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**Knowledge Sharing in Doctoral Research**

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## **Abstract**

**Title:** Knowledge sharing in doctoral research

**Keywords:** Knowledge management, knowledge management systems, knowledge sharing, doctoral research, doctoral research supervision, pod structure of research supervision

**Category of paper:** Practice paper

**Purpose of the research:** This paper aims to address issues of doctoral research and supervision, including isolation, lack of resources, candidate-supervisor relationship, quality of supervision, experience of supervisor, match between supervisor and candidate, and quality assurance.

**Findings:** The Graduate College of Management at Southern Cross University, Australia, has implemented a number of knowledge sharing technologies, techniques and practices, including an online Doctoral Candidates Centre, Doctoral Supervisors Centre, doctoral symposia, and a professional development program for supervisors. It has also encouraged collaborative knowledge creation and sharing by promoting a 'pod' structure of doctoral research and supervision and personal and electronic networks by means of e-learning software that permits asynchronous distance learning in a real-time collaborative environment.

**Value of the paper:** This paper will make contribution in how the current situations in doctoral research in Australia, especially for practitioner research situations in business and management, can be improved.

**Number of pages:** 9

**Number of tables/figures:** 2

**Section headings:** Abstract, Introduction, Knowledge management and knowledge sharing, Creating a knowledge sharing culture, 'Pod' structure, Knowledge management systems, Research workshops, Professional development, User feedback and future directions.

## **Introduction**

In the past, doctoral candidates at Australian universities researching in business and management worked mostly on their own, with a supervisor with whom they shared and created new knowledge to contribute to their field of inquiry (unlike in the US where doctoral research is done under the supervision of a committee). Some typical problems in the process include: (1) isolation of candidates; (2) relationship with supervisors; (3) lack of resources; (4) quality of supervision; (5) experience and training of supervisors; (6) difficulties in getting supervisors within the university; (7) match between supervisor and candidate; (8) quality assurance. Today, universities actively work to foster collaborative knowledge creation and encourage candidates and supervisors to share their knowledge with their peers. This article presents some knowledge sharing practices and methods implemented in Southern Cross University, which has one of the most successful Doctor of Business Administration (DBA) programs in Australia.

There has thus been a rise in the number of alternative doctoral programs devoted to the development of practitioner-scholars, with the DBA being the main alternative offered in business schools. The development of the professional doctorate in Australia was a result of widespread changes to higher education introduced by the government in the late 1980s to meet the needs of the economy and industry, as the Doctor of Philosophy (PhD) degree was criticised for being too limited to be useful in the workplace. The professional doctorate has been described by the Australian Council of Deans and Directors of Graduate Studies as a program of research and advanced study which enables the candidate to make a significant contribution to knowledge and practice in their professional context, in which the candidate may also contribute more generally to scholarship within a discipline or field of study.

### **Knowledge management and knowledge sharing**

Knowledge management (KM) has been defined as ‘an approach to adding or creating value by more actively leveraging the know-how, experience, and judgment [that] reside within and, in many cases, outside of an organization’ (Ruggles 1998, p. 80).

The above definition highlights important elements of KM. The know-how aspect of KM emphasizes explicit knowledge, which can be easily captured and codified (Bonner 2000). On the other hand, the experience and judgment aspects of KM reflect tacit or implicit knowledge, which is difficult to capture and formalize (Bonner 2000). The definition also emphasizes that the primary purpose of KM is to add or create value. At the same time, there are four modes of tacit and explicit knowledge creation processes: (1) tacit-to-tacit; (2) tacit-to-explicit; (3) explicit-to-explicit; and (4) explicit-to-tacit (Nonaka & Takeuchi 1995).

Knowledge sharing is possible in all four knowledge creation processes. The difference is in their focus (tacit, explicit, or both) and the required facilitation and information technology (IT) support. However, resistance to knowledge sharing is probably part of human nature, especially when we believe that knowledge is power and that hidden knowledge can lead to prestige and job security (since what only I know, no one else knows; so they need me). When people are asked to share their knowledge, one question they always ask is, ‘What’s in it for me?’ However, knowledge is important to everyone in today’s knowledge-based economy and academics will be among those who view knowledge as a very important resource since they are knowledge professionals who engage heavily in creating and delivering knowledge products (publications) and services (lectures, presentations, seminars, *International Technology Management Review*, December 2007, v1, n1.

supervision, theses examinations), and whose performance appraisals are very much related to these knowledge products and services. For DBA candidates, similar issues will come up as they spend two to four years or even longer on their knowledge products – their research theses. Again, academics and research students may be reluctant to share their research and data for the following two primary reasons: (1) the fear of being criticized for possible errors and weaknesses; (2) the fear of losing the advantages arising from full utilization of the findings and data of their research projects (Hubbard & Little 1997).

