STRENGTHENING POSTGRADUATE SUPERVISION

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THE SUPERVISORY PROCESS AND DEVELOPMENT OF SCHOLARSHIP

REFLECTIONS ON THREE JOURNEYS

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INTRODUCTION

In this chapter I reflect on three supervisory journeys: that of a colleague who is a senior professor in my school; my own journey as a doctoral student and supervisee; and my subsequent journey as a new researcher and supervisor of my own postgraduate students' research. I compare and contrast our experiences as supervisors or supervisees in a professional school in a South African university. My reflection focuses on the notion of the development of scholarship in the course of the supervisory journey. My interest in the development of scholarship was first aroused as I reflected on my struggles as a doctoral student, making shifts between disciplines and between research approaches and methodologies, as I made the transition from Biodiversity Conservation research to Science Education research.

My reflection on the three journeys seeks to understand, firstly, from a discussion with a senior academic in my school, how she developed scholarship in her postgraduate students and how this transformed her supervision style over time as she worked with different students. Secondly, looking back on my own PhD journey with my own supervisor as a biologist studying towards a doctoral degree in Science Education, I reflect on how my supervision journey facilitated the transition. I reflect on the ways in which those aspects of scholarship that were transferable between disciplines were strengthened while some were remodelled to be relevant to my new education researcher identity. Thirdly, I reflect on my own practices as a current supervisor of doctoral students to understand how I am drawing from my own experience as a former supervisee to inform my orientation and style of supervising postgraduate research and to help develop scholarship in my own students.

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DEFINING SCHOLARSHIP

To define scholarship, I draw from the work of Boyer, particularly his Carnegie report of 1990 and his lecture of 1994. Boyer (1990:28) defined scholarship in terms of research, service and teaching. In his 1994 lecture entitled 'Scholarship assessed' Boyer proposed what he called 'a new paradigm of scholarship with four interlocking parts' (Boyer 1994: 27). He articulated the four forms of scholarship in his summary as follows:

Putting all of this together, I can imagine a grid in which the four forms of scholarship: discovery, integration, application, and teaching are placed horizontally across the top. (Boyer 1994:54)

... to keep the flame of scholarship alive, we must give new dignity and new status to the scholarship of teaching. (Boyer 1994:58)

Although Boyer was addressing scholarship in relation to the professoriate, I find his categorisation of scholarship useful in framing my discussion on supervision. According to Boyer 'every member of the academy should demonstrate his or her ability to do disciplined research', which he terms 'the Scholarship of Discovery' and be able to make connections and contextualise disciplinary knowledge, 'the Scholarship of Integration' (Boyer, 1994:28-29). For Boyer the Scholarship of Integration included the work of academics in such disciplines as psycho-linguistics or bio-engineering, which embrace 'what Michael Polanyi calls 'overlapping academic neighborhoods' (Boyer, 1994:35).

Boyer's third category of scholarship focuses on maintaining the relevance of academia to real social, economic and other civic issues; 'to relate the theories of research to the realities of life' (Boyer 1994:39). This Boyer called the 'Scholarship of Application'. In his 1990 paper he had discussed a similar scholarship of service. In the South African context, the development of this kind of scholarship in doctoral students is an interesting subject, considering the various doctoral experiences of students in the variety of institutions that now exist in the country. For example, would the development of this form of scholarship differ in traditional universities, in universities of technology and in comprehensive universities?

Finally, Boyer (1994:45) saw teaching as a priority of the professoriate and argued that teaching was important in order 'to sustain the work of the academy'. It can be argued that it is not necessary to develop this form of scholarship during the doctoral journey. However, for those doctoral students who, at the completion of their studies, find themselves in tertiary institutions as new lecturers, the journey seems to be incomplete without any deliberate development of the scholarship of teaching. In such cases the development of the scholarship of teaching tends to

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be assumed and not explicitly addressed in the doctoral journey and it becomes a private engagement for the student.

For a more elaborate definition of the scholarship of teaching, I turned to the work of Trigwell and Shale (2004), who tease out the notion of ‘scholarship’ in the various models of university teaching. They argued that scholarship was in ‘the construction and critical review of the knowledge base for teaching’, the core concepts of which include ‘reflection, communication, pedagogic content knowledge, scholarly activity and pedagogic research’. They further argue that a view of teaching as ‘a reflective and informed act engaging students and teachers in learning’ is supportive of the aims central to the project of developing a scholarship of teaching (Trigwell and Shale, 2004:524). An earlier elaboration of this view is held by Kreber and Cranton (2000) who define the scholarship of teaching as both learning and knowing about teaching. They describe the development of scholarship in teaching as a process comprised of reflection on experience-based knowledge and research-based knowledge of teaching.

