

Editorial

E te whānau ō tēnei pukapuka putaputa, tēnā koutou.

Welcome to the first issue of *Set: Research Information for Teachers* in 2020, completed amongst the juggle of bubbles. What an intense start to the school year. It has been breathtaking to witness the pace of education's response to COVID-19. I have been especially struck by the caring, commitment, and professionalism demonstrated by teachers across Aotearoa.

Hats off to all teachers and whānau who have adopted and adapted to the new dance of learning. In my home two children began with empty dance cards, soon to be filled by their teachers, parents, friends on Zoom, and online options already in existence or quickly produced by educators and experts both locally and nationally. At a systems level, from government and schools, there has been strong messaging to keep a dual focus on wellbeing and equity at centre stage. Even so, not all students will have been able to fall into step with their peers because of issues related to connectivity or other circumstances. My hope is that Issue 1 will be helpful whether school gates are open or closed, especially for engaging students and whānau during and beyond the pandemic.

In the Practitioner Inquiry section, Natasha Low, Kylie Thompson, and Anne McKay present four teachers' endeavours to make learning visible to their priority learners. Their project was situated within the Health and Physical Education learning area, so may be of specific interest to *Set* readers concerned about students' physical and emotional health related to COVID-19. Inspired by John Hattie's (2009) work on metacognition, each teacher aspired to provide a learning environment where "students see themselves as their own teacher ... and teachers become learners of their own teaching" (p. 4). Such intentions resonate with the Australian Council for Educational Research's reminder to focus on high-impact pedagogy during COVID-19, in particular by supporting students' metacognition and self-regulation when learning from home (Schoeffel & Vaughan, 2020).

Tania Cliffe-Tautari shares her experience with a pedagogical strategy unique to Aotearoa. Her work with young Māori is informed by Lee's (2008) research into the use of pūrākau for articulating stories about cultural identity. The article takes readers on a journey from

considering pūrākau tawhito (ancient stories), which educate successive generations within iwi and hapū, to new and creative pūrākau crafted for today's ākongā. To quote, "Pūrākau provides Māori learners with an indigenous construct to unpack their own perceptions about their cultural locatedness in a modern era" (p. 14). Fast forward to mid-2020 and new questions arise. For example, what culturally embedded identity narratives might emerge from whānau touched by the pandemic? What role might teachers play in helping students to shape their learning stories in an empowering form?

Young citizen empowerment is the topic of the next article. Cameron Pierson, Dayle Anderson, and Markus Luczak-Roesch led an investigation into online citizen science in primary school. Their authorship team report on how four teachers engaged with different online science platforms. Each project enabled students to upload and analyse real-time data in ways that built their science capabilities for citizenship. Readers may wish to encourage their students to interact with similar websites from home or school.

Collaboration between scientists and the public has significance during this year's health crisis. Students who contribute to collective projects and knowledge-building may well be more inclined to see how their individual actions impact on flattening the curve of COVID-19. They may also be better equipped to make sense of the plethora of graphical analyses and statistical modelling being presented. This brings us to the focus section of Issue 1, Mathematics and Statistics in a Changing World.

The first two focus articles consider at how students of all ages can operate like real statisticians. Statistics researchers, Maxine Pfannkuch and colleagues, reflect on a revamp of statistics education prompted by "an unprecedented data revolution increasingly impacting our daily lives" (p. 28). To them, statistical inquiry involves "unlocking the stories in the data" (p. 40). Their article includes a box plot about Instagram followers to demonstrate the conceptual-development foundations required in Years 10–13 to guide statistical inference. The team has also developed free software that is available to help students to plot and analyse data. A statistical inquiry cycle is fully unpacked in the next article led by

Pip Arnold. Here, primary students are positioned as data detectives. Five steps demonstrate that statistics involves far more than analysis. Statisticians also have a key role in design and communication. Again, the statistics articles are timely in a world awash in a sea of health and economic data being interpreted by academics, officials, media, and armchair commentators.

