# 'Becoming a supervisor': the impact of doctoral supervision on supervisors' learning

## Christine Halse

# 'Becoming a supervisor': the impact of doctoral supervision on supervisors' learning

Christine Halse*

*School of Education, Deakin University, Melbourne, Australia*

The doctorate is an educative process for students but what is its impact on supervisors' learning about the practice of doctoral supervision? Internationally, there is an increased emphasis on formal training, monitoring and accountability of doctoral supervisors. Yet there is a striking silence about what doctoral supervisors learn through supervising doctoral students, and how the impacts on supervisors might be theorised. The aim of this article is to begin to address this gap in the doctoral education literature, based on a thematic analysis of two complementary interview studies of a cross-disciplinary sample of experienced doctoral supervisors. The analysis illustrates the significant impact of doctoral supervision on the learning and knowledge of doctoral supervisors, particularly in relation to how supervisors engage with/in the social and political context of their university, understand themselves and their students, and how the contemporary context of supervision affects the sort of pedagogical relationships supervisors establish with their doctoral students. Regardless of supervisors' discipline, position in the academic hierarchy or supervisory experience, the analysis indicates that supervisors' learning experiences shape their subjectivities and identities, and that supervision is an ongoing ontological process of 'becoming a supervisor'. The importance of integrating a theory of 'becoming a supervisor' into supervisor professional development is proposed.

**Keywords:** doctorate; PhD; supervisor; learning; pedagogy

## Introduction

The doctorate is a learning process for students, but what is the impact on doctoral supervisors' learning and knowledge about doctoral supervision? Supervisors play a critical role in the doctoral experience, in the success of a doctoral program and in achieving faster progression and lower attrition rates among students (Golde and Walker 2006; Lee 2008; Sadlak 2004). Although doctoral supervision has been described as a secret garden where student and supervisor engage with little external scrutiny or accountability (Park 2006), recent decades have focused a sharper lens on the work of doctoral supervisors by tightening the regulation of the doctorate, increasing transparency and accountability, and developing policies and strategies to improve the quality of doctoral supervision (e.g. Olson and Clark 2009; Park 2007; Powell and Green 2007). A key trend has been an upsurge in emphasis on the professional development of doctoral supervisors. The European Charter for Researchers, for example, specifies that researchers at all career stages should continually improve

*Email: c.halse@deacon.edu.au

themselves by updating and expanding their skills and competencies (European Commission 2010). Similarly, universities across Europe and in the UK, Australia and New Zealand have introduced formal, often mandatory, professional development programs for doctoral supervisors (see Manathunga 2005).

Two interview-based studies involving a broad cross-disciplinary sample of experienced doctoral supervisors (see Halse and Gearside 2005; Halse and Malfroy 2010) have afforded opportunities to glean a picture of supervisors' experiences of the changed conditions in higher education and in the work of doctoral supervisors. One theme that emerged was that supervisors contrasted contemporary conditions with their prior experiences as supervisors where doctoral supervision was 'learned on the job':

> Basically I learnt by doing. I received insufficient guidance at the beginning. I learnt by just being tossed into the deep end and learnt by mistakes. And by making mistakes as well as I suppose learning to trust my intuition. (Professor, Social Sciences)

The findings of both studies agree with those from various other countries that there is continuing resistance to supervisor professional development, particularly from senior researchers (Christie and Adawi 2006, 289; also Manathunga 2005; Park 2006). As an eminent Professor of Science in Australia commented, 'I think supervision training is a good thing and important. But I've been supervising for more than 30 years; I've graduated nearly 50 PhDs! Why do I need supervision training?' Manathunga (2005) has examined some of the reasons for the resistance of academics to supervisor professional development. She found that some supervisors criticised the omission of pedagogy from professional development programs. Some supervisors also:

> resent the intrusion of educational developers into what many of them have regarded as a private pedagogical space. They interpret such programs as further instances of the quality assurance agendas of governments and university administrators, and are justifiably suspicious of what some describe as the colonial underpinnings of educational development. (17)

In higher education systems increasingly focused on accountability and quality, supervisor professional development often attends to the instrumental, administrative aspects of the doctorate, because these are 'embedded and explicit in the systematic routines, procedures, policies and practices of universities, and therefore can be easily coded, commodified, taught to and learned by doctoral supervisors' (Halse and Malfroy 2010, 88). The problem with this approach is that it presumes there are deficits in supervisors' expertise and that these can be remedied through formal, structured, cognitive transmission of knowledge from instructor to learner. The transmission model of learning views propositional knowledge as superior to the expertise gained through practical experience, and treats learning as a product – a package of particular knowledge and skills – that can be obtained in one context, transported within individuals and applied in new and different contexts (Sfard 1998). Thus, the transmission model of learning disregards the interdependent relationship between the learner, learning and learning context.

