Citation: Robert Webb
Queensland University of Technology

Queensland Spatial Excellence Awards

Category: Education and Professional Development

Robert Webb (R) from QUT receiving his award from Chris Swane.
QSEA 2009 Category: Education and Professional Development

Citation: ROBERT WEBB
Queensland University of Technology

Executive Summary

Robert is a Lecturer and the Spatial Science Program Coordinator of the undergraduate surveying/spatial sciences within the School of Urban Development, Queensland University of Technology (QUT). He has undertaken a wide range of frontline teaching duties and administrative workloads during 2007, 2008 and 2009.

Robert has achieved excellence in student evaluations of his teaching well above the faculty average values. He has taught a diverse mix of subject areas both individually and provided educational leadership as part of larger teaching teams. Robert has an impressive number of lodgements on the QUT digital repository E-Prints research system. He is also currently leading a teaching and learning project focused on engaging students in real-world learning activities across the civil engineering and surveying disciplines.

Address to Education and Professional Development Criteria:
Criteria 1: Teaching

Robert undertook a wide range of frontline teaching duties and workloads during 2007, 2008 and 2009. During 2008, Robert was involved in fourteen units (seven in each semester). This year, he has been involved with delivery of nine units include two school-wide units and coordination of final-year spatial science/surveying projects.

Students across the university are invited to provide feedback on their units and teachers through the formal Learning Experience Questionnaire (LEX) each semester. These university-wide reports indicate Robert is performing as a teacher well above faculty and university average teaching ratings. In his most recent evaluation period, Robert had increased his teacher ratings across his units with scoring in the range 4.6 to 4.9 on a zero to 5.0 scale. These units had more than 70 percent student response rates compared to the faculty average response rate of 36 percent.

Some written comments from the student evaluation questionnaires included:
- "good with teaching topics in many different ways, always enjoyable to learn."
- "Robert has a good teaching style and can relate and communicate to students well."
- "friendly, knowledgeable and approachable, considerate and understanding of students needing time to work on assignments and other problems students may face with assessment"
- "Robert is a great teacher who understands what me as a student wants and helps us with any problems that we might have."
- "An enthusiastic and competent lecturer, good slides and well prepared presentations"
- "Very good knowledgeable person. Knows what he is talking about. Inspires me to learn."
During late 2008, peer observations of a selection of Roberts classroom activities was successfully undertaken with minor reflective improvements implemented. He has employing a variety of learning techniques depending on the level of student audience in his classes. These techniques have included traditional lecture and tutorial formats; tactile techniques for instruction and utilisation of specialised application/simulation software; active learning and student engagement strategies; real-world cases studies; organisation of industry site-visits and practical-based fieldwork learning experiences.

Most recently, Robert has provided educational leadership as part of the course quality and improvement process in undertaking an audit of assessment activities and criterion reference assessment practices throughout the spatial science curriculum and school-wide units. He has also provided leadership to curriculum mapping processes within the school of Urban Development and recently presented a conference paper on curriculum mapping focusing on the journey of cartography education at QUT.

Over the last five years, Robert has actively sought to improve the learning experiences of the students through the following teaching practices:

- Piloting the use of digital presentation technology for student assessment in all digital mapping production resulting in improving students technological literacy skills in map design processes and graphic presentation outcomes;
- Introduced an innovative e-journal approach to teaching Geographic Information Systems within the universities new on-line teaching and learning management systems;
- Facilitated active learning by students through restructuring the mix of delivery approaches and scheduling associated with first-year surveying/spatial including competency based tutorials;
- Successfully introduced student-centered learning for understanding historical, precise-time technical issues applicable to positioning, navigation and mapping.
- Undertaken intensive 3-day staff development training - transition to supervisor; Robert coordinates about a dozen part-time casual academic staff that provide specific inputs to some technical units.
- Experimentation and evaluation of block-mode teaching delivery approaches for hydrographic surveying module including intensive field practice, use of industry relevant guest lecturers, and structured site visits examining real-world hydrographic and environmental survey/mapping projects.

