

# **Developing Research Supervisors: breaking down internal barriers and drawing on resources from the Australasian academic community**

## ***Introduction***

This paper reports on the progress of a project focused on the important learning and teaching issue of research supervision. The aim of the project is to enhance the learning journey of post-graduate research students by improving the capability of research supervisors at the University of Southern Queensland (USQ) Australia. The project has established a Community of Practice - Research Supervisors (CoP-RS), conducted a training needs analysis to determine the training requirements of supervisors, designed a professional development program, coordinated the delivery of pilot workshops, and is evaluating the effectiveness and outcomes of the activities.

This paper describes the background which prompted the project, then details the activities undertaken to date and planned for the future. The outcomes and challenges are described. Conclusions are drawn and future research directions suggested.

## ***Background***

In the past, at USQ much of the professional development for research supervisors was conducted within Faculties. It was organised in a sporadic, ad-hoc fashion with little evaluation of training programs. In 2008, the Graduate Research Committee at USQ decided to implement an accreditation scheme for RHD supervisors. This raised awareness of the need for a coherent training program for supervisors.

This project is directly aligned with the institutional goal 'research and research training' in USQ's Strategic Plan (2005-2009) (USQ 2005). It contributes to the initiative of 'fostering the development of researchers and research students within USQ'. More importantly, the project complements the Academic Professional Development project, a major sub-project of the Program Revitalisation project that includes tailored professional development as well as communities of practice (LTSU 2008).

Increasingly, Universities in Australia are under pressure to ensure postgraduate research students complete their projects in a timely manner. We also need to consider student satisfaction with the quality of supervision provided and ensure adequate resources are provided to ensure effective supervision. The issues addressed by this project are:

- do research supervisors at USQ have adequate knowledge and skills to supervise students?
- can the capability of research supervisors be improved by offering workshops and resources as part of USQ's professional development program?

Previous research has shown that supervisors tend to base their supervision approach on their own experience as research students (Pearson and Brew 2002). Traditionally, it was presumed that anyone capable of performing research was able to effectively supervise a research project (Taylor and Beasley 2005). Furthermore, the role of Principal Supervisor was achieved only after serving an 'apprenticeship' as an Associate Supervisor 'for the duration of a candidature, from admission through to submission of thesis and successful award of degree' (Monash University 2004).

Recently, literature has emerged relating to the pedagogy of research supervision and the recognition of research supervision as a form of teaching (Manathunga 2005). Consequently, research supervisors are urged to reflect on their own research style and that of their students. Pearson and Brew (2002) mount a compelling argument that supervisors need to develop a 'repertoire of knowledge and understanding about different aspects of supervisory practice' (p.146).

This project follows guidelines promoted by Pearson and Brew (2002) and is 'focused on the development of supervisors' knowledge base, their skills and their orientation to their practice' (p.148). It aims to provide the following learning outcomes for research supervisors:

- knowledge of USQ institutional requirements and procedures including ethics and workplace health and safety;
- greater self-awareness of supervisors' own conceptions of research and supervisory practice;
- understand what constitutes a productive research learning environment;
- appreciate a range of good practice approaches to research supervision.

The community of practice approach (Wenger 1998) supports the development of supervisors' knowledge base as it provides a framework or approach where subtle, tacit types of knowledge can be cultivated, shared and sustained (Hildreth and Kimble 2004). Tacit knowledge is highly personal, and is understood without being articulated. It is the kind of knowledge that successful, experienced supervisors use in their everyday practice, however, it is hard to formalise and therefore difficult to communicate to others as it is unvoiced or unspoken. Lave and Wenger (1991) and Vygotsky (1978) have identified the acquisition of knowledge as a social process, and communities of practice provide the opportunity to share and articulate tacit knowledge.

The term "communities of practice" emerged from Lave and Wenger's (1991) study that explored learning in the apprenticeship model, where practice in the community enabled the apprentice to move from peripheral to full participation in community activities. Wenger, McDermott and Snyder (2002) describe communities of practice as:

Groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis ... (As they) accumulate knowledge, they become informally bound by the value that they find in learning together. Over time, they develop a unique perspective on their topic as well as a body of common knowledge, practices, and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice (pp. 4-5).