To foster knowledge creation and encourage collaboration and knowledge sharing in doctoral research, Southern Cross University's DBA program has implemented some effective pro-knowledge sharing practices that cover an entire knowledge lifecycle. These include: (1) promoting a knowledge sharing culture and creating an environment for comfortable knowledge sharing; (2) a pod structure for doctoral supervision with a group of candidates and supervisors working together for collaboratively; (3) knowledge management systems, including the online doctoral candidates centre, doctoral supervisors centre, and Elluminate *Live!*<sup>®</sup> e-learning software; (4) optional colloquia for works-in-progress presentations (5) mandatory doctoral weekend workshops/symposia twice a year; (6) social gatherings for doctoral students and supervisors; (7) a professional development program for supervisors; and (8) a publications program to help researchers publish their work in peer-reviewed conferences and journals.

### **Creating a Knowledge Sharing Culture**

An important element for successful knowledge sharing practices is the establishment of a knowledge sharing culture. Changing the existing culture and people's work habits is the main hurdle for most knowledge management programs (McDermott 1999). Other studies (Chase 1997; The Conference Board 1999; The Delphi Group) indicate that the lack of a knowledge sharing culture is the biggest obstacle to knowledge management. The Graduate College of Management, which runs Southern Cross University's DBA program, has been actively working on creating a pro-knowledge sharing environment (by promoting knowledge sharing in all the public places, including meetings, presentations, workshops, conferences and websites, and establishing and implementing reward programs for good knowledge sharing practices), in which supervisors and candidates feel comfortable and are happy to share their knowledge and discuss their experiences.

### **'Pod' Structure**

Knowledge sharing is also about breaking down barriers within an organization. Therefore, an organizational structure facilitating knowledge sharing should be in place. A knowledge sharing structure encourages the development of 'communities of practice' and discourages the traditional silo structure in order to gain maximum benefits from people's knowledge (Mazzei 2000). At Southern Cross University, we have experimented with a 'pod' structure whereby a group of candidates assigned to a particular supervisor work together like an 'action learning set'. Pods also benefit by having multiple supervisors, who bring different strengths to the candidates' research. The candidates meet monthly, or as the situation demands, to question and reflect with each other and share resources. The outcomes of the 'learning sets' are emailed to the supervisors for comment. These notes served as useful data when it comes to reflecting on the experience. This mutual support is critical in overcoming the ebb and flow of enthusiasm that is part of any long research endeavour and contributes to the success rate of the group, with several of the candidates completing their theses and graduating at the same time. Some candidates also help others with the content area of their research which helps to reduce the supervisors' workload, so that they can focus on the

research process and help the candidates extract their research outcomes (Sankaran, Swepson & Hill 2005).

The advantages of the pod have been recognised by other doctoral candidates in the college, who have formed ‘virtual learning sets’ to share knowledge and motivate one another via teleconferences and online discussion groups. Recent graduates of the university sometimes join these conversations and act as unofficial mentors. Some graduates have also signed on to become supervisors in the university’s doctoral program. A bonus feature has been more joint conference presentations and co-authored journal papers from candidates in the pods.

### Knowledge Management Systems

Knowledge management systems such as intranets, best practice databases, corporate knowledge directories, corporate information portals, knowledge networks and maps (Alavi & Leidner 2001), can also be used to support and enhance knowledge sharing activities and facilitate the sharing of both tacit and explicit knowledge. The online doctoral candidates centre, doctoral supervisors centre and Eluminate *Live!*<sup>®</sup> communication tool at Southern Cross University’s Graduate College of Management are three examples of effective knowledge management systems in doctoral research and supervision.

### Doctoral Candidates Centre

Southern Cross University’s Graduate College of Management (GCM) has set up an online knowledge repository called the ‘doctoral candidates centre’ where the College’s doctoral candidates can locate relevant information and academic resources, network with other candidates and complete their progress reports (Figure-1 is a snapshot of one of the Web pages from the candidates centre). Through the centre, doctoral candidates can also get a better understanding of the processes, procedures, practices of the doctoral programs in the GCM.



**Figure-1: A Snapshot of the GCM Doctoral Candidates Centre**

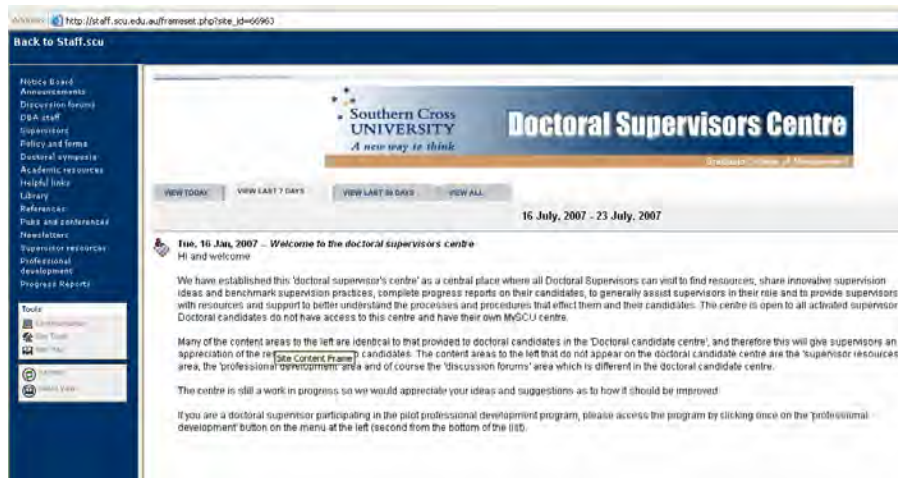
(Source: <http://www.scu.edu.au>)

Doctoral candidates can locate the following information, resources and facilities in the centre:

- Announcement Section, where candidates can view announcements and the latest news from the GCM doctoral administration team.
- Online Discussion Forum Section, which allows candidates to set up forums to communicate with one another and share their knowledge with other candidates on their research topic and/or methodology. Examples include forums on knowledge management, performance measurement, outsourcing, change management, IT and competitive advantage, business research in China, e-commerce, small and medium enterprises, corporate governance and supply chain management, among others.
- DBA Staff Section provides information on the DBA administration team.
- Supervisors Section presents information on available doctoral supervisors and their profiles to assist candidates in choosing their supervisors.
- Policy and Form Section contains details of the policy of the doctoral programs and downloadable copies of all the forms needed for the programs.
- Doctoral Symposia Section includes information on workshop schedules and guidelines on presentations.
- Academic Resources Section includes resources for new, progressing and completing candidates, copies of completed theses, and information on the GCM's publications project, in which an experienced academic employed by the College assists candidates in developing publications from their theses projects.
- Helpful Links Section provides some useful internal and external Web links.
- Library Section presents information on library services available in Southern Cross University and some tips for effective information searching.
- References Section includes references and reading lists recommended by doctoral supervisors, candidates and graduates.
- Pubs and Conferences Section presents information on various conferences suggested by supervisors and candidates and a list of publications by supervisors and candidates.
- Newsletter Section presents news and information on the achievements of candidates and supervisors.
- Progress Report Section allows candidates to fill in their annual progress report online.
- Group Section is where candidates can form study/peer groups, communicate with group members and exchange information.

### ***Doctoral Supervisors Centre***

The GCM has also set up an online knowledge repository for doctoral supervisors, called the 'doctoral supervisors centre', where supervisors can share their knowledge and experiences of supervision and locate required information and resources (Figure-2). The supervisors centre aims to facilitate supervisors' understanding of the processes, procedures and practices of doctoral programs in the GCM, which have an impact on both supervisors and candidates.



**Figure-2: A Snapshot of the GCM Doctoral Supervisors Centre**  
 (Sources: <http://www.scu.edu.au>)

Many of the content areas in the supervisors centre are identical to those in the candidates centre, in order to provide supervisors with an appreciation of the resources available to candidates. Some additional areas in the supervisors centre that do not appear in the candidates centre include:

- Supervisor Resources Section where supervisors can locate and download the candidate/supervisor manual and information on supervision theory and practice.
- Professional Development Section which contains a number of modules that supervisors can use either as reference material or undertake in a moderated way for professional development.
- Discussion Forums Section where supervisors can discuss issues concerning supervision, such as required resources, supervision experiences and best practice. Supervisors can also form discussion groups and collaborative teams as they wish.

### ***Virtual Discussions***

In addition, the university is trialling Elluminate *Live!*<sup>®</sup> Academic Edition<sup>™</sup>, which is a real-time virtual classroom environment designed for distance education and collaboration in academic institutions. Some doctoral candidates who are used to teleconferencing using the phone line on a regular basis are now experimenting doing the same with Elluminate.

### **Research Workshops**

At Southern Cross University, half-yearly doctoral symposia are held for both DBA and PhD students from Australia and countries such as New Zealand, USA, Singapore, Canada and Malaysia, where the main purpose is knowledge sharing between candidates and their supervisors, as well as with peers and other academics. A guest speaker, usually a former candidate who has successfully completed the program, is also invited to share his/her experiences. During the symposia, which run for about a week and include such events as research seminars on current topics, dinner with a speech by a candidate who has completed the program, two days of workshops/presentations, teaching sessions and support sessions, students are also asked to present their research to staff and other doctoral students for critique. Candidates are encouraged to present their research in the form of papers rather than PowerPoint presentations. This is to motivate the candidates to start writing their thesis. The audience is also encouraged to get the students reflecting on their research and not feeling that they are under scrutiny. Some supervisors take their students to conferences and present

papers jointly with them at colloquia giving the candidates an opportunity to learn from questions asked by peers and academics who could become their examiners.

### **Professional Development**

The GCM has established a professional development program supported by an experienced supervision training consultant. The program includes 'supervisor professional development modules' that take about 15 hours to complete, and help new doctoral supervisors learn and experienced supervisors update their supervisory skills and knowledge.

### **User Feedback and Future Directions**

The feedback from users (both candidates and supervisors) is very positive. In the words of one of the doctoral graduates, 'the best way to complete this "journey" is to develop a network of fellow travellers. Take a little and give a little'. In the future, the idea of co-supervision and panel supervision versus the traditional one-to-one supervision relationship (Malfroy 2005), which is still the dominant approach in our doctoral program, should also be examined closely. In addition, more thought on the impact of national culture on knowledge sharing among supervisors and candidates who come from or are located in different parts of the world could also be pursued. It is also worth exploring the issues and factors influencing the acceptance of and participation in e-knowledge sharing environments such as our doctoral candidates centre and doctoral supervisors centre.

### **References**

- Alavi, M. & Leidner, D.E. 2001, 'Knowledge management and knowledge management systems: conceptual foundations and research issues', *MIS Quarterly*, vol. 25, no. 1, pp. 107-146.
- Bonner, D. 2000, *Leading Knowledge Management and Learning*, American Society of Training & Development, Virginia.
- Chase, R.L. The knowledge-based organization: an international survey, *The Journal of Knowledge Management*, 1, 1 (1997), 38-49.
- Hubbard, R. & Little, E.L. 1997, 'Share and share alike? A review of empirical evidence concerning information sharing among researchers', *Management Research News*, vol. 20, no. 1, pp. 41-49.
- Malfroy, J. 2005, 'Doctoral supervision, workplace research and changing pedagogic practices', *Higher Education Research & Development*, vol. 24, no. 2, pp. 165-178.
- Mazzie, M. 2000, Key challenges facing the evolution of knowledge management, in *Knowledge Management for the Information Professional*, T.K. Srikantaiah and M.E.D. Koenig (eds), Information Today, Inc., Medford, New Jersey, USA, pp. 99-114.
- McDermott, R. Why information technology inspired but cannot deliver knowledge management, *California Management Review*, 4, 4 (1999), 103-117.
- Nonaka, I. & Takeuchi, H. 1995, *The Knowledge-Creating Company – How Japanese Companies Create the Dynamic of Innovation*, Oxford University Press, New York.



Ruggles, R. 1998, 'The state of the notion: knowledge management in practice', *California Management Review*, vol. 40, no. 3, pp. 80-89.

Sankaran, S., Swepson, P. & Hill, G. 2005, 'Do research thesis examiners need training?: Practitioner stories', *The Qualitative Report*, vol. 10, no. 4, pp. 817-835.

The Conference Board. 1999, *Beyond Knowledge Management: New Ways to Work and Learn*, The Conference Board Inc, New York, USA.

The Delphi Group. 1997, *Delphi Research Identifies Culture as Key Hurdle to Knowledge Management*, viewed 20 May 2000, [www.delphigroup.com/pressleases/1997~PR/11051997/KMApplicationsHurdle.html](http://www.delphigroup.com/pressleases/1997~PR/11051997/KMApplicationsHurdle.html).

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