In contrast, participatory and practice-based learning theories view learning as ubiquitous in human activity. Learning and knowledge generation occurs through the formal and informal social interactions involved in engaging in particular work, enterprises and practices that are embedded in specific social, cultural, economic and

historical contexts, structures and power relationships. It is through the activity of participation that individuals develop an understanding of how to behave, what to do, and of what is acceptable/unacceptable and doable/not doable in particular contexts (Lave and Wenger 1991).

Theorists of participatory and practice-based learning differ in the emphasis they place on the individual, the workplace, and the broader social context. Lave and Wenger (1991), for example, stress the importance of learning as a process of individual identity formation, while Engestrom (2001) and Billett (2001) emphasise the ways in which the activities of individuals are determined by systems and complex relationships between individuals, objects and communities. Hodkinson and Hodkinson (2003, 2004), in contrast, use Bourdieu's signature concepts of habitus, field and cultural capital as a conceptual framework for exploring the conjunction between the individual, workplace and outside world, and how wider cultural, social, political and economic factors influence workplace learning.

There has been an exponential development in the literature on participatory and practice-based learning in workplaces and the professions (for an overview see Billett [2010]). Despite a swelling body of policy documents, research studies and commentaries on what supervisors *should* do, the processes and nature of the learning that supervisors *actually* acquire through the practice of doctoral supervision are largely neglected in empirical and theoretical discussions about the doctorate. The aim of this article is to make a start in correcting this omission, and to shed light on the impact of doctoral supervision on doctoral supervisors.

Specifically, the article examines the following questions: What do supervisors learn from the work of supervising doctoral students? How does supervisors' learning come about? How might such learning be usefully theorised? The analysis and discussion draws on in-depth interviews with a purposive sample of experienced doctoral supervisors in an Australian university but the question of the learning and knowledge that is generated through the practice of doctoral supervision is of interest and concern for academics, universities and policy makers around the world.

## Data collection and analysis

This article draws on two complementary interview studies with 26 doctoral supervisors working in a large, comprehensive, metropolitan university in Australia (Halse and Gearside 2005; Halse and Malfroy 2010). Reflecting the disciplinary profile of the university, supervisors were drawn from the disciplines of business and management, humanities and social sciences, psychology, education, and science and health. The profile of interviewees was typical of doctoral supervisors in Australian universities in terms of age, gender, qualifications and supervisory experience (Pearson, Evans, and Macauley 2008). All interviewees were tenured members of staff and all were at the level of senior lecturer or higher, with the majority being professors. All had reputations as 'good' supervisors among their students, academic colleagues and doctoral program administrators. Reflecting differences in doctoral enrolments between disciplines, interviewees had successfully supervised between 3 and 30 doctoral graduates, with the average being 10 graduates.

Individual, semi-structured life history interviews of one to two hours were conducted, recorded and transcribed. Interviews focused on supervisors' historical and current experiences of doctoral supervision, including what they had learned from these experiences. Although an interview schedule guided the discussion, the recursive

model of interviewing, whereby the interview proceeds along the lines of a conversation, was used to enable supervisors to reflect on their experiences, discuss issues they considered important, and to elicit finely grained insights into their practices and learning (see Minichiello et al. 1990). The interview transcripts were entered into NVIVO and analysed using thematic coding to identify key areas of supervisors' learning, and patterns across the sample by gender, discipline and academic level.

## Discussion

### Learning about the social and political context of supervision

The analysis revealed that supervising doctoral students drew all supervisors into learning about the social and political context of doctoral education and the 'rules of the game' in their university, but that supervisors responded in different ways. Newer supervisors were more inclined to accept the performative requirements embedded in the social and political agendas of the university workplace. In contrast, more senior supervisors used their cultural capital to deploy a range of strategies to shore up their professional standing and protect themselves from some of the performative burdens involved in supervising doctoral students.

