

2010 Professional Development Workshop, 54th Annual Meeting of the Australian Mathematical Society

The inaugural *Effective Teaching, Effective Learning* workshop chaired by Diane Donovan (The University of Queensland (UQ)) and Birgit Loch (Swinburne University of Technology) was held in September 2010 in conjunction with the 54th Annual Meeting of the AustMS at UQ, Brisbane. Sixty-five participants from around 20 universities attended. The workshop was run with financial support from AMSI, the AustMS and the Australian Learning and Teaching Council (ALTC). These workshops form part of a professional development program for lecturers and tutors teaching in disciplines in the mathematical sciences, funded by the ALTC and supported by the AustMS.



The Project Team

At the workshop, PhD students and early career academics came together with 'old hands' to share strategies for teaching university-level mathematics. The teaching strategies offered in the workshop are applicable across the quantitative disciplines. After an inspiring plenary address from Bill Barton (The University of Auckland), facilitators shared good teaching practice and used case studies to generate lively discussions in interactive sessions. These sessions, run in parallel

streams, focused on class and unit planning, assessment, planning your career, evidence-based teaching and service teaching. The sessions on educational technology were very popular and explored delivery platforms, online tutorials and the use of mathematical typesetting for students.

The workshop was a chance to showcase the teaching and learning programs, staff and facilities of the host university. Three local UQ staff from a variety of departments conducted workshop sessions, including Merrilyn Goos who facilitated a popular session on strategically planning your professional learning, and Richard Wilson who demonstrated how he engages engineering students through online statistics tutorials. UQ mathematics graduate Katrina Hibberd delivered a plenary focusing on the transition from academia to industry. She highlighted the importance of effective communication skills in this process and opened up a lively discussion about how assessment can prepare mathematics and statistics graduates for working both in teams and with people outside of the discipline. Diane Donovan and Birgit Loch led participants in experimenting with tablet technologies using UQ's renowned \$2.5m Advanced Concepts Teaching Space laboratory, a 100-seat lecture theatre equipped with pen-enabled screens for all students. Details of the workshop proceedings, including abstracts, presentation slides and presenter biographies, are available at www.austms.org.au/ALTC+Workshop+2010.

There was a high-energy buzz amongst participants and presenters alike, especially given that this was the first time a workshop of this kind has been run. Many participants said they were enthused by the opportunity to engage with similarly passionate colleagues committed to teaching and learning in mathematics and statistics. Participants indicated they would attend future events and recommend the workshop to their colleagues. Regular face-to-face workshops are a key avenue for fostering enthusiasm, inspiration and innovation, as linked to focused knowledge on best-practice teaching. Many higher degree research students and early career researchers participated; these are our future academics and academic leaders. We hope the impact on the profession and the student experience will be significant. Participant feedback after the workshop included:

- You're never too old to learn more.
- The most valuable thing was discussing these issues within the discipline (so much more common ground).
- Such a variety of ways to engage students online!
- I need to become familiar with more technology so I'm not left behind!!!
- I will consider materials in different styles, rather than providing more.
- I will challenge the way I do things more! I will look at the research literature more closely to inform my practice because it is time to move forward.

Following the success in Brisbane, we are holding another workshop, on 29–30 September 2011 at the University of Wollongong, in conjunction with the 55th annual meeting of the AustMS. We hope these workshops will become a regular event associated with each annual meeting. Staging the workshop each year builds capability across the higher education sector as the AustMS meeting moves

around Australia and different universities take ownership of the professional development process. We are excited to collaborate with staff from the University of Wollongong (UoW) who will run sessions at this year's workshop. These sessions will include first-year experience, a UoW-led ALTC project on sharing mathematics teaching resources, and peer review. Additional sessions on service teaching, educational technologies, threshold concepts and assessment will be facilitated by presenters from The University of Auckland, The University of Sydney, LaTrobe University, Murdoch University and Macquarie University. A plenary will be given by Jon Borwein (University of Newcastle). We invite you to register early to attend this year; see www.austms.org.au/ALTC+Workshop+2011 for information on registration and sessions.

These workshops are run as part of a professional development program developed specifically for teaching staff in the quantitative disciplines. As noted in previous issues of the *Gazette*, the professional development unit comprises twelve modules on planning and conducting mathematics lessons, teaching in service units, assessing students in classes and units, planning and managing mathematics units, evaluating mathematics teaching, and developing mathematics learning communities. The project team (below) presented selections from these modules at the workshop sessions, and used valuable feedback from participants to refine our materials. We anticipate that outcomes from future workshops will influence the whole program, ensuring that it continues to enhance teaching and learning in the quantitative disciplines.

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