Tom Hubble, School of Geosciences, Faculty of Science

Tom Hubble refers to himself as “old-school” although he was originally appointed to a teaching-only tutorial position and had something of an atypical route into academic life. Rather than completing a PhD and a couple of post-doctoral appointments before applying for a teaching position, he began his teaching career as a first-year teaching assistant. “It might make me something of a relic but when I started almost twenty years ago the tutors were an integral part of the teaching effort.” He had been a research assistant before that and was finishing off a Masters when the research grant money ran out. The Head of School asked Tom to help with the first-year practical classes, which was extended to second and third year classes and “Before I knew it I was giving some of the Honours coursework. People would quit or retire and the Prof just kept finding money to keep me on. By 1995, I’d been reappointed on so many six-month and one-year contracts that I had to be given a permanent position. Along the way I finished a Diploma of Education and was looking to teaching as a career.” This time spent in the classroom honing his skills and having an education background obviously stood Tom good in stand for his future achievements. In 1999, he was a recipient of a Vice-Chancellor’s Award for Outstanding Teaching, and more recently in 2004, a NSW Minister’s Award for Education & Training/Australian College of Educators Quality Teaching Award. When asked why he thinks his teaching has been recognised, Tom responds: “I like teaching and I like people. That’s always been a good start. Most of the really good teachers I’ve worked with or observed seem to be naturals – it’s got something to do with the way they’re built. We can all get better with the right training or by thinking about the issues but I think a lot of my success results from enjoying students’ company. I like to see them broaden their knowledge and understanding. These days I also consult and research in engineering and environmental geology which helps me make my classroom teaching edgy and relevant to work environment most of my students will go to when they finish their degree.”

One aspect of teaching that has changed since Tom took his undergraduate degree in Geology and Geophysics is the sheer volume of new content to be got through. This always presents challenges. He says, “I call this the ‘stack of books’ problem. When I was a student, the questions about what should I read, what should I know in order to be a good geologist – there might have been about a dozen books to read. If students were to ask me the same question now, the stack of books would be 10 times as high. Knowledge is increasing at an exponential rate while the available teaching time is decreasing, so you’ve got to make some decisions about what’s important to know; you’ve got to put a framework around things and help the students develop the confidence required to be able to find things out for themselves because there is no longer the time to teach the breadth.” Tom’s energies are focused on helping students ask questions that have a problem at their root. In doing so, students develop the analytical techniques, skills and confidence to solve the problem. There is every indication that Tom’s approach works. “Usually, when we get to the end of a semester it doesn’t seem to me that we’ve got through all that much, but when I go through and mark the exams and reports and see what students can actually do, I realise that not just trying to cram tons of stuff into them, works.”

Tom’s more recent challenge has been in moving outside the classroom to assuming faculty based roles that concern the consolidation of teaching and learning improvement. He represents the Faculty of Science on two major institutional teaching and learning initiatives: the first is the Faculty of Science representative on the Evaluation and Quality Assurance (EQA) Working Group and the second is the eLearning Working Group. Both roles offer different perspectives on how well the faculty is travelling when it comes to teaching and learning. “Working for the Faculty gives you a much more global picture about what everybody does, and there is a commonality of purpose and approach that I still find surprising. Eight or nine major disciplines – each divided into as many as fifty sub-disciplines. I talk with people in different Schools, get their views and communicate messages and in doing so I’ve found out how we do, what we do. Our researchers are very successful but that is by no means all that we’re good at. There are lots of good teachers and a few really great ones. And the variety of the teaching is astounding when you think about it. From the large classes, particularly the first-year Physics, Chemistry Biology, Psychology, Microbiology and Maths units which are massive operations that provide tutorials, pracs and lectures for between 500 and 1800 students week-in, week-out to the Talented Students Program (TSP) where small groups of three or four students work on a one-off project.” What Tom likes about both these roles is a security in the overall sense of something common. “Even though our Schools are very different and tend to operate independently of each other, we are all training students to solve problems with data sets they collect and analyse themselves. Students will do that at different times during their degree–some in second year, some through the TSP and others, as part of their Honours degree. But they do it somewhere.”

The next challenge as Tom sees it will be to integrate that learning experience with the web. “The current generation of students are teaching now is fairly connected to the web. But the next generation won’t know much of anything else. And we hear that they don’t like reading books much either. Many would much rather do a Google search, expecting things to animated, glossy and fun. And they’ll expect to use the web. Some of those are new things for us and we need to come to grips with how to provide students with those experiences without unduly increasing our workload. That will be the next test of modern academia.”

The other major challenge as Tom sees it is the balance between teaching and research. As the latest round of successful ARC grants demonstrate, the Faculty of Science continues to maintain its rich international research reputation. “This Faculty is doing a lot of good things in both teaching and research. That was recognised through our Academic Board Review and in the visit from AUQA (Australian University Quality Assurance Agency). My job in representing the faculty in teaching and learning is to be strategic about where to focus our efforts. There is a constant desire to improve teaching and learning and we do want to improve the things about teaching that need improving but we don’t want to do that at the expense of diminishing our research results.”

On the relation between teaching and research, Tom ends with a reflection. “Some of the people who taught me were both great researchers and great teachers. There was one, Peter Valder, a botanist who taught my prac group for about three weeks when I was in first-year. He was a great communicator, wickedly funny, a researcher and incredibly knowledgable. It was inspiring to be taught by somebody like that. He was having fun with us and telling us really interesting things about plants at the same time. That kind of enthusiasm just rubs off on you. When I became a teacher I thought to myself, ‘I want to be like that. I want to find out new things and communicate them to students.’ His final thought is this: ‘if there is a message for any set of teachers, it is that you should sit down and really think about why you’re doing what you do; what makes the curriculum work and how much stuff is really required to get it to work’.”

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