### Learning the 'rules of the game'

Supervisors across both studies described doctoral supervision as 'the most rewarding aspect of academic life'. It provided an opportunity for reading and debating the latest literature in the field, discussing and learning about theoretical and methodological developments, and engaging deeply with their disciplines. This enthusiasm did not render supervisors immune to the social and political pressures within their university workplace. Senior supervisors described at length their experiences of the changes in the cultural conditions in the university over recent decades, and the impact of these changes on the doctorate, the work and experiences of their doctoral students, and their practices as doctoral supervisors.

> Doing a doctorate used to mean having the time to read, think and discuss theory, ideas, and the work of other scholars. This wasn't an indulgence but an important part of the work of doing a doctorate and becoming a scholar. Now this process is truncated. We have to make sure our students complete in three years before the funding runs out. So we direct their work, give them reading lists instead of sending them into the library to immerse themselves in the literature and provide summaries of the work of key thinkers. (Professor, Education)

The organisational culture and practical realities of the contemporary university required all doctoral supervisors to learn the new 'rules of the game' and to comply with a raft of policies, practices and procedures that the university decreed essential for 'good' supervision. This expectation was communicated and reproduced through the daily practices and moral technologies of academic life: corridor conversations with colleagues; directives from university administrators; new accountability demands in academic workloads and performance reviews. It was imposed through institutional regulations – the requirement for supervisors to: complete formal supervisor training prior to being considered eligible to supervise doctoral students; to document and report on students' compliance with national and university policies, such

as the Research Code of Practice, the Human Research Ethics policy and national data management legislation; to report on the outcomes of supervisory meetings and students' research training, progress and outputs; to procure timely doctoral completions; and to be accountable for students whose progress was delayed.

Supervisors indicated their support for many of the reforms, particularly more systematic reporting on student progress: 'Things like setting annual milestones and reporting on these in the annual student report is sensible, and just puts a structure around what we are doing anyway' (Associate Professor, Psychology). However, none endorsed the expectation that a doctoral degree should be completed in three years, following a decision by the Australian government to impose time-limited funding on the doctorate:

> The completion thing is really changing the PhD into a conveyor belt mentality and no, I don't agree with that and I think that the three years is too short a period of time, that the PhD probably needs to be longer than that. But, on the other hand, there clearly needed to be something done about the 7 and 8 and 9 years and longer that were being taken. (Professor, Psychology)

All supervisors reported feeling the performative pressures of their workplace keenly, but their commitment to learning about and engaging with the intensified regulation of doctoral supervision depended on supervisors' discipline, experience in academe and the area of regulation. As a group, senior academics were more sceptical and resistant. The new regime did not fit comfortably with their established views of the doctorate or academic work. They regarded it as an irritating, burdensome interference in their workplace practices. Some senior academics from the arts, humanities and social sciences also alleged that stronger institutional oversight of doctoral students and supervisors undermined quality research, eroded academic freedom and was inappropriate for their particular disciplines:

> The problem with all having to learn all these new rules and regulations is that it consumes huge amounts of time that could be better spent doing other things, and it doesn't produce better research because it stifles intellectual vitality and freedom by pushing students and academics into a one-size-fits-all approach. It's based on a bio-medical model of a PhD and just isn't appropriate to disciplines like mine. (Professor, Cultural Studies)

In contrast, newer academics tended to respond more positively – often with enthusiasm and zeal – to learning about the contextual conditions affecting the doctorate and doctoral supervision. Unburdened by either romanticised or actual views of the past, new academics were more relaxed and supportive of the political agendas shaping the work of contemporary academics and universities. They were also restless to accumulate the workplace knowledge, cultural capital and rewards to progress up the institutional ladder; and complying with university's regimes and procuring timely doctoral completions were key criteria for securing a promotion and the highly sought after release from undergraduate teaching to conduct research.

> I don't worry too much about the rules and regulations. It's just part of the job and something you've got to do, and I've never known anything different. And it's important to learn these rules and follow them because your research workload includes doctoral completions so I have to get these students through if I want to continue having some time to do research. If you want to go forward for promotion and you don't have any completions,

then you don't have a chance. So, you see, there are incentives for following the rules. (Senior Lecturer, Education)

The learning through which individuals take up the doxa or dominant view of the world is the process by which subjectivities and identities are established. It occurs through immersion in and habituation to the values, behaviours, attitudes and practices of a particular social and political context whereby 'individuals interiorize external controls and practices and take them up as an internal constraint on the conduct of the self' (Halse, Honey, and Boughtwood 2007, 222). Thus, acquiring an understanding of the university's regulatory environment, particularly the expectation for timely, high-quality doctoral completions, shaped supervisors' approach to doctoral supervision and the formation of an identity to which supervisors were strongly invested.

