



Editorial: October 2019

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Welcome to the inaugural issue of the *Statistics and Data Science Educator (SDSE)*. This online journal of peer-reviewed lesson plans for teachers arose from a NZSA Education Committee concern that available teaching resources for the NZ statistics curriculum at the school and tertiary level needed to be improved. Hence Maxine Pfannkuch and Anna Fergusson led a working group to establish *SDSE*. As secondary school and tertiary teachers and statistics education researchers, we are aware of how the design of a task has a critical influence on students' reasoning processes, what they learn and on how they engage in, experience and understand the nature of statistical thinking and practice.

Our aim of publishing high quality teaching resources has meant that we needed to develop criteria for what makes a good lesson and to think about what makes a good resource for teachers to use. The criteria we developed for good lesson designs were:

- Rich task and context e.g., (Is there a relevant context and problem that is worthwhile solving?)
- Cognitive demand (e.g., Is the lesson cognitively demanding? Does it make students think?)
- Pedagogy (e.g., Is the lesson pedagogically sound and follow recognised learning principles?)
- Language and content (e.g., Is the statistical content and language used correct?)
- Accessibility and Implementation (e.g., Is the lesson accessible to all NZ teachers?)

With regard to how the lesson is presented for teachers to use, we drew on the work of Charles Lovitt and Ian Lowe of the Australian Curriculum Corporation Mathematics Curriculum and Teaching Program (MCTP) *Chance and Data Investigations* by emulating their conversational presentation style with teacher and

student quotes, artefacts and interactions captured during the implementation of the lesson. Hence for a lesson plan to be published it must have been trialled with a class and ideally should include the use of technology. In this inaugural issue, one of the highlights of the lesson plans is teachers critically reflecting on their own teaching and suggesting ways to improve and enhance the lesson for learners.

We acknowledge Chris Franklin, the K-12 Ambassador for the American Statistical Association (ASA), who prodded and pushed us to make *SDSE* a reality. Through her work with the ASA/National Council of Teachers of Mathematics Joint Committee, we were able to draw on their experiences of setting up the Statistics Teacher and also work cooperatively with them on defining what makes a good lesson plan.

The establishment of *SDSE* would not be possible without teachers willing to share their lessons with us. We thank Pip Arnold, Michelle Dalrymple, Mark Hooper and Sashi Sharma for their willingness to submit their lessons to be scrutinised and reviewed. Also thank you to the reviewers who were willing to trial the reviewer guidelines: Lisa Darragh, Anne Patel, Chris Wild and Emma Wilson.

