

## **Annual Report: Education Committee of NZ Statistical Association: November 2017 to November 2018**

Alasdair Noble. For AGM of Wed 28 Nov 2018.

**The AGM needs to note the text, about our plans for 2019, at the end of this report and approve them.**

### **A year of conversations**

The Ministry of Education launched the *Education Conversation: Korero Matauranga* early in the year. A central part of this was about the future of NCEA, and the proposed 'six big opportunities'. We responded to the *Conversation* with three statements, as linked below. In particular, we agreed with their big opportunity 4:

Making it easier for teachers, schools and kura to refocus on learning (and shifting culture from achieving as many credits as possible to encouraging quality teaching and learning).

As we said in our second statement,

We strongly support this shift in culture, as it means preparing students for their lives with much more appropriate skills. Again, we see the need for teacher professional development, along with consultation and planning. Since statistics has many engaging features (like problem-solving in context, visualisation, etc), it may be able to take a lead in demonstrating this shift. It may be able to do this in conjunction with any and all other learning areas.

In August, a team of five of us met with the key (and mostly new) people involved with *Mathematics and Statistics* in the Ministry, and discussed possible actions for both them and ourselves. The team was Chris and Anna from Auckland, Michelle from Christchurch, and Derek and Mike from Wellington. (See list of committee below).

On the same day we met with the key people involved with *Mathematics and Statistics* in NZQA

We've had an ongoing conversation with the NZ Mathematical Society's Education Committee. They see *Statistics* in school as pointing in a good direction for the future, and want to make sure that *Mathematics* is pointing in the best direction too. We see:

- both committees advocating when we can for the health of *Mathematics and Statistics*
- the two committees supplying their expertise to their respective sides of *Mathematics and Statistics*.

### **Who we were in 2018**

Here's the 2018 membership. The first seven people formed the steering group for 2018.

- Alasdair Noble (AgResearch) (convenor and link with NZSA Executive)
- Mike Camden (secretary)
- Maxine Pfannkuch (University of Auckland)
- Chris Wild (University of Auckland)
- Michelle Dalrymple (Cashmere High School)
- Anna Fergusson (University of Auckland) (meetings scribe)
- Mark Hooper (Otago Boys' High School)
  
- Pip Arnold (Karekare Education)
- Derek Smith (University of Otago)
- John Harraway (University of Otago)
- Sashi Sharma (University of Waikato)
- Marion Steel (Epsom Girls' Grammar School)
- Jeanette Chapman (Otago Girls' High School)
- Marie Fitch (University of Auckland) (deputy chair)
- Andrew Tideswell (Stats NZ)
- Robyn Headifen (University of Auckland)
- Tilman Davies (University of Otago)

- Dave Phillipps (Lincoln High School)
- Jake Wills (Kapiti College) (first part of year)
- Christine Franklin (American Statistical Association and University of Georgia, USA)
- Emma Mawby (Stats NZ)
- Anne Lawrence (Massey University)
- Rachel Passmore (University of Auckland)
- Rhys Jones (University of Auckland)
- Matthew Parry (University of Otago)
- Neil Marshall (Cognition Education).

### When we met

We had four meetings in the year, with the help of the Zoom conferencing service. We again thank the University of Otago (and in particular Greg Trounson) for their support with this service. Attendance went like this:

Date	Attendees	Apologies	Total
15/02/18 Wedn	14	10	24
02/05/18 Wedn	8	10	18
03/08/18 Wedn	7	13	20
08/11/18 Wedn	12	8	20

### What we released

We released four 'statements', during the year, all on the future of NCEA. They're on CensusAtSchool.

The first pre-dated the Ministry's *Conversation*:

Topics for NCEA Review from NZSA Education Committee:

<http://new.censusatschool.org.nz/2018/03/20/ncea-review-from-nzsa-education-committee-march-2018/>

The second is on Literacy for University Entrance:

<http://new.censusatschool.org.nz/resource/literacy-for-university-entrance-views-from-nzsa-education-committee/>

The third is a response to the Ministry's 'six big opportunities':

<http://new.censusatschool.org.nz/2018/10/20/the-future-of-ncea%E2%80%8B-nzsa-education-committee-response/>

Also in that link is the NZ Mathematical Society Education Committee submission, and our endorsement of it.

