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Exploring of new models of research pedagogy: time to let go of master-apprentice style supervision?

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While the time-honoured one-to-one supervisory model of higher research degree training has its advantages, recent research suggests that the model also has significant drawbacks, including its hierarchical nature. Nevertheless, this pedagogical model remains the default for higher research pedagogy. Using the discipline of music as a case study, where growing interest in practice-based research has lately demanded considerable fluidity in supervisory practices, this research explores the benefits and challenges of one-to-one models of supervision. Drawing on semi-structured interviews, dialogue forums, survey data, the extant literature and observations of practices at selected higher music education institutions in Australia, the UK, Belgium and the Netherlands, it recommends and suggests ways to implement more ‘horizontal’ approaches to research pedagogy. The findings of this research may improve teaching and learning experiences and outcomes in higher research degrees in music and the creative arts, and stimulate a reflection of supervisory approaches more generally across the sector.

Keywords: collaborative learning; communities of practice; Higher Degree Research; higher research education; supervision

Learning and teaching in higher research degrees: contexts and conventions

As part of a larger project, the paper explores collaborative learning approaches to the Higher Degree Research (HDR) space and seeks to illuminate aspects of one-to-one models of supervision. Beginning with an exploration of the literature and drawing on data generated through interviews, forums and observations, the project examined practices in Australia, the UK, Belgium and the Netherlands. While this scope excludes the practices in the North American context where students in doctoral programmes are usually expected to take a number of courses and work with a doctoral committee, some participants did undertake coursework and refer to this aspect of their training as a critical complement to their supervisory meetings.

The conventional one-to-one supervisor–student model of HDR training remains a stalwart of higher education, and much of the literature endorses the belief that quality supervisor support through HDR studies is key to students’ success (e.g. Gurr 2001; Pearson and Brew 2002; Sinclair 2004). Some studies point to such supervision as a factor in students’ timely completion of higher research degrees and employment upon

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completion (Wisker 2005; Platow 2012). Higher degrees are not immune to the shifts in tertiary education currently taking place.

Moreover, a rise in the diversity of degrees – including research degrees, as indicated by the growth of professional doctorates – has contributed to a more diverse student population, with a wider range of learning styles and needs (Engebretson et al. 2008), and a wider range of motivations for undertaking study (Harrison 2011). Given the increasing diversity of career pathways sought by graduates (including HDR graduates) combined with the fact that few find work in academia following their studies, robust employability and academic skills are increasingly essential (Cumming et al. 2009). For HDR students, the consequences of these shifts include the need to be able to deal with fast-changing educational models, heightened expectations of autonomy and pressure to complete in shorter time frames.

In this at-times challenging educational environment, the traditional one-to-one model of supervision has fallen under scrutiny. Some studies have cast doubt that this model is able to meet the demands created by increasing HDR student diversity, institutional accountability and the wider range of post-HDR career pathways (e.g. Yeatman 1995). Shacham and Od-Cohen (2009) argue that traditional models of research education fail to sufficiently prepare students for a fast-changing workplace environment where collaboration is increasingly the norm. Engebretson et al. (2008) question the usefulness of these models in cases where the student has extensive industry experience (as is standard for those enrolled in professional doctorates), and Brien and Williamson (2009) connect the challenges of supervision to the wider issues relating to the changing role and nature of the higher education sector at large.

Despite some recognised limitations of the traditional supervisory model of research higher education, until relatively recently many academic studies adopted the approach of attempting to improve the mechanisms of that model, rather than investigating alternatives. Yeatman (1995), for example, acknowledges some shortcomings of the one-to-one approach, and describes how a supervision log may be used to record and clarify advice given in supervisory meetings, thereby improving it. Another example is Murphy (2009), who makes suggestions for improving the model, noting that the mismatch between students' and supervisors' preferences regarding the content of supervision contributes to poor student experience of HDR study and longer than average completion times. The usefulness of one-to-one supervision notwithstanding, the changes in the higher education environment combined with the limitations of classic one-to-one supervision call for new ways of conceptualising HDR training. This is increasingly reflected in the literature on higher research pedagogy, which more recently has tended to explore alternatives to the traditional one-to-one approach (e.g. Boud and Lee 2005; Engebretson et al. 2008; Westerlund and Karlsen 2013).

Concepts and practices of one-to-one pedagogy

One-to-one pedagogy is not necessarily hierarchical – for example, it may be Socratic, dialogic or bidirectional. It is therefore important to distinguish it from the more specific approach to one-to-one known as 'master-apprentice', which is founded upon the transmission of knowledge and/or skills from a highly knowledgeable and/or highly skilled individual to one less so, who then (typically passively) receives and assimilates that knowledge. Even when one-to-one interactions are not explicitly hierarchical in nature – for example, where a research student is encouraged to learn by observing and

emulating his or her supervisor in a laboratory (see Dysthe 2002) – this kind of learning can still embody a master-apprentice-style transfer of information to the student, who may have little control over the content, pace and direction of learning.

Various definitions of supervision exist in the pedagogical literature, encompassing a range of perspectives on supervisor authority, student autonomy and the nature of supervisor–student relationships and interactions (e.g. Cargill 2000; Dysthe, Samara, and Westrheim 2006; Lee 2008, 2012; Samara 2006). As it is traditionally conceived and practiced in higher education institutions in much of the Western world, though, one-to-one HDR pedagogy arguably still tends towards an inherently hierarchical model, as is perhaps indicated by the very use of the term *supervision* to describe it ('the action or function of overseeing, directing, or taking charge of a person, organization, activity, etc. '; OED 2013).