In April 2008, the USQ Graduate Research Committee (GRC) adopted a proposal to accredit research supervisors and record their details in a register. The most recent figures available at the time suggested there may be as many as 80 USQ staff currently supervising research students. The GRC discussion paper stated that applicants for accreditation as a Research Higher Degree Supervisor 'must have undertaken the University's Research Supervisors' Program or demonstrate that they have an equivalent level of expertise and/or training'. At the time, USQ did not have a Research Supervisors' Program. Subsequently, USQ subscribed to fIRST - a repository of resources and workshops compiled by a consortium of universities in Australia and New Zealand (fIRST Consortium 2002). A working group was formed at the June 2008 GRC meeting to recommend the components of the Research Supervisors Development Program.

The knowledge and skills required by supervisors can be broken into two groups: administrative and academic. The GRC Working Group identified that administrative knowledge could be covered in an induction program for research supervisors and include topics such as USQ research policy, intellectual property (IP) policy and contract framework, ethics clearance, workplace health and safety issues relating to students, policies related to research finance support, administrative processes, USQ and Federal Government policies relating to admission, confirmation of candidature, submission of thesis, and examination. This list extended the range of topics recently identified by USQ's Director of the Office of Research and Higher Degrees (OR&HD). In relation to academic knowledge and skills, in the past, ad-hoc seminars and workshops had been organised at USQ and Faculty level. The GRC Working Group recommended the following topics in the professional development program: developing the student-supervisor relationship, literature review, development of the proposal and confirmation of candidature, thesis writing, and data analysis methods.

## **Methodology**

Based on the background as described, the project was designed and achieved funding as a Learning and Teaching Associate Fellowship project. The project comprises four main activities to be achieved in 17 weeks from the beginning of March 2009:

1. establish a Community of Practice for Research Supervisors (CoP-RS);
2. perform training needs analysis;
3. develop and conduct induction and pilot workshops program;
4. evaluate the program and report outcomes and recommendations to stakeholders.

## **Community of Practice – Research Supervisors**

The establishment of a Community of Practice for Research Supervisors (CoP-RS) across all faculties at USQ commenced with the launch of the project. The purpose of the CoP-RS is to provide a formal social network of USQ research supervisors to encourage education, dissemination of best practice and to build on the existing knowledge in research supervision. Support and guidance was provided by LTEC CoP expert Dr Jacquie McDonald, as part of her Learning and Teaching Support Unit (LTSU) Community of Practice leadership role.

The community of practice model proposed by Wenger (1998) and developed further for business contexts by Wenger, McDermott and Snyder (2002) provides a framework for the building of successful academic communities of practice. The essential elements of a Community of Practice are defined by Wenger (1998) as:

- a domain of knowledge that creates a common ground and sense of common identity;
- a community of people who care about the domain and create the social fabric of learning;
- a shared practice that the community develops to be effective in its domain.

In this project, the domain of knowledge is focused around research supervision and the community members are USQ research supervisors. At USQ substantial progress has been made in adopting the Community of Practice concept since it was piloted in 2006 in the Faculty of Business CoP for First Year Core Course Leaders (McDonald and Star 2006; McDonald and Star 2008). The model has a number of unique features that has proven successful at USQ for implementing and sustaining CoPs in an academic context. These features include the use of the three CoP elements of community, sharing practice and building domain knowledge which provide the organising structure for CoP meetings. CoP priorities and a yearly agenda are established from issues identified by members at the first CoP meeting. The role of convenor is shared by a domain expert (in this case the Project Leader Aileen Cater-Steel) and a convenor with knowledge of CoP processes and professional development knowledge (Jacquie McDonald).

This CoP structure ensures that each of the essential elements of a CoP is addressed at CoP meetings and provides clear direction, outcomes and value-adding for members. The structure, community support, and outcomes have assisted in addressing initial scepticism about “just another meeting” and ensure best use of the time committed, for time-poor tertiary educators (McDonald and Star 2008).

To help establish the Cop-RS, lists of supervisors were provided from the Office of Research and Higher Degrees. The lists had been provided individually from each of the five faculties and were in five different formats. The files contained errors and omissions in names. When the lists were combined, deduplicated, and corrected the total population of supervisors numbered 190 rather than the initial estimate of 80. Invitations were emailed to the supervisors to attend the launch of the project and the first CoP-RS Meeting.