> Your credibility as an academic is on the line in terms of student completions and, if I don't get those students through, then I don't look like a good academic. The push for completions thing, it's a strategy for judging us as worthy academics. Can we get our students through? Are we up to the mark? Are we passing the PhD? When an examiner reads a thesis, it reflects on you because they read it as also being the supervisor's work. I probably do more than I should on each thesis, but my credibility as a supervisor is on the line when the thesis goes out to examination. (Associate Professor, Education)

### Learning self-protective strategies

The imposition of formalised rules and regulations in the workplace can 'trigger resistance, evasion and strategic compliance' as well as adherence (Hodkinson 2004, 15). In a context of heightened performativity and accountability, supervisors learned to make use of self-protective strategies to guard against the loss of stature and certain rewards that might ensue if there was a negative event where the supervisor might be construed as culpable, such as a damaging report from a student, failure to secure an on-time completion, or critical feedback from an examiner. Typical self-protective measures mentioned by supervisors included: being very directive in shaping and guiding students' work; discouraging students from intellectual risk-taking or time-consuming research methods and analyses; blurring the boundaries between reviewing and writing students' theses by providing excessively detailed feedback on students' work; using university and research grant money to employ data analysts, research assistants, writing coaches, proofreaders and editors to speed students' progress or plug the gaps in students' skills; and routinely pre-empting the possibility of a delayed completion by providing a rationale for a late thesis submission in the annual report on each student to the university, just in case such an excuse might be needed in the future. Another strategy was the use of a new criterion in decisions related to thesis examiners:

> In some cases, I have second thoughts, for instance, about sending the work of students to overseas examiners that may not understand the exact nature of the institutional constraints under which we're operating. I think that amongst colleagues in other universities in Australia who I've talked to there is a kind of understanding and a knowledge of the constraints under which we are operating so, in the PhD marking process, there is a lot more cross-institutional kind of swap going on in Australia than a few years back. If we have to keep producing quick PhDs to fund ourselves in universities, universities will do it, and certain examiners will understand the constraints and the pressures under which [the thesis] has been produced. (Associate Professor, Cultural Studies)

Such self-protective strategies testify to the institutionalisation of a performative identity among doctoral supervisors, but also to a redistribution of responsibility for the doctorate from the student to the doctoral supervisor. Senior academics, however, were more likely, able and confident than their junior colleagues in using self-protective tactics to satisfy the university's performance doxa and preserve their organisational status as high-performing supervisors. They quickly learned that the easiest way to meet the university's demands for rigorous, timely doctoral completions was to develop a research project, including the substantive and theoretical innovations and methods of data collection and analysis, secure a research grant, and to appoint a doctoral student to manage the project, produce publications, and complete a fast-tracked thesis.

> I don't get the opportunity to do personal research these days so my research is done through my students. [Doctoral students] work on my research grants and their scholarship is funded through my grants and I supervise their work. I expect all my students to have some publications before their PhD is submitted. I'm always an author because the students are working on my grant. It's important that students understand what the game is. (Professor, Educational Psychology)

Such an approach makes use of a business model of research that is familiar in the biomedical and science disciplines. Supervisors from other disciplines, however, viewed the 'research-as-a-business' approach as a common-sense – even desirable – practice in a workplace that prioritised competition, performance and productivity. Newer supervisors coveted the managerial expertise of their senior colleagues but acknowledged that doing 'research-as-a-business' meant redefining their identity as an academic, researcher and doctoral supervisor.

> One of the things I don't think I'm good at and need to learn more about is how to be more efficient with my research and students. It needs to be more of a production line if you're going to get anywhere and I haven't mastered this yet. My approach is a bit old-fashioned, I guess, but I'll be left behind – you know, I need to get grants and have my PhDs working on my research projects and generating my publications. It's the way we need to do supervision nowadays to get the outputs required. (Senior Lecturer, Business)

The self-protective strategies deployed by supervisors impacted on the experiences, learning and subjective formation of doctoral students and graduates. Although these impacts are beyond the remit of this article, some supervisors, in their more reflexive moments, wondered about the quality of the doctoral graduates being produced under such conditions. They were concerned that handing students a pre-packaged research project or giving excessive support meant that students could not acquire the critical knowledge, skills and expertise they would need in the future:

> I think one thing that we may be in danger of is too much spoon feeding. We're wanting the student to get through – we're wanting completions – [so if the student is] a bit deficient in this area, we'll just fill it up with 'spakfilla' [a commercial brand of plaster] … but, in the long run, that doesn't work. We're sending out people who find that the 'spakfilla' dries and falls off and they don't have the skills. (Professor, Science)

### Learning about the pedagogical relationship

While different aspects of students' experiences of the supervisory relationship have attracted scholarly interest (e.g. Bartlett and Mercer 2001; McAlpine and Amundsen 2007; Wall 2008), less attention has been given to how supervisors experience the

pedagogical relationship and how this impacts on the ways that supervisors engage with doctoral students.

