

EDITORIAL

We are now immersed in the Fourth Industrial Revolution – a time where the world is becoming increasingly driven by data algorithms and artificial intelligence. A time where global challenges are at a scale never seen before, causing dramatic alterations to the ways in which we interact, work and educate. In this age, higher education is being disrupted. Reports suggest that students who are able to combine their disciplinary, technological and quantitative skills with creativity and inventiveness will be the most employable, whatever the context; they will be the ones with the most influence over our future society (Aoun, 2018; Business Council of Australia, 2017; Price Waterhouse Cooper, 2017).

Accordingly, at a time where content is both everywhere and ever-expanding, we must remember our valuable roles as creators. On one hand, technology frees us to decide what is important in our face to face interactions with students. No longer do we need to spend time “telling the content”. On the other hand, technology separates us from our students and decreases the interactions needed to build rapport and develop student skills.

This year we have decided to focus on the stories of ourselves and our students, and the lived experience of their learning. Articles in these proceedings range from the creation of multidisciplinary labs, to re-imagining the professional skills for science students, and the need to be less “siloe”, as disciplines work together on inter and multi-disciplinary problems. They comment on the power of reflection and metacognition, purpose and invisibility. They share aspirations for student success – an education which is truly transformative.

For a quarter of a century, the purpose of UniServe Science and the Australian Conference on Science and Mathematics Education (ACSME) has been to share stories that are at the forefront of innovation. Indeed, many learning experiences discussed at ACSME last century are now appearing in publications such as the Proceedings of the National Academies of Science (PNAS). UniServe and ACSME have ensured repeated “breeding seasons” of innovation, fostered by the collective support and leadership legacy first of Robert Hewitt, Mary Peat and Ian Johnston, then Manjula Sharma and Alexandra Yeung, and now Elizabeth Johnson, John Rice, and Cristina Varsavsky.

These proceedings and this community are cherished. Let ACSME always be a place where we connect, belong, and continue to be inclusive of all stories. The authors in these proceedings, including one of our newest contributors, Amanda Niehuas (2019), succinctly describe the energy needed to maintain these moments: “Let it be a time of new momentum”...a time when “something new surges up in her, fierce and red, and she readies to throw it into the world.”

Professor Pauline Ross
Chair, Proceedings of the Australian Conference on Science and Mathematics Education

REFERENCES

- Aoun J. (2018) *Robot-Proof: Higher Education in the Age of Artificial Intelligence*. Cambridge, Massachusetts: The MIT Press
- Business Council of Australia (2017) *Future-Proof: Protecting Australians Through Education and Skills* [PDF File] Retrieved from https://d3n8a8pro7vnm.cloudfront.net/bca/pages/178/attachments/original/1530596649/BCA_2017_OCT_EDUCATION_Future_Proof_Download_120dpi.pdf?1530596649
- Niehuas, A. (2019) *The Breeding Season*. Sydney Australia: Allen & Unwin
- Price Waterhouse Cooper (2017) *Workforce of the future: The competing forces shaping 2030* [PDF File] Retrieved from <https://www.pwc.com/gx/en/services/people-organisation/workforce-of-the-future/workforce-of-the-future-the-competing-forces-shaping-2030-pwc.pdf>

Proceedings of the Australian Conference on Science and Mathematics Education, The University of Sydney and University of Technology Sydney, 2 - 4 October 2019, page 1, ISBN Number 978-0-9871834-8-4