## **Training Needs Analysis**

Initially the Project Leader intended to develop the training needs analysis for USQ. However, in July 2008, the researcher became aware of an Australasian Survey. The survey, funded by the Australian Learning and Teaching Council, was conducted by researchers involved with the fIRST Consortium (2009). Supervisors at USQ were encouraged by the Office of Research to complete the survey but there was insufficient response from USQ for fIRST to provide a detailed analysis of USQ responses. In March 2009, the researcher gained cooperation from the fIRST researchers to reopen the survey for USQ supervisors. Research supervisors were encouraged by the DVC Research to complete the survey. This has resulted in 48 responses to date.

## Workshops

Through the CoP-RS, the project is building on the existing repository provided by the fIRST consortium by supporting professional development and providing opportunities to share practice, build resources and implement innovative research supervision practices. The establishment of the CoP-RS will address USQ's desire to improve research supervision practices by drawing together separate islands of research supervision knowledge into an accessible body of resources and social networks of professional expertise. The project aims to increase the awareness and use of different approaches to research supervision through the creation of a program of activities that will incorporate existing workshops and resources available both within USQ and from the wider fIRST Consortium of 35 Universities throughout Australia and New Zealand.

Based on training needs identified, suitable workshops from the fIRST collection will be identified. Where there is no suitable workshop available in fIRST, members from the CoP-RS will be invited to suggest an alternative. The fIRST workshop authors will be invited to USQ to present the selected workshops. To ensure transfer of skills, at least one USQ research supervisor will be identified as an 'Understudy' and encouraged to work with the presenter so that in-house expertise can be developed to conduct the workshop on an ongoing basis.

## Findings

The CoP-RS meetings have a three part structure: fellowship and sharing refreshments; sharing practice; building domain knowledge. During the initial CoP-RS, supervisors worked in groups to discuss, list, and prioritise issues in relation to research supervision. The issues fall into four categories:

- Lack of training, mentoring, workload to support supervisors. Training requirements include thesis proposal defence, thesis writing, philosophy and methodology. It was suggested that a requirement existed for compulsory professional development for all supervisors and to undertake an audit of supervisors' skills and processes.
- Need to establish and maintain positive relationships with students and to recognise external pressures for student to complete in minimum time.
- Requirement for a central web-based repository so supervisors can access policies, procedures, definitions.
- Difficulties in supervising international students in Australia and across borders.

The final issue is as a result in the doubling of the headcount of international research students over a five year period from 39 to 88 as shown in Table 1.

Table 1. Higher Degree Research Students – Student Headcount from 2003-2008

Student Group	YEAR					
	2003	2004	2005	2006	2007	2008
International	39	43	51	58	65	88
Domestic	146	157	158	157	203	241
Total	185	200	209	215	268	329

Source: USQ Data

The second CoP-RS meeting focussed on sharing practices related to international students. Members discussed the challenges of international students and suggested a range of solutions to overcome the perceived challenges. One suggestion is use the existing the USQ course management system (Moodle) to create a community research course which is not tied to any program or semester offer. This course would provide an online environment for supervisors and students to share resources, build learning communities and electronically answer frequently asked questions, for example, policy issues. The Moodle environment also hosts asynchronous discussion forums, so international students can interact at any time, despite different time zones. Other suggestions involved supervisors using communication technology such as Skype to help students overcome feelings of isolation.

In terms of building domain knowledge, the second CoP-RS examined training requirements for RHD supervisors. The suitability of the fIRST resources was discussed and four workshops selected to pilot test. Members of the CoP-RS volunteered to take on the role of Understudy for each workshop. The authors of the selected fIRST workshops have been invited to present their courses at USQ and to facilitate the transfer of knowledge to the Understudies so that the workshops can be scheduled as required in the future.

Although the project is achieving its outcomes in terms of the establishment of the CoP-RS and the pilot workshops, there are challenges. The CoP-RS meetings include supervisors from all five faculties, but only about 20 supervisors are engaged in the CoP at this early stage. It is not surprising that there is resistance as the project is associated with USQ's implementation of the supervisor accreditation initiative. The extent of resistance is difficult to gauge: after the invitation to the first CoP-RS meeting, the Project Leader received this email sent in error! "yes, I got this too! Again, it's a process of 'institutionalising'. Anyway, we have a meeting with XXXXXXXX that day - 9.00-10.30." Increasing expectations of accountability and performance are changing the traditional supervisor role, with the locus of accountability with "the institution rather than individual academics, particularly in Australia ... where ranking relates to the institution rather than its 'component parts'" (Coaldrake and Stedman 1999).