*Learning disciplined supervision*

The intensification of academic labour and aligning their supervisory practices with new workplace demands required supervisors to learn new ways of managing the pressures placed on their time and emotional, physical and intellectual resources. In practice, this meant supervisors learned to be increasingly disciplined in their interactions, management and pedagogical relationships with doctoral students. They scheduled regular, fixed-duration meetings with students, and carefully structured meetings by requiring students to prepare an agenda and submit minutes of the meeting outcomes. They introduced group meetings with students to reduce consultation time and avoided out-of-hours contact and social activities with students. Others learned to manage their personal workload by referring students for help and assistance to colleagues, outside agencies or different service units in the university: the library, the learning support service and research training workshops offered by different schools and faculties. Supervisors differed in the number of times they read students' work, ranging from 4 to 20 iterations of a single chapter, but some imposed a strict quota, regardless of the capacities of their students:

> I say to a student nowadays, I'm willing to read each of your chapters three times and you have to understand what that means. That I read it when you've taken it as far as you can without discussion, then I'll read it and the discussion that we have should enable you to get it to the point where it is an almost complete piece of work that you're satisfied with [and] then the last time that I'll read it is when it's together with all the other chapters and I look at the flow of it from one chapter to the next and discuss it in the context of the whole work. (Professor, Education)

Many supervisors had misgivings about these changes. They felt anxious and sometimes guilty about spending insufficient time engaging deeply with students' work. They had to learn to come to terms with this new modus operandi, but also to recognise that students did not necessarily experience their practices as problematic:

> I'm finding it difficult, increasingly difficult, to find the time to read students' chapters. I'm having to skim. Although interestingly, I have to confess, even though I'm spending less time on it, it's not seeming to matter as much ... when we talk I can fairly quickly get a sense of where they're at and what they're doing [but] I'm obviously really struggling with it because I feel like [the work] deserves more because people have sweated blood over this stuff [but] I haven't got the time. But somehow it doesn't seem to be affecting things with the students as badly as I'd been fearing. (Associate Professor, Social Sciences)

For some supervisors, learning disciplined supervision involved consciously discarding the mode of supervision they relished during their own doctorate – a period of independence, extended study and unfettered freedom to explore their research area, with minimal direction or interference from their supervisor.

> I think back to my own model when I was a PhD student, my supervisor never pushed. He was always there if I wanted him but he never asked to see me, he'd read everything immediately and get it back to me and comment but would never demand anything. There were no annual reports, there was no surveillance. It was the complete antithesis

of this whole kind of modern system and I flourished and I finished my PhD in two and a half years. (Professor, Psychology)

Regardless of their seniority, discipline, gender or own doctoral experiences, all supervisors agreed that learning to establish a disciplined supervisory relationship was a necessary survival strategy that shaped their identity as a doctoral supervisor by redefining the practice of doctoral supervision from an intense personal relationship to a form of professional work (see Halse and Malfroy 2010).

> I have to be disciplined to survive. I don't have the time or want to be a student's mother, counsellor, confidante or friend; and I can't afford to invest as much time in the thesis as the student. Supervision is just one part of my work. It's a professional relationship. (Professor, Humanities)

### *Learning about self and others*

Despite the time and energy they invested, all supervisors quickly discovered at the beginning of their careers that getting students through a doctorate was 'hard work' and that they could not 'transform *all* doctoral students into world-class scholars and academic superstars' (Professor, Science). Realising this fact did not prompt supervisors to relinquish their ambitions to produce outstanding doctoral graduates. Rather, it led them to acknowledge that doctoral supervision is a specialised form of advanced teaching (Connell 1985), and that the outcomes they could achieve hinged on the pedagogical relationship they established with their students.