DEVELOPMENT OF SCHOLARSHIP

Whilst Boyer’s definition of scholarship is made in the context of the professoriate, it nonetheless provides a framework for thinking about the forms of scholarship that might be developed through the process of doctoral supervision. I do not argue that the role of the doctorate is to induct students into the professoriate, but rather that the development of some, if not all, of the four forms of scholarship can and should begin for the student in the doctoral supervisory journey. With this in mind, I show how, in the journeys that I consider in this paper, there was some conscious effort to develop at least some of Boyer’s four interlocking parts of scholarship.

There was certainly deliberate effort to develop the scholarship of discovery, and the creation of new knowledge, and there were efforts to develop the scholarship of application through a growing ability to link theory to practice in the field of education. As for the scholarship of integration, this is probably best encapsulated in the multi/interdisciplinary nature of the field of education research itself with its ‘overlapping academic neighborhoods’ (Boyer, 1994:36). In the three journeys that I reflect on here, the scholarship of teaching is probably the least prominently developed, perhaps with good reasons considering that we were all located in a school of education whose core business is – or should be – to develop the scholarship of teaching for all its students anyway.

In his 1990 lecture Boyer (1990) made some suggestions on how the development of scholarship might happen in the context of the doctorate. I focus on only three

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which are most relevant to the journeys I am discussing: induction into the academic community; processes and practices in supervision; and the learning in supervision.

INDUCTION INTO THE ACADEMIC COMMUNITY

Boyer (1990:68) makes the assertion that 'it is in graduate education where professional attitudes and values of the professoriate are most firmly shaped' and goes on to ask, 'What might be the characteristics of graduate study that would most appropriately prepare tomorrow's scholars?' There are two important points made by Boyer in these statements. The first relates to aspects of induction of the student ('attitudes and values ... firmly shaped') to the community of practice, the professoriate. The second relates to identification of the 'characteristics of graduate study' that prepare the doctoral student to become a (future) scholar.

To illustrate these two points I refer to my experience as a doctoral student coming from a Natural Sciences background to Education. I had obtained my Master's degree in Zoology while working in Biodiversity Conservation, where I was inducted into systematics research and into working with local communities. After eleven years of practice I had become a member of the community of practice of Systematics and Biodiversity Conservation research, with well-established networks and collaborative relationships locally and abroad.

I then had the opportunity to spend two years at a university where I was invited to help establish a research programme, as the university transitioned to a research-active institution. My duties included teaching some Biology courses to undergraduate students enrolled in a variety of programmes, ranging from the Bachelor of Education to the Bachelor of Science in Environmental Science, in Environmental Health and in Agriculture. At the end of the two years I decided to obtain a teaching qualification and continue in academia. I enrolled for the Postgraduate Certificate in Education (PGCE) and, five years later, made the decision to embark on a doctoral degree in Science Education.

The shifts that I underwent in this academic journey were sometimes quite overwhelming. I went from being an expert in Systematics and Biodiversity Conservation research to being a novice lecturer in Biology and then a novice Science Education researcher. While I was comfortable teaching Biology, I struggled with the shift to being a student (again) and being a researcher in Science Education. I needed to gain access not only to the field of Science Education but also to its various communities of practice. I was joining the teaching community in the School of Education as a new lecturer and the graduate student community as a doctoral student. I needed guidance to access the tools to negotiate these unfamiliar terrains.

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As a novice researcher I was entering what Kamler and Thompson (2006:29) called 'occupied territory – with all the imminent danger ... that this metaphor implies – including possible ambushes, barbed wire fences, and unknown academics who patrol the boundaries of the already occupied territories'. I was to go through a long process of change from one discourse (Systematics and Biodiversity Conservation research) to a new one (Science Education research). I came from a research culture that did not require much collaboration, nor required me to work with other scientists as closely as I was now expected to do in Education research.

I had come from Natural Sciences research, working on ecosystems and landscapes, rarely ever concerned with people except for the local communities that lived in or close to some of the ecosystems of my interest. My interaction with other Biodiversity Conservation researchers was limited, whereas, as I was later to learn, in Education research I would not only work closely with other researchers but may need their feedback and continual validation of my thinking and research approach. My doctoral supervisor became my mentor and guide. He quickly worked out that while my subject matter knowledge and research experience (in Biology) was sound I was under-prepared in understanding of Education theory and the nature of Social Sciences research. He recommended that I attend two Masters of Education courses – Theories in Science Education and the Research Design course.