The fourth is our endorsement of the NZMS's submission as in the link above.

It concludes like this:

The area (*Mathematics and Statistics*) is one of rapid change, new needs for future citizens and workers, new challenges, and new opportunities. Mathematical and statistical thinking are vital skills for the future.

We would like to see progress with NCEA as a major way of making the most of the opportunities here. We urge the Ministry to promote research, consultation, professional development, and other resources for this rapidly changing learning area.

### What is our purpose in life?

It is in our improved webpage: <https://www.stats.org.nz/education-committee-nzsa/>

Our main goal is to positively influence statistics education by providing leadership that consists of expert advice and advocacy for change.

### **Learners need datasets**

We've been working on how to make strong NZ datasets accessible to teachers and learners. Your ideas and datasets are welcome!

### **Networks of expertise in *Mathematics and Statistics*, NZAMT, and regional mathematics associations**

During the year, the Ministry called for tenders to set up 'networks of expertise' in the learning areas of the curriculum. We are very pleased to see that NZAMT and regional mathematics associations have been awarded contracts to provide these networks across the country. We look forward to working with them over the next two years and beyond.

### **A review of the NCEA Achievement Standards**

When the Ministry decides on improvements to NCEA, it will then, in 2019 and onwards, move to a review of the NCEA Achievement Standards. We are looking forward to putting plenty of effort into this.

### **We're progressing the idea for a new electronic journal: *DAMIT***

We plan that *Data And Modelling In Teaching* will contain peer-reviewed lesson plans from NZ teachers.

### **International engagement continues**

This includes:

- links between ourselves and the ASA/NCTM committee in the USA; Anna is currently working with the American Statistical Association on an upcoming publication featuring statistical modelling activities, in the roles of co-editor and graphics editor.
- Involvement of members in the International Data Science in Schools Project: <http://www.idssp.org>
- Chris Wild's keynote address at ICOTS10 in Kyoto: *Through a glass darkly*
- NZers (committee members Rachel and Pip) receiving two of the four 'highly commendeds' for their papers at ICOTS10
- Recognition of Maxine's editorial work on SERJ at ICOTS10
- Four presentations including a keynote and a public lecture by Maxine, while on University of Tasmania Visiting Scholarship for three weeks
- Anna's workshops at JSM/MWM in Canada.

ASA/NCTM = American Statistical Association / National Council of Teachers of Mathematics

ICOTS = International Conference on the Teaching of Statistics

JSM/MWM = Joint Statistical Meetings / Meeting Within a Meeting of ASA/NCTM

### **We're planning for 2019**

We'd like the AGM to endorse our proposed Steering Group for 2018:

- Alasdair Noble (AgResearch) (convenor and link with NZSA Executive)
- Pip Arnold (Karekare Education)
- Mike Camden
- Michelle Dalrymple (Cashmere High School)
- Anna-Marie Fergusson (University of Auckland)
- Mark Hooper (Otago Boys' High School).
- Maxine Pfannkuch (University of Auckland)
- Chris Wild (University of Auckland)

We'd like the AGM to consider and, if necessary, comment on our priorities and ongoing activities for 2018. They are very similar to the items for the last two years. The issues above all fit in with them.

Priorities:

- Statistics education in the primary sector
- Establishing an online statistics teaching journal for New Zealand
- Datasets: Sourcing, processing and making fit for use data that engages and is useful for students
- Future of our school statistics curriculum

Ongoing activities:

- International collaboration with partners in the USA and UK
- Reviewing implementation of the statistics strand of the NZ Curriculum, with inclusion of assessment.

To further these goals the Education Committee would like Exec to consider granting us a budget line of up to \$5000 per annum. This would be used for support for an international speaker at the biannual New Zealand Association of Mathematics Teachers annual Conference (Exec currently funds this at \$1500 every second year) and for other activities such as travel for members to attend meetings with Ministry of Education and NZQA officials which we hope to arrange annually.

Finally Thanks to Exec for their support and thanks, Catherine, for work on the webpage.

Alasdair Noble