   In various ways and to varying degrees, all supervisors described endeavouring to learn to be more adaptive and responsive to the needs of their students. Critical to this process was developing an understanding of their own personal temperaments and capacities, and learning how to manage these in the pedagogical relationship. This was difficult work. It involved learning to establish a 'supervisory persona' that maximised the outcomes of their engagements with students by minimising personal dispositions or behaviours that might impact negatively on the student/supervisor relationship, such as being impatient, inflexible, intolerant, arrogant or overly demanding.

> I get irritated when I have to repeat the same thing over and over again at different meetings or [when giving feedback] in different chapters. When I feel I'm getting angry, I drop my voice a couple of tones and speak more slowly or hold off giving written feedback until I've calmed down. It helps, and getting angry is counterproductive. (Professor, Geography)

   Doctoral supervision also required supervisors to learn from their mistakes and failures. No matter how painstaking or industrious they were, supervisors made errors of judgement, provided faulty advice or directions, or misjudged the impact of their instructions and feedback on students. Supervisors who learned to confront their mistakes and failures were able to develop alternative approaches to the pedagogical relationship:

> A student gave me a draft chapter and I took my job seriously with a red pen so her beloved 40 page document came back just covered in red ink and she freaked. And I didn't mean to do that, it took ages and it was not time well spent on my part either really [because] I really sweated over this [but] I responded to it as an editor not as a

> supervisor, and I didn't know the difference at that time and I didn't know the right sort of questions to understand the difference, but I never made that mistake again. I had to apologise and spend a lot of time getting her on side again. (Associate Professor, Health)

Sometimes, supervisors did not learn about their failures until the formal relationship with the student had ended:

> She'd graduated and was addressing the new group of doctoral students. She told them that every time she'd get my feedback in the mail she'd be in a red rage for three days and her husband would have to hide in the shed. Then she'd calm down and do the revisions. She'd never told me! It was a salutary learning experience. I'm more careful now. I always try to follow up with a phone call to make sure the student's OK. (Senior Lecturer, Education)

The above interview extracts also illuminate the complex power dynamics that are entangled in the student/supervisor relationship – in particular, that a critical part of supervisors' learning about self involves relinquishing investment in their own egos and power. It was through such processes that supervisors developed a fresh openness to learning about their students.

> I learned a couple of years into supervising I had to stop trying to create people in my own likeness. To actually value what they had to bring. And they're all different from me. I've enjoyed growing to realise diversity and understand and appreciate people's diversity and the different things that people will bring. (Associate Professor, Psychology)

Underlining Lave and Wenger's (1991) argument that learning is relational and a form of social practice, supervisors working with international students, for example, described consciously working to master key phrases in their students' language, and to learn about the cultures and customs of students' countries to make them feel 'at home' and to ensure that their interactions with students were culturally sensitive, respectful and appropriate. Supervisors also described learning to 'tune into' the intellectual and emotional needs of students: offering freedom when students were confident and secure; providing direction and guidance when students were intellectually uncertain; giving sympathy and affirmation when students were physically exhausted or emotionally fragile. Learning to be flexible also required supervisors to repeatedly reconfigure and reframe their role, practice and identity as students moved through the different stages of the doctorate.

> The person you're working with is making the transition from being a student to being a colleague and you need to help them make that transition through the kind of relationship you have with them. And it's tricky. You need to allow them to be a student and to learn things and to have a bit of dependency, but you also need to teach them to be a colleague and to allow them to be a colleague, so as they go through the candidacy their voice becomes more confident, they're having more equal kinds of discussions with you about suggestions and direction and so on. (Professor, Education)

### (Re)learning their discipline

Given students' interests, skills and engagement in new doctoral forms, such as professional doctorates, the practice of doctoral supervision invariably involved supervisors in rethinking the relevance and desirability of their taken-for-granted understandings of research and scholarship in their discipline.

I come from a very traditional arts background and I'd never heard of a professional doctorate before but I suddenly found myself thrown into supervising a whole lot of these students so I had to learn. It involved learning an entirely new epistemology as well as research methods and ways of presenting data. It wasn't what I expected. When I first became an academic, I wanted to do theoretical work – ivory tower stuff. My doctoral students taught me the value of practical research. You know, change the world stuff. The two aren't incompatible but it's challenging and exciting to work on bringing them together. It's given me a whole new understanding of academic work. (Professor, Humanities)