I believe that attendance of those two courses transformed my PhD experience, and enabled my participation in the doctoral learning space in ways that would otherwise not have been possible. I got to understand the difference between the kind of research I had done in Biology and what was expected of me in Social Science research. I had not previously engaged with theories of learning and their place in conceptualising research, their role in determining the kinds of data that I would require and how I would analyse it to answer my research questions. I learnt for the first time about paradigms and their role in research, as well as the different genres of academic writing.

I was introduced to the conventions, rules and values that informed practice in this new terrain; and to what it actually means to be a member of this community of practice. I was able to participate and contribute to the debates in the doctoral discussion groups and, in time, I gained the confidence to lead discussions. In short, I was affirmed. As my confidence grew I began to identify with the Education research community. My supervisor's insightful guidance had facilitated my induction and inclusion. This was for me a big part of the development of scholarship in my new field of research.

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What this experience also did was to show me that I was able to learn much more than I had thought myself capable of. It inspired me to engage more deeply with the field of Science Education. I wanted to know more, not just about topics related to my PhD study but about other topics related to Science Education research, and about the various paradigms, theoretical perspectives and methodologies. With the help of my supervisor, I published my first Education research paper in the second year of my PhD study. My supervisor also helped me prepare and present my first paper at a Science Education conference.

Attendance at the conference was another important step in induction into the community of practice, exposing me to the diversity of research topics in Science Education and to my supervisor's network of fellow researchers and collaborators in the field. It helped me put my own work into perspective within this broader context of general Education research. The various scholars that I met and interacted with were to become my role models as they enacted what it means to be members of this particular academic community.

Boyer (1990:68) says that in doctoral research on a narrow isolated topic 'creative integrative thinking often is repressed' and that it therefore produces 'specialists without perspective'. This highlights the tension in the supervision process between the need for a supervisor to be well established, knowledgeable, and an expert in her/his discipline and yet still engage with the broader academic community. A similar tension exists for the doctoral student, who needs to be willing and able to start contributing to the broader debates in the field yet continue to focus on the study (a narrow topic) and strive to meet the institutional requirements for the qualification.

As Boyer argues, my professional attitudes and values of the professoriate were shifted and reshaped during the course of my graduate education. This happened through a supervision process that not only offered institutionally mandated academic mentorship but also provided a deliberate induction into the community of practice of Social Science research in general and Education research in particular.

PROCESSES, PRACTICES AND LEARNING IN SUPERVISION

I now move on to my colleague's supervisory journey to illustrate some of the processes and practices that shape learning and the development of scholarship in supervision. In the excerpt below she talked about how being an experienced supervisor, who was sure of her niche in the field, had influenced her supervision style and how her style of supporting her students had transformed over time.

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My colleague, who for the sake of this account I will refer to as 'Jane', opened her remarks about supervision by stating that

Supervision is pretty much like teaching. Just as we tend to teach in the way we were taught, we tend to start out supervising in the way we were supervised. However, my supervision style has evolved. At first I supervised in the way I was supervised but in time as I established my own niche in research I insisted on taking only students whose interests matched my interest area. That way I was able to determine my own style of supervising. (Interview, 30 July 2014)

Jane explained how her role as supervisor had transformed in two ways. The first was with regard to the nature of student support that she gives to her students. Her first PhD was co-supervised with a more experienced colleague and she noticed that she and her colleague gave different forms of feedback. He gave feedback at what she called 'the macro scale', focusing on the more global conceptual issues, while she, on the other hand, gave micro scale feedback, commenting on details, sentence by sentence. In time she says her own way of co-supervising has evolved and in co-supervision she now gives the more global feedback at the conceptual level while the new supervisors tend to focus on the micro scale.

The second point Jane made was that while the role of a supervisor was as advisor/mentor to her students, she felt it was more important to be able to provide academic leadership for her students. She said that knowing her own niche in research had shaped her supervision style and the provision of academic leadership for her students. She can now afford to be selective about who she takes on as PhD students. Her students work on various aspects of the same project and she can say 'No' to students whose interests are too far outside her own. This, she says, allows her to be able to support and guide her students more effectively – for example, by pointing them to the requisite literature.

Brew and Peseta (2004) allude to the importance of reflection and feedback in the supervisory process. In their intervention with Australian academics they found that, as they reflected on their own supervision, they began to think about it differently. It seems that in the interview Jane was able to reflect on her own supervision style and realised that her style was different from her fellow supervisor's. In time she noticed how her own supervision style and sense of herself had shifted. For example, she also talked about her supervisory role extending to a mentorship-advisory one and how she provided academic leadership to her students. These kinds of shifts in roles and supervisory focus present a challenge for new supervisors like myself.