The next mathematics article has particular relevance for teaching Māori students. Ngaarewa Haawera and Leeana Herewini write about an inquiry in a puna mātauranga kiritōa. Three kaiako developed a new pāngarau programme intended to inspire greater independence and collaboration amongst 60 ākonga. Given the findings, one might wonder if the affordances of the modern learning environment also better prepared students to lead their own learning when later dispersed across community bubbles. On the flipside, the authors raise the concern that digital resources predominantly operate in English. Sinapi Taeao and Robin Averill then consider mathematical learning opportunities associated with the Samoan sāsā. They encourage teachers to integrate dance across the curriculum in order to promote health and wellbeing, validate Pacific funds of knowledge, and strengthen home–school partnerships.

Home–school partnerships have played a vital role in teaching and learning during COVID-19. When school doors were abruptly closed across Aotearoa, teachers and parents continued to support students' learning from home. While some national resources were made available, each school's local solution was shaped to attend to the community it serves. Melanie Riwai-Couch conducted a quick online survey for the parents of Māori and Pacific students, beginning with her personal and professional social media networks. Her team's synthesised analysis is presented as a Rangahau Whakarāpopoto,¹ here based on research akin to a "safe to fail probe" as a response to the speed of change). The team summarises parents' perceptions about the strengths of school-led learning at home, as well their concerns. The article concludes with questions that schools may wish to ponder as they reopen their gates to Māori and Pacific families. How might the disruption of COVID-19 be an opportunity to walk a new path ahead together?

In Assessment News Charles Darr explains a new series of reports that are written especially for teachers. Each report presents insights on a specific learning area, drawing from the National Monitoring Study of Student Achievement (NMSSA). I asked that special attention be given to the most recent report about mathematics and statistics to suit our Issue 1 focus section. In addition, we have prereleased Assessment News for Issue 2 at Set Online First.² There, Charles Darr and Rosemary Hipkins consider the impact that COVID-19 could have on

assessment and moderation practices going forward.

Accredited secondary facilitators, Sabina Cleary and Carmen Kenton, share how they supported teaching and assessment practices to pivot during lockdown in Q&A. Prior experience of school closures during the Canterbury earthquakes led them to encourage digital learning systems, streamlined curriculum, naturally occurring evidence, and a personal touch, even with students back in class. *Set* also hopes to support teachers to adapt to the new operating environment. NZCER Press has opened up free access³ to past *Set* articles, handpicked for relevance to COVID-19, including two about post-crisis schooling in Christchurch. I wish *Set's* readers all the best as our education system continues to find its groove in the new dance between digital and analogue, with students switching learning partners between teachers, parents, peers, and others. I am hopeful that we might break out with a raft of new creative beats, with strong choreographic input from students and whānau. At the same time it is clear that many of us (parenting teachers especially!) need space to catch our breath and gather strength for what may come to feel like an ever-lasting recital. Let's keep hauora strong at the centre while pushing out the edges of twenty-first century learning.

Ngā mihi, me kia kaha koutou i te wā o te KOWHEORI-19.

Josie Roberts

Set Editor

Notes

1. As introduced in *Set*, Issue 2, 2019, He Rangahau Whakarāpopoto provides an opportunity for authors to present a summary of research insights about a specific issue.
2. Available online at <https://www.nzcer.org.nz/nzcerpress/set/set-research-information-teachers-online-first>
3. Please go to <https://doi.org/10.18296/set.Covid-19>

References

- Schoeffel, S., & Vaughan, T. (2020). Home-supported learning: Using what works in schools. *Teacher: Evidence + Insight + Action*. Australian Council for Educational Research. https://www.teachermagazine.com.au/articles/home-supported-learning-using-what-works-in-schools?utm_source=CM&utm_medium=Bulletin&utm_content=28April
- Lee, J. (2008). *Ako: Pūrākau of Māori teachers work in secondary schools* [Unpublished doctoral thesis]. The University of Auckland.
- Hattie, J. (2009). *Visible learning: A synthesis of 800+ meta-analyses on achievement*. Routledge.