Supervisors also found they had to translate their intuitive knowledge into concrete forms, and to communicate this new knowledge in ways that were comprehensible and productive for students. This translation process traversed a wide range of areas, from using simple technology, such as the editing and track-change functions in a computer program, to developing a literature review, conducting complex data interpretation and managing the politics of relationships with external funding agencies. In terms of communication, supervisors often experimented with multiple strategies until they stumbled across the one that worked best with each student. Others developed more systematic approaches. One supervisor, for example, described herself as 'the mistress of the metaphor', because she deliberately cultivated expertise in 'describing research design in terms of analogies'. At times, communicating with students required supervisors to learn basic knowledge and skills that they had bypassed during their own training. One of the most frequently mentioned areas was academic writing:

I've always been able to write easily but it was intuitive. It wasn't until I was supervising that I had to learn the basics, like rules for punctuation, verb tenses, clauses, sentence structure and so on, and to learn how to teach these basics to students so we had a common language for understanding what did and didn't constitute good writing. (Professor, Geography)

Because their students' work was at the cutting-edge of research, doctoral supervision offered a strategic way of staying up to date with the latest developments in their disciplines or fields, and of learning new knowledge, methods and technical skills. In broad terms, supervisors adopted different approaches to these learning opportunities depending on their standpoint and position in the academic hierarchy. Newer academics were more likely to be energised to develop their own skills and expertise in order to keep up with their students. They read the same literature and actively worked to master the research methods, analyses and technologies being used by their students. In contrast, some senior supervisors viewed students as a resource for supplementing the gaps in their own knowledge, skills and time:

I don't have time to read anymore but reading my students' work keeps me on top of the latest research, and often they want to do new statistical analyses that I don't know so I have to get on top of these in a general sense but not the detail. (Professor, Educational Psychology)

It was a seductive strategy but not one that other supervisors supported:

It's OK if you've got a brilliant student but these are few and far between. With most [students] you have to keep up to date so you're sure they've got it right or they won't get through the thesis examination. (Professor, Health)

## Impact and implications

This article makes visible some of the impacts of doctoral supervision on doctoral supervisors and the sort of learning and knowledge produced through the contemporary practice of doctoral supervision in an Australian university. While policies and commentaries emphasise the importance of performance, accountability and quality assurance in the supervision of doctoral students (e.g. Park 2007), this article proposes that doctoral supervision involves *all* supervisors in complex learning and the production of knowledge, capacities, dispositions and practices relevant to contemporary workplace conditions. Such learning shapes the subjectivity and identity of individual supervisors. Thus, doctoral supervision can be theorised as a perpetual process of subjective and identity formation – of 'becoming a supervisor'.

Because the work of doctoral supervisors is deeply embedded in the social and political context of the university workplace and contemporary higher education policy, changing historical conditions reshape supervisors' experiences of doctoral supervision and the nature of the learning and knowledge generated through the practice of doctoral supervision. In the interview studies discussed in this article, such a dynamic was evident in the ways that the university's regimes for performance and accountability framed and fashioned supervisors' practices. Supervisors, however, did not uncritically and automatically integrate the hegemony of imposed policies, procedures and regulations into their practice. Rather, they learned strategic, innovative ways of managing the contextual constraints and demands of their workplace.

This concatenation of contextual elements comes to life in the pedagogical relationship and the minutiae of supervisors' interactions with doctoral students. It was through/in practice that doctoral supervisors learned new ways of organising their work, shaping their relationships with students, and defining their engagement with their discipline. Part of this process involved supervisors in confronting and dealing with their personal and professional priorities, values and capacities, including their mistakes and failures. It was in the pedagogical relationship that all distinctions faded – where context and pedagogy merged seamlessly into the learning and knowledge generation of 'becoming a supervisor'.

The areas of supervisors' learning described in this article should not be read as a definitive, categorical list. They reflect the learning of a particular group of supervisors working in a particular social and political context under specific cultural conditions. Other areas of learning and knowledge generation might emerge among different groups of supervisors in different historical, social and political contexts. This qualification aside, the data indicates that doctoral supervisors were invested in accumulating practical, personally significant knowledge about the practice of supervision.

Although the nitty-gritty of learning to 'do' doctoral supervision happened through negotiated practice 'on the job', such knowledge is rarely described or acknowledged in universities, because it is contrary to the codified knowledge traditionally cherished by the academy and that underpins the transmission model of supervisor professional development. One way of addressing this exclusion and strengthening the relevance and value of formal supervisor professional development programs would be to make the formative learning and knowledge acquired through the practice of doctoral supervision explicit – for example, the ways in which the work of doctoral supervision shapes supervisors' attitudes, values, orientations and how they see, think and behave in relation to their context, students and the practice of doctoral supervision. This is not to advocate a learner-led rather than knowledge-led approach to supervisor professional

development. Rather, it is to recognise that valuable and meaningful knowledge is generated through the practice of doctoral supervision, and that this has a significant impact on 'becoming a supervisor' and on 'supervision as becoming'.