Criteria 2: Research

In order to understand and contribute in a positive way to the world of emerging spatial scientists and related professionals, Robert has supported the research activities of his discipline and allied disciplines by:

- Undertaking the role of associate supervisor for Research Masters students and active participation in Office of Research workshops on postgraduate supervision.
- Assisted three PhD students from Geology discipline in undertaking GPS surveying associated with groundwater modelling and specific borehole measurement studies-research outcomes have included technical reports and referred conference papers.
- Providing coordination and direct supervision of a handful of final-year survey measurement projects involving applied research.
Providing a “spatial” point-of-contact for the Institute of Sustainable Development (ISD) initiative and provision of advice for developing spatial infrastructures at the Samford environmental research facility;

Provided cooperative research assistance to Faculty of Science staff and post-graduates in establishing transect profiles for medium-term ecological studies within Samford Valley;

Leading a research project associated with a teaching and learning grant focusing on engaging students in real-world learning. The project brings together three units from civil engineering and surveying working towards a common collaborative project that provides supportive and engaging learning environments and renews real-world emphasis.

Criteria 3: Publications Summary

Much of Roberts focus in recent years has been involved with program coordination and operational teaching issues of the undergraduate surveying and spatial science program at QUT.

With this focus in mind, Robert has still managed to achieve some publications. Robert has been considered an early academic adopter and very supportive of digital repository technologies. QUT E-Prints is a web-accessible repository of research outputs created by QUT staff and postgraduate students.

His colleagues consider him as a bit of a quiet achiever. However, Robert has achieved an impressive eighty-plus lodgments on the QUT E-Prints system that has placed him in the top forty authors across the university, based on internet access statistics. A full listing of Roberts’ publications can be accessed from the QUT digital repository at URL http://eprints.qut.edu.au/view/person/Webb,_Robert.html

Criteria 4: Professional Service

Robert has made positive and valuable contributions to professional service by:

- Providing expert opinion and advice to members of the community;
- Providing coordination of final-year student projects directly involved with local government community enhancement projects;
- Involvement with measurement specialist team in three consulting/investigative projects in the last six years;
- Served on health and safety committees at school organisation level;
- Undertaken the role of a faculty appointed first-aid officer since 2003.

Since early 2007, Robert has been undertaking the role of Subject Area Coordinator for Spatial Science/Surveying. This role has included responsibilities for coordination of units and staff/equipment/space resources, addressing teaching operational issues and performance standards, and offering administration support to university and faculty activities. This role has also included many evenings and weekends involved with marketing and external relation events for the study-areas from School of Urban Development through contributing to presentations and promotional materials.
The role of an academic is often wide-ranging in scope. Robert has provided advice and leadership through Faculty-level health and safety committee duties. As such, he has maintained currency over many years with senior first-aid (workplace) certification. During the last eighteen months, Robert has ensured new risk management planning, appraisal and documentation requirements have been undertaken of all field surveying practical’s and measurement laboratory projects undertaken by undergraduate students.

From 1999 to mid 2003 Robert was an honorary co-editor of “The Queensland Surveyor Journal”- published 6 times per year. This professional involvement has resulted in a real impact in modernizing this Queensland journal and providing some influence in educational and publishing issues of the Institution of Surveyors. Robert has also contributed many QUT Spatial Science News reports to the Spatial Science Queensland magazine.

Professional Service
Robert has also been associated with a number of professional groups:
- Member of Institution of Surveyors, Australia, 1995 – 2003
- Member of Mapping Sciences Institute of Australia, 1994 -2002
- Member of Australasian Urban and Regional Information Systems Association, 1999-2001
- Foundation Member of Spatial Sciences Institution Australia, 2003 – present
- Member of International Global Navigation Satellite Systems Society, 2004-present
- Member of Australian Hydrographic Society (AHS), 2004 – present
- Member of Australian Association of Engineering Educators (A2E2), 2006-present
- Member of Australasian Spatial Information Education and Research Association (ASIERA), 2009-present

Summary
Roberts strong teaching abilities in undergraduate units have contributed significantly to the “real-world” appeal and effectiveness of courses offered from the Faculty of Built Environment and Engineering. Robert has sought to be innovative in his teaching units addressing issues such as flexible online learning, e-journal learning approaches, competency based measurement skills, technological literacy and improved research capabilities of QUT graduates. Robert has also received very high teacher evaluations and positive feedback from spatial science/surveying students. Roberts’ proactive role as subject area coordinator for spatial science/surveying within the school of Urban Development has made a significant and superior contribution to producing graduates for the surveying and spatial science industry.

Robert has contributed to research through a number of cross-disciplinary projects. He has published nationally, quite a number of publications locally, with access to his publications through the QUT E-prints repository. Robert has also made significant contribution in the area of community service with a broad range of involvements and committee representations over the last five years.