Another challenge relates to the lack of a reward mechanism for Understudies to compensate them for their time in preparing and conducting the pilot workshops. Also, supervisors from USQ's two small satellite campuses have not shown interest in the project. A strategy needs to be formulated to ensure they can be involved in the CoP-RS and can attend the workshops.

## **Conclusions**

It is too early to judge if the program of workshops developed by this project will suffice to provide the skills required by USQ supervisors. Evaluation may determine that it may not be a sustainable model. The project is using a variety of methods to evaluate its efficacy:

- Extent of participation and activity in CoP-RS as recorded during meetings;
- Feedback from CoP-RS;
- Feedback from evaluation forms at pilot workshops.

Beyond the life of this project, its longer-term impact may be measured by the following performance indicators: research higher degree enrolments and completions; research student and graduate satisfaction; research student graduate destinations; and qualifications and skills profile of staff.

One of the highlights of this project is that it is contributing to overcoming internal USQ boundaries between 'Research' and 'Learning and Teaching'. Financial support from the PVC L&T was provided with an Associate Fellowship grant. The Associate Fellowship provided teaching relief for 18 weeks and allowed for travel costs for presenters to come to USQ (\$6,000AUD). The project also involves the HR department (recording of attendance for professional development register, scheduling workshops), the PVC Research (funding for CoP-RS refreshments) and also the Office of Research and Higher Degrees (providing lists of supervisor names). The planning and implementation of CoP-RS is a collaborative partnership between the Project Leader and a member of LTSU. This is an example of the 'joint portfolio' between the teaching and learning centre and the research centre of the university as prescribed by Murphy (2004). The CoP-RS is creating research leadership and building a research supervisor community that has broken down the borders between Faculty and research disciplines. Despite the complex issues around sharing different research methods and approaches, the CoP-RS provides rich learning opportunities and builds a dynamic community with a high level of expertise and resources to support both local and international research students.

## **References**

- Coaldrake, P. and L. Stedman (1999). *Academic Work in the Twenty-first Century: Changing roles and practices*. *Occasional Paper Series*, Department of Education, Training and Youth Affairs, Higher Education Division: 1-35.
- fIRST Consortium. (2002, 28 January 2009). "fIRST for improving research supervision and training." Retrieved 25 April, 2009, from <http://www.first.edu.au/>.
- fIRST Consortium. (2009). "Building research supervision and training across Australian universities: Survey of supervisors." Retrieved April 29, 2009, from <http://www.first.edu.au/public/Carrick/survey.html>.
- Hildreth, P. J. and C. Kimble (2004). *Knowledge networks: Innovation through communities of practice*. London, Ideas Group Inc.

- Lave, J. and E. Wenger (1991). Situated learning: Legitimate peripheral participation Cambridge, Cambridge University Press.
- LTSU (2008). Program revitalisation: project handbook, USQ.
- Manathunga, C. (2005). "The Development of Research Supervision: "Turning the light on a private space"." International Journal for Academic Development **10**(1): 17-30.
- McDonald, J. and C. Star (2006). Designing the future of learning through a community of practice of teachers of first year courses at an Australian University. The First International LAMS Conference: Designing the Future of Learning. Sydney, Australia.
- McDonald, J. and C. Star (2008). The challenges of building an academic community of practice: An Australian case study. HERDSA 2008 conference: Engaging Communities. Rotorua, New Zealand.
- Monash University. (2004). Overview: Research Supervision Accreditation. Retrieved 30 April, 2009, from <http://mrgs.monash.edu.au/research/staff/supervision/overview.html>
- Murphy, N. (2004). Orientations to research higher degree supervision: the interrelatedness of beliefs about supervision, research, teaching and learning Brisbane, Griffith University.
- Pearson, M. and A. Brew (2002). "Research Training and Supervision Development." Studies in Higher Education **27**(2): 135-150.
- Taylor, S. and N. Beasley (2005). A Handbook for Doctoral Supervisors. London, Routledge Falmer.
- USQ (2005). Strategic Plan 2005-2009. Toowoomba, USQ.
- Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. M. Cole, V. John-Steiner, S. Scribner and E. Souberman. Cambridge, MA, Harvard University Press.
- Wenger, E. (1998). Communities of practice: learning, meaning and identity. New York, Cambridge University.
- Wenger, E., R. McDermott, et al. (2002). Cultivating communities of practice. Boston, MA, Harvard Business School Press.