## References

Bartlett, A., and G. Mercer, eds. 2001. *Postgraduate research supervision transforming (r)elations*. New York: Peter Lang.

Billett, S. 2001. *Learning in the workplace: Strategies for effective practice*. Sydney: Allen & Unwin.

Billett, S, ed. 2010. *Learning through practice: Models, traditions, orientations and approaches*. Dordrecht: Springer.

Christie, M., and T. Adawi. 2006. A model for the supervision of PhD students. *Shifting paradigms in engineering education,* ed. M. Christie, 289–98. Gothenburg: Chalmers Strategic Effort on Learning and Teaching, Chalmers University of Technology.

Connell, R.W. 1985. How to supervise a PhD. *Vestes* 28, no. 2: 38–41.

Engestrom, Y. 2001. Expansive learning at work: Towards an activity-theoretical reconceptualisation. *Journal of Education and Work* 14, no. 1: 133–56.

European Commission. 2010. *European Charter for Researchers (version 1.0.13)*. http://ec.europa.eu/euraxess/index.cfm/rights/europeanCharter.

Golde, C.M., and G.E. Walker, eds. 2006. *Envisioning the future of doctoral education: Preparing the stewards of the discipline – Carnegie essays on the doctorate*. San Francisco: Jossey-Bass.

Halse, C., and A. Gearside. 2005. *A genealogy of becoming researchers: The discursive and interactive construction of postgraduate supervision*. Sydney: University of Western Sydney.

Halse, C., A. Honey, and D. Boughtwood. 2007. The paradox of virtue: (Re) thinking deviance, anorexia and schooling. *Gender and Education* 19, no. 2: 219–35.

Halse, C., and J. Malfroy. 2010. Retheorising doctoral advising as 'professional work'. *Studies in Higher Education* 35, no. 1: 79–92.

Hodkinson, P. 2004. Research as a form of work: Expertise, community and methodological objectivity. *British Educational Research Journal* 30, no. 1: 9–26.

Hodkinson, H., and P. Hodkinson. 2004. Rethinking the concept of community of practice in relation to schoolteachers' workplace learning. *International Journal of Training and Development* 8, no. 1: 21–31.

Hodkinson, P., and H. Hodkinson. 2003. Individuals, communities of practice and the policy context: School teachers learning in their workplace. *Studies in Continuing Education* 25, no. 1: 3–21.

Lave, J., and E. Wenger. 1991. *Situated learning*. Cambridge: Cambridge University Press.

Lee, A. 2008. How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education* 33, no. 3: 267–81.

Manathunga, C. 2005. The development of research supervision: 'Turning the light on a private space'. *International Journal for Academic Development* 10, no. 1: 17–30.

McAlpine, L., and C. Amunsden. 2007. Academic communities and developing identity: The doctoral student journey. In *Global issues in higher education*. ed. P.B. Richards, 57–84. New York: Nova Science Publishers.

Minichiello, V., R. Aroni, E. Timewell, and L. Alexander. 1990. *In-depth interviewing: Researching people*. Melbourne: Longman Cheshire.

Olson, K., and C.M. Clark. 2009. A signature pedagogy in doctoral education: The leader-scholar community. *Educational Researcher* 38, no. 3: 216–21.

Park, C. 2006. *The end of the secret garden: Reframing postgraduate supervision*. http://www.lancs.ac.uk/celt/celtweb/files/ChrisPark.pdf.

Park, C. 2007. *Redefining the doctorate*. York: Higher Education Academy.

Pearson, M., T. Evans, and P. Macauley. 2008. Growth and diversity in doctoral education: Assessing the Australian experience. *Higher Education* 55, no. 3: 357–72.

Powell, S., and H. Green, eds. 2007. *The doctorate worldwide*. Maidenhead: Open University Press.

Sadlak, J. 2004. *Studies on higher education: Doctoral studies and qualifications in Europe and the United States: Status and prospects*. Bucharest: UNESCO-CEPES.

Sfard, A. 1998. On two metaphors for learning and the dangers of choosing just one. *Educational Researcher* 27: 4–13.

Wall, S. 2008. Of heads and hearts: Women in doctoral education at a Canadian university. *Women's Studies International Forum* 31, no. 3: 219–28.