide insights into what it means to work towards decolonising education, and not just

reading about it. Their reflections may help you create your own path. Perhaps, just as you dear reader rise from your reading marathon, you might want to gift a copy of this last paper to one of your leaders so that they too can see how other executives have approached indigenous community engagement and knowledge, and the richer they have felt for it.

As more leaders move from voicing interest and support to actually engaging with the issue, then perhaps we will start to see real change and all our communities will be richer for it. It could be said that Indigenous Australians managed to live in harmony on the oldest continent for thousands of years – no doubt requiring a lot of skilled scientists willing to use the scientific method and trial and error (I am sure the fish trap designs and boomerang took a few failures), yet the adoption of western science and western knowledge systems has pushed away any sense of harmony and towards a sense of combat. Perhaps as we bring such knowledge systems back, our graduates will be better equipped to look at current problems in new ways and help bring that harmony back.

Thank you, dear reader, for your time and attention, and lastly a big thank you to our Authors for whom this has been a collaborative journey.

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