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As a new supervisor it is not automatically obvious what the nature of the academic leadership required in supervision is, nor how to operationalise it for each student so as to be able to provide the support that they need as individuals. As Anne Lee suggests, development of supervision skills should be part of a 'continuing professional development activity, CPD' which also enables new and experienced supervisors together 'to uncover the conceptions [of research supervision] that they hold and examine them alongside other supervisors' (Lee, 2007: 691). Lee argues for that supervisors need such skills as flexibility, to be able to use different supervision approaches, depending on the student's needs and where they are in their research journey. For instance, a postgraduate student who is also a probationer requires different kinds of assistance to that required by a full-time student whose focus is primarily on the PhD. The supervisor would need to decide when to take a mentoring approach, supporting the students in the same or different ways, and when to be a gatekeeper enculturating the staff member into the values and practices of the institution. Ultimately, the supervisor's toolkit, as it were, determines the type of researcher that their supervisees emerge as at the end of the supervision process.

In my experience as a doctoral student who was also a probationer in the same institution, the mentoring tends to supercede the enculturation, mainly because the practices of the institution are tacit and assumed. A supervisor who is also a colleague, as an insider has access to some of these assumptions and can at least attempt to make them explicit. However, the processes and structures for enculturation, especially for probation, are often centralised and managed remotely from the supervisor-supervisee interactional spaces, both physically and administratively.

Another area of concern is the institutional requirement for throughput which may cause supervisors to see themselves as required to operate in a functional role, affording progression to completion of the qualification. In the process they may overlook the development of critical thinking skills in their mentees. For me, this raises the question of how long a student should remain in the system. As a supervisor, the choice is between whether I encourage my students to finish as quickly as possible within the institutional timeframes or whether it is acceptable to allow a student to remain in the system long enough to acquire the evaluative and deep inquiry skills expected of an academic and researcher.

It is in resolving supervisory dilemmas such as this that I believe my toolkit, the range of skills and conceptions of supervision that I hold, is useful in determining what each student needs. As an aspect of my toolkit, I keep in mind the notion of academic leadership and constantly monitor my own growth to determine if I am attaining to that position. The thought can become overwhelming if one takes into consideration

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the three-to-five-year journey that a doctoral supervisor and supervisee have to undertake. It is a long relationship with each student, demanding the investment of considerable emotional intelligence on my part as the supervisor – a skill which can only come with experience.

THE SCHOLARSHIP OF TEACHING

Boyer (1990, 1994) argues that it is the role of graduate schools to also equip students to be able to teach at all levels when they finish their doctorates. He argued that the academy was overemphasising the other three forms of scholarship over the scholarship of teaching. Manathunga and Goozée (2007) seem to be making a similar argument for both students and supervisors. They argue that it is an error for the academy to assume that a doctoral student is automatically a researcher and that a new supervisor is already an expert in supervision. This erroneous assumption seems to be one that South Africa's Higher Education Qualifications Sub-Framework (HEQSF) makes. In this respect, Jane (the senior colleague interviewed) argues that just as we teach in the way we were taught, we tend to supervise in the way we were supervised, which would suggest that, without opportunities to reflect on our practice, our supervisees are at risk of being subjected to the same defects in supervision that we encountered. Boyer (1994) also seemed to be mindful of this error when he argued that institutional and academic procedures should be put into place to prepare doctoral graduates who are lecturers in universities for teaching and not just for research.

In a professional school such as the one I work in, doctoral students have previous training as school teachers. The doctoral process therefore focuses on making them into academics and researchers and the scholarship of teaching is assumed. One wonders if this assumption is always accurate. For instance, for doctoral students like myself, coming in with rather limited experience in teaching even if stronger in research experience than the more conventional Education doctoral student, it becomes necessary to consider how and where the scholarship of teaching is then to be developed. I contend that a similar question could be asked about some conventional Education doctoral students who are qualified school teachers but who then stay on to become university lecturers. The assumption is that their qualification as school teachers is sufficient for them to transition into university teaching and I argue that there may be a need for empirical evidence to support this assumption.

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CONCLUSION

In this chapter I have discussed some of my experiences of supervision, both as a student and as a new supervisor, in contrast to the views of an experienced colleague in the same School. I defined scholarship in supervision by drawing from various sources and constructed a working definition of scholarship as a reflective act engaging students and supervisors in learning, mentorship, knowledge production and communicating ideas and research findings. The development of scholarship in supervision therefore involves supervisors taking on the role of mentors, and inducting their mentees into the academic community and into a scholarly community of practice. Successful induction of the mentee into the academic community tends to be dependent on the supervisor's own engagement in the community of practice. I also argued that while it is not the primary purpose of doctoral supervision to develop the scholarship of teaching, depending on the route they have taken to education research, some doctoral students do need to be supported and prepared for teaching in addition to research and service to the community.

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