COMMITTEE FOR THE ADVANCEMENT OF LEARNING AND TEACHING

FINAL REPORT ON GRANT

As at 31 MARCH 2014

Name: Martin Tolich

Department: Sociology

Title of Project: Developing Research, Mentoring and Supervisory Skills in Post Graduate Students through Community Outreach

Project Team: Martin Tolich (Sociology) , Sally Carson (Marine Science), Victoria Rosin (Marine Science), Steve Cutler (Marine Science) and Dave Warren (Chemistry).

Amount Awarded: 19,977

Snap shot:

The overall aim of the project was to explore how mentoring school students contributes to postgraduate research students' learning and the development of their key skills and capabilities in research and science. The article, Enhancing Graduate Attributes through Community Engaged Learning and Teaching in Chemistry and Marine Science, has been submitted to Journal of the Higher Education Research and Development Society of Australasia.

The Key objectives were:

1. To explore how mentoring school students contributes to postgraduate research students' learning and the development of their key skills and capabilities in research and science.
2. To develop an evidence-based model, guidelines and resources for the mentoring of school students by research postgraduate students that can be used across the tertiary sector in New Zealand.
3. To compare two University Outreaches with paired students involved in similar courses of study but not involved with either outreach.

4. Contribute to an international literature on postgraduates as mentors of school students in science.

   The research question asked to what extent their involvement in these teaching programmes enhanced their 'graduate attributes', e.g., communication skills, self-motivation, cultural understanding, in-depth knowledge, lifelong learning, workplace related skills and critical thinking.

   The methodology compared University students taking part in either Chemistry or Marine Science-based extra-curricular teaching programmes at the University of Otago in a year-long study.

   Key findings: The two teaching programmes evaluated were similar in many respects; however, differences were later noted in participant characteristics and how the two programmes were managed. By the use of interviews and reflective journals, it was demonstrated that participation in these programmes enhanced a select number of attributes, but not all. These enhanced attributes were unequally distributed between the Chemistry and Marine Science programmes.

   Discussion and implications: This study provided a number of unexpected findings outside the list of graduate attributes, such as development of specific teaching skills, awareness of career pathways, connections with the wider community and enthusiasm for the teaching programmes. As this research took place with students who had only just begun their involvement with these community programmes, further research is needed to assess if the graduate attributes develop further or whether other graduate attributes become apparent over time in the programmes among returning cohorts.

   Outputs: The article has been submitted to Journal of the Higher Education Research and Development Society of Australasia.

Amount expended to date: $12,712. The expenses for the study were employing a research assistant to conduct the interviews and draft the initial paper plus a typist to transcribe the interviews. The project was $7000 under budget.

Other Outputs*:* The article, Enhancing Graduate Attributes through Community Engaged Learning and Teaching in Chemistry and Marine Science, has been submitted to Journal of the Higher Education Research and Development Society of Australasia.

Two other articles are under development are looking at how important extracurricular activity within subject disciplines are to enhancing graduate attributes and the development of models and differentiated approaches in mentoring in science.

The research finding have been shared through the University of Otago.s Community Engaged Teaching and Learning research group. We hope to also share the results through the Quality Advancement Unit's Spotlight on Teaching session and appropriate conferences.

Signature:
Date: