Supervision of doctoral research projects

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Overview

There is a view in the management of doctoral research programs that ‘the quality of the supervision within the program equals the quality of the program’. That is, the quality of the program is not totally contingent upon the strength of the doctoral candidates.

If one accepts this dictum as correct or even relevant, then those charged with the quality and responsibility of a research program are required to ensure that the supervisors of the research projects are capable supervisors and have available to them rigorous professional development opportunities to maintain their professional and supervision skills.

There is also considerable discussion in higher degree research (HDR) literature about what constitutes ‘good’ HDR Supervision. The discussion, consciously or unconsciously explores other questions such as ‘What is Research?’ and ‘What is Supervision?’ and in doing so reveals multiple constructs and dissonance across the terrain. Accordingly, a curriculum for Higher Degree Research supervision must adopt a constructivist stance in order to portray these multiple possible meanings for ‘good’ research supervision.

This chapter explores the design, development and delivery of an on-line professional development program for doctoral research supervisors who are supervising research thesis for Doctor of Business Administration candidates.

Introduction

The Southern Cross Doctor of Business Administration (DBA) program is classified by the Australian Government Department of Education, Employment and Workplace Relations (DEEWR) to be a doctoral research degree as the thesis component of the degree is a minimum of 66% of the program (that is 16 units of 24 units of study are the thesis component with an additional two units involving preliminary work for the thesis). Candidates therefore undertake and produce a
major thesis, usually of between 60,000 and 85,000 words. Like all doctoral research programs, the undertaking of a large and rigorous research project is undertaken by the candidate under the supervision of an experience academic who is appointed to supervise the project.

The policy on the supervision of doctoral candidates is to appoint a suitably qualified and experienced supervisor for all candidates. All supervisors must meet the following criteria:

- have a doctoral qualification
- be experienced in research and/or in the supervision of research higher degrees
- have relevant knowledge and expertise for the research project
- have sufficient time and access to adequate resources to supervise the research project.

All supervisors must apply to be appointed to the DBA supervisor register on the appropriate form and undergo a rigorous review to ensure that they are experienced researchers capable of undertaking doctoral supervisory roles.

The Graduate College of Management (GCM) utilises a ‘pod’ model for supervision at all overseas locations where the program is delivered. The GCM uses the terms ‘co-supervisor’ for supervisors who are located at overseas locations and ‘principal supervisor’ for the supervisor who is appointed to take responsibility for principal supervision of all candidates (and local co-supervisors) at an overseas location (partner). Pod supervisors are full time members of SCU staff while co-supervisors are employees of the local partner institution.

Under the ‘pod’ supervision model for overseas centres, the principal supervisor does not supervise directly each individual candidate’s research project (this being the role of the local co-supervisor) but provides a quality control watch over the project and the local co-supervisor(s). In addition to the quality control role with the co-supervisor, the principal supervisor has formal roles for each candidate’s project.

In 2007, the then Director of the DBA, Associate Professor Peter Miller commissioned the development of a supervisor professional development program. The wide ranging campuses of SCU and network of overseas partners necessitated an online program to enable Higher Degree Research (HDR) supervisors in a number of national and overseas locations to participate in HDR supervisor professional development. The program needed to be relevant for HDR supervisors from all disciplines. The cost of underwriting this project was provided by Professor Peter Baverstock from the university’s Graduate Research College. The objectives of the HDR supervisor program were to:

- Assist HDR supervisors to examine the nature of HDR supervision and to discuss what might constitute ‘effective’ research supervision
- Assist HDR supervisors to articulate and reflect on their supervisory practice in a collegial environment
• Expose HDR supervisors to different models of supervisory practice
• Assist HDR supervisors to develop a critical understanding of the teaching and learning processes involved in effective HDR supervision
• Engage HDR supervisors in a reflective process to challenge and extend their understanding of effective supervision
• Expose HDR supervisors to the resources available to assist effective supervisory practice outside the SCU environment.

There has been considerable discussion about supervision of Higher Degree Research (HDR) in Higher Education literature for the past twenty years. Within this context it has been acknowledged that professional development for HDR supervisors improves the completion rate of higher degree research (Zuber-Skerritt, 1994; Conrad, 1996, Pearson & Brew, 2002; Manatunga, 2005). This focus on completion has been accentuated by Federal Government intervention in the field. Minister Kemp’s (1999) funding formulae for higher degree research, essentially providing funding only on the completion of the degree, drew universities attention to factors that enhanced completion and emphasised the importance of professional development for HDR supervisors. Minister Nelson’s (2002) subsequent changes to funding formulae reinforced the already established demand for professional development for research supervisors and added a new agenda of research training of research students. This second wave’s emphasis on completions accentuated the importance of research training curriculum and also drew attention to curricula for HDR supervision training.

When universities acknowledged the importance of professional development programs for research supervisors they initially offered a range of face-to-face workshops (Zuber-Skerritt, 1994; Conrad, 1996). More recently, educational computer technology development in Higher Education has enabled the emergence of web based resources and on-line programs for research supervisor professional development. The fIRST resource, developed by the ATN universities in 2002 is an example of one such resource. It offers a number of on-line activities to help research supervisors improve their research supervision practice.

This chapter describes the development of an on-line HDR Supervisor professional development program that both attempts to familiarise participants with already existing on-line HDR Supervision resources, notably the fIRST resource, and to advance participants in their critical reflection of their HDR supervision practices by presenting them with multiple constructs for ‘good’ research supervision.

The chapter is based in part on the following article ‘Problematising “good” HDR supervision: A case study of an international pilot of a on-line HDR supervisor professional development program’ (Miller, P, 2007) in The International Journal of Research Supervision, vol 1, no 1, pp29–38, and is used with permission.
HDR Supervision Training Curriculum

The Nelson (2002) federal initiatives drew attention to the importance of research training curricula. This focus also accentuated the importance of curricula for HDR Supervisor professional development. Manatunga (2005) points out that prior to the pressure on improved supervision through the Federal policy initiatives, research supervisors learnt about supervision through their own experiences of being supervised. As universities began offering workshops for HDR supervisors the content addressed such issues as matching of supervisors and prospective students, ensuring there are regular meetings between student and supervisor and bringing together groups of students where simultaneous information can be provided for them (Zuber-Skerritt, 1994).

More recently, discussions about appropriate professional development for HDR supervisors have narrowed to explore the specific value of Reflective Practice and Communities of Practice in the professional development of HDR Supervisors (Pearson & Brew, 2002).

Whether explicitly or implied, professional development in HDR supervision has been underpinned by the exploration of the question ‘What is ‘good’ research supervision?’. Answering this question is confounded by it being not a single question but a nested set of questions asking:

1. What is ‘good’ research?
2. What is supervision?, and
3. What is research?

The ‘What is Research?’ question has been amply answered by others (for example Stenhouse, 1981) revealing the history of debate associated with different paradigms impacting on individual views of research. This debate establishes the position that the term ‘research’ represents disputed territory.

The ‘What is Supervision?’ question is implicit in most of the literature about HDR supervision and gives rise to multiple perspectives. Manatunga (2005) describes one area of dissonance in the HDR literature that distinguishes between administrative and pedagogical ways of investigating HDR supervision. This dissonance can be seen as answering the ‘What is Supervision?’ question with different constructs of ‘good’ supervision.

Exploration of all three questions emphasises the importance of adopting a curriculum approach that accommodates the multiple construct nature of this topic to recognise that there are no single answers but responses informed by the many paradigms of research and research supervision that underpin these practices.
A Professional Development Program on Higher Degree Research Supervision

Pearson and Brew (2002) advocated reflection of practice situated in the practitioner's (research supervisors) own experiences. This suggested a philosophy of the Reflective Practitioner (Dewey, 1933; Schon, 1983) suggesting that when professionals reflect on their practice this enables them to identify ways in which their practice can be improved.

Manathunga (2005) advocated building on practitioner prior knowledge and understanding to open up the private space of research practice. This initially aligns with a philosophy of Practitioner Investigation (Anderson & Herr, 1999; McNiff, 2002) that suggests that when reflective practice is undertaken in a rigorous and explicit way this helps practitioners to articulate to themselves and others the nature of their professional practice. In articulating their practice to themselves, professionals are then more open to investigating and changing their practices. It also suggests a philosophy of Community of Practice (Wenger, 1998; Wenger & Snyder, 2000) that suggests that when professionals meet together for the purpose of sharing and making explicit their professional practice this enables each of them to improve their personal practice.

Communities of Practice (Wenger & Snyder, 2000) are, as the phrase suggests, a gathering of practitioners with intent to share practice. This educational approach creates an opportunity for practitioners (in this case research supervisors) to share their experiences of being practitioners. This initially helps to articulate the nature of that practice and makes explicit what is often tacit. It also helps a practitioner to become self-aware, a step towards essential critical reflection of practice.

The multiple construct nature of research supervision begged for a professional development program that exposed participants to the range of ways of thinking about ‘good’ research supervision; helped them to identify which of the ways related to their own views of good research and good research supervision; and helped them develop critical reflection of their practice.

Manathunga’s (2005) distinction between administrative models of supervision and pedagogical models poses one set of constructs for exploring ‘good’ research supervision. The pedagogical frameworks for practicing HDR supervision have been in existence since very early writing about the practice (Connell, 1985) and have continued in recent times (Pearson & Brew, 2002; Green, 2005). The increasing number of examples of administrative models was in Vilkinas (2002) opinion, a response to the ever increasing demands on thesis completion.

While the above two constructs of HDR supervision are well documented and understood in the literature, two emerging constructs of HDR supervision also require investigation.
Supervision as Epistemology

Most definitions of research and research degrees include reference to a contribution to knowledge. The suggestion is that research generically and research degrees specifically lead to a contribution to knowledge. This prerequisite in the definition then provides the basis for another construct of ‘good’ research supervision in that ‘good’ supervision enables a research student to make a contribution to knowledge. The nature of this construct, while appearing straightforward, is confounded by the disputable nature of what constitutes a contribution to knowledge. This dispute is in some ways being addressed by the emergence of the Research Quality Framework (RQF) that has the potential to influence what constitutes a contribution to knowledge by providing funding for the types of research it lists in its framework.

Supervision as Relationship

Research student stories consistently point to the importance of their relationship with their supervisor. Salmon (1992) in her study based on the stories of ten of her research students pointed to the scientific traditions of research and how this generated often distant and product driven supervision. In contrast she advocated a process driven approach based on a relationship that had mutual sympathy and trust. Vilkinas (2005), in a similar study drawing on the stories of students she had supervised, highlighted the students desire that the supervisor have personal qualities such as faith in the student, reliability and being a risk taker.

A Curriculum for Research Supervision

Combining the two well known constructs of research supervision (HDR supervision as teaching (pedagogy) and HDR supervision as administration (project management) with the two emerging constructs (HDR supervision as a contribution to knowledge and HDR supervision as maintaining good relationships) offers a framework of four constructs of ‘good’ HDR supervision. These are:

1. Good pedagogy
2. Good administration
3. Good contributions to knowledge, and
4. Good relationships

These constructs parallel Green’s (2005) paper on the future of HDR Supervisor thinking.

Methodology

It is said to be not often that organisations provide their staff with the learning tools necessary for them to extract maximum learning from their experiences (Wick & Leon, 1993). A research design and methodology was therefore adopted to allow the HDR Supervisors to not have just a skill building exercise in the traditional training sense, but also to provide an opportunity for maximum self reflection and
learning that aligned with the strategic directions of the organisation. Therefore, the development and evaluation of the HDR supervisor professional development program was based on an action research (Creswell, 2008), research design. This paper reports on the outcomes of the first action research cycle.

The SCU program developed and adopted the quadrant set of constructs in a program that consisted of eight modules delivered over five weeks and requiring an estimated 15 hours of work as shown below:

- **Module 1**  Introduction to the supervisor professional development program
- **Module 2**  What is ‘good’ research supervision?
- **Module 3**  Supervising research to make a contribution to Knowledge
- **Module 4**  Supervising research to lead to timely completions—well managed research
- **Module 5**  Supervising research through good teaching
- **Module 6**  Supervising research with a good relationship between the supervisor(s) and their candidates
- **Module 7**  Approaches to making research supervision better
- **Module 8**  Summary and optional assessment

Each of the modules concerning the four HDR supervisory constructs (modules 3–6) introduced the constructs to the participants, required them to read and respond to a case study (from the fIRST site) and then to participate in a facilitated discussion forum with the other supervisors.

The program was designed to be self contained, rigorous and doable by busy supervisors. It was also designed to be undertaken either in a self paced way as a resource or in a moderated way as professional development. Participants were able to download a ‘work book’ at the commencement of the program with guidelines and provision to make private reflective comments and with written instructions on how to access the fIRST web site so that they did not have to toggle back and forward for instructions within the online environment. The pilot program was moderated by an experienced doctoral supervisor and facilitator.

The program had an international pilot in February 2007. The pilot program drew from an international audience and included research supervisors from a number of disciplines and from educational institutions other than SCU and of course included local supervisors from the various overseas partner institutions offering the DBA program. Fifteen experienced HDR supervisors were recruited for the pilot program. The supervisors were located in Australia, Singapore and New Zealand.
Results

The program was formally and independently evaluated. Participants were asked to respond to an evaluative survey at the end of the pilot program. The survey items included the following questions:

1. Overall, how would you rate your experience in the program (rated on a seven-point Likert scale)
2. How often is your experience of the following true (rated on a five-point Likert scale)
   a. The program is suitable for academics in my discipline
   b. The length of the program is appropriate
   c. The depth of the program is appropriate
   d. The discussion forums were useful to my learning
   e. The case studies provided were useful to my learning
   f. The directions in the program materials enabled me to navigate it smoothly
   g. The feedback and discussion from the moderator and other participants was helpful in improving my supervision practices
   h. The program got me thinking about my supervisory style
   i. The program will assist me to supervise more effectively in the future
   j. I learnt things in the program about supervisory practice that I did not know before
   k. The program assisted me to conceptualise my supervision differently
   l. My students will benefit from me undertaking the program
   m. I would recommend the program to my colleagues

A summary of results are shown in Table 17.1 below.

**Table 17.1: Summary of Quantitative Findings**

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale used</th>
<th>Mean score</th>
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<tbody>
<tr>
<td>Participants overall experience in the program</td>
<td>Seven-point Likert scale</td>
<td>6.2</td>
</tr>
<tr>
<td>Average of 13 specific items concerning the program</td>
<td>Five-point Likert scale</td>
<td>4.5</td>
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In addition to the analysis of the quantitative items, a number of qualitative questions were asked including:

1. What is one aspect of the program that you consider should be changed?
2. What is one aspect of the program that you consider should remain the same?
3. In your opinion, what other improvements to the program could be made to make the program more effective?
4. Have you any other comments or suggestions you would like to make that might assist us in improving the effectiveness of the program in the future?
A selection of the qualitative feedback that is representative of the comments from participants included:

I liked the pace and composition. It made me reflect on the use of online learning and that is important for us. It would also be interesting to see what happens based on each group of supervisors.

I learnt a lot from the discussion board and it confirmed my supervision was on par or up to the mark.

The moderator’s prompt responses are crucial to motivation in an online program like this one.

The general structure, length and depth of the program [should remain the same].

Some of the participants made some interesting observations based on their practice. It would be great if they could expand on these. I think [name removed] is considering developing more case studies based on the participants’ experience for the journal. That should help continue the conversation.

I really enjoyed the program and thought it was about the right length for busy people.

**Discussion**

Busy HDR supervisors often find it difficult to commit to a one day workshop and such a training design is problematic for creating opportunities for self reflection. The situation is a paradox when one considers the known importance of self knowledge and self reflection if professional practice and leadership is to be improved (Dubrin, Dalglish, & Miller, 2006).

HDR supervisors are the ‘research leaders’ in any research environment. Their research supervisory style (and their effectiveness as a research supervisor) will have a significant impact on HDR candidate success and on the research environment generally. Segal and Horne (1997, p56), when considering the issue of leadership made the following comment:

The pursuit of self-knowledge is the work of a developed personality and a characteristic of an enlightened leader. Self-understanding is the most secure bed-rock on which to shape one’s life. Nothing is more important in conditions of turbulence and change than a secure sense of self. Self-understanding also provides a basis for understanding others—it is difficult to be conscious of another’s need, motivation, and processes without first having awareness of one’s own.

HDR supervisor professional development programs therefore need to offer supervisors the opportunity for self knowledge and self reflection if HRD supervisors are to be more effective and embrace their role as research leaders. Self knowledge and self reflection are foundations of the educational philosophies of the Reflective Practitioner, Practitioner Investigation and Community of Practice. The design and structure of the pilot program under investigation in this paper provided supervisors with the opportunity to explore different HDR supervisory styles guided by a constructual framework of four constructs of ‘good’ HDR supervision.
The results of the evaluation of the program demonstrated that the structure and
design of the program was appropriate for busy HDR supervisors. Overwhelmingly,
the HDR supervisors found that the program gave them opportunities to self reflect
on their supervisory style, assisted them to conceptualise supervision differently,
will assist them to supervise more effectively in the future and will be of ultimate
benefit to the HDR candidates under supervision.

Those who attempt to study and measure social and organisational issues, often
reduce difficult concepts to ‘constructs’ in order to investigate and research them.
HDR supervisory styles, have been reduced to the four ‘constructs’ outlined in
this paper because as researchers we are not able to directly observe what ‘good’
supervisory practice is. That is, ‘HDR supervisory practice’ does not exist as a single
observable dimension of behaviour but rather reflects a variety of behaviours, skills,
attitudes and beliefs. Constructs are therefore theoretical and latent (not visible or
apparent) rather than concrete and observable.

Having now identified four theoretical constructs and introduced these constructs
to supervisors as a means to enable them to reflect on their own supervisory styles
and improve their practice, the next step in further developing the professional
development program will be to endeavour to operationalise these constructs and
to measure them.

Further research is therefore focusing on the development and testing for reliability
and validity of a web based self diagnostic tool and taxonomy for HDR supervisors
to assist them to become more self aware of their operational supervisory style. It
is proposed to also develop an intensity index that will measure the intensity of the
supervisor’s dominant style and therefore the probable difficulty for a supervisor to
‘move’ their style to what might be considered to be a more balanced approach to
supervision. Such a diagnostic instrument could be used as a pre and post test for
the professional development program and for the matching of HDR supervisors
and candidates.

Conclusion

This chapter has briefly reviewed some of the international higher degree research
(HDR) literature about what constitutes ‘good’ HDR Supervision and about
whether HDR Supervision can be considered as teaching.

A constructual framework of four constructs of ‘good’ HDR supervision has been
developed that was then used to form the basis of an on-line HDR supervisor
professional development program.

Building on the educational philosophies of the Reflective Practitioner, Practitioner
Investigation and Community of Practice, an 8 module on-line professional
development program for HDR supervisors was developed and piloted. An
evaluation of the program demonstrated that the HDR supervisor participants
started to self reflect on their supervisory style, assisted them to conceptualise
supervision differently, will assist them to supervise more effectively in the future
and will be of ultimate benefit to the HDR candidates under supervision.
The professional development program has been delivered several times and research is continuing on the development and testing for reliability and validity of a web based self diagnostic tool and taxonomy for HDR supervisors to assist them to become more self aware of their operational supervisory style. Such a diagnostic instrument could be used as a pre and post test for the professional development program and for the matching of HDR supervisors and candidates.

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