Even if current models of HDR supervision are commonly hierarchical, though, it would be wrong to assume that overt authority or establishment of a hierarchy is unambiguously negative. In exploring preferred supervisory practices of engineering supervisors versus candidates, Murphy (2009) found that although the majority of supervisors focused on the professional and personal growth of the candidate and saw their role as guiding rather than controlling the research, the majority of students in the study preferred prescriptive, task-oriented, controlling supervision. For some HDR students, at least at certain stages of their candidature, a more prescriptive approach to supervision may work well. This issue is explored later in this paper.

Alternative models for research pedagogy

Since at least the 1990s, researchers have explored alternative models for research pedagogy that disrupt the characteristically hierarchical nature of supervisory practices. Burnett (1999), for example, examined HDR supervision through a 'collaborative cohort model', contrasting it with a 'master-apprentice' approach. More recently, drawing on ideas of transference from psychoanalytics, Hecq (2009) has described interactive narrative pedagogy as a way of displacing overtly authoritative relationships between supervisor and student. She suggests that this approach encourages engagement between student and supervisor and enhances both students' and supervisors' knowledge (including self-knowledge). Another innovative approach to HDR supervision is outlined by Carter (2010), who describes the use of psychodrama as method of externalising thoughts and ideas within the supervision session. Objects are chosen to 'be' particular ideas or groups of people involved in the research and each is placed spatially (and moved, as appropriate) to represent the relationship it has to the others. Ideas, thoughts, memories and experiences become embodied through their kinaesthetic enactment. The relationship between the supervisor and student moves away from one of hierarchical dependency as the student develops an internal sense of authority. Various other examples of 'alternative paradigms' for HDR supervision exist (e.g. Biggs and Büchler 2009; Westerlund and Karlsen 2013).

Team supervision is one way to dissipate verticality in research training. Harrison and Dwyer (2014) propose an alternate model founded on Gee's (2004) belief that 'people learn best when their learning is part of a highly motivated engagement with social practices that they value' (70). They advocate for establishing, within the HDR context, 'affinity spaces' (Gee 2004) – learning environments characterised by a common space and a common endeavour shared by masters and newcomers, where leadership is

‘porous’, where forms and routes to participation are many, and where intensive, extensive, individual, distributed, dispersed and tacit forms of knowledge are all encouraged and honoured. The literature on dialogue forums indicates that there can be barriers to dialogue taking place. Within the HDR context, careful consideration might be given to the structure of the forum, the skills and institutional positioning of the facilitator and ways to promote an environment whereby participants interact and create meaning from the dialogue.

Practice-based higher degrees in the creative arts

While many challenges to the higher education sector are sector-wide, some are compounded when dealing with academic disciplines that are relatively new. In the time-honoured science disciplines, studies have indicated that discrepancies still arise between preferences of students and supervisors on the role and nature of supervision (e.g. Murphy 2009). It is fair to say that in some creative disciplines (for example, architecture, music technology and chamber music) work tends to be structured around shared project or around a shared data-set and, as a result, there is more collaborative, peer-based support. However, the majority of students in the creative arts do work in isolation. The potential for mismatches between supervisor–student expectations and approaches may therefore be magnified, and ‘unclear or differing expectations of supervisor-student roles and relationships’ may exacerbate existing challenges in these ‘non-traditional’ discipline areas (Brien and Williamson 2009, 1).

In the creative arts, a desire to better understand the nexus between creative practice and research has recently also stimulated growing scholarly interest in the topic of what might constitute appropriate approaches to supervising such research. The motivation to undertake doctoral studies, and the institutional responses to these motivations are explored more fully in Harrison (2011). These include the societal value of research degrees and their role in national building alongside more selfish goals of self-improvement and academic advancement. In themselves, the analogies between learning creative arts practices and ‘learning to research’ have potential to stimulate new ways of thinking about strategies and systems for research pedagogy. Gaunt (2011) notes the parallel between one-to-one instrumental tuition and supervisory research models; Harrison refers to similarities and dissimilarities between teaching singing in the studio and teaching research students; and Bresler (2009) observes likenesses between research education and musicianship, both of which require the student to learn to perceive, listen and improvise, and demand ‘a strong intrinsic motivation in order to persist when the answer is not evident’ (7).

In most conservatoires the master-apprentice model is thoroughly embedded in institutional psyche via the continued emphasis on that centuries-old style of learning a musical instrument. Conservatoires continue to ‘display considerable respect for this model, promoting its existence as an “internationally recognized” standard of teaching, one that needs to be “safeguarded” for a country to remain musically competitive on the international scale’ (Carey et al. 2013, 357). Despite a number of studies over the last decade or more raising concerns with one-to-one instrumental and vocal teaching, including the hierarchical, de-contextualised, assessment-oriented approach often taken (e.g. Persson 1994; Burwell 2005; Presland 2005; Carey & Grant, *forthcoming*), individual lessons in the master-apprentice manner still typically perceived to be an ‘indispensable, intense and intricate’ part of instrumental and vocal learning. Arguably,

the philosophies and approaches found in one-to-one undergraduate music training are to some extent carried over to conservatoire postgraduate research supervision, particularly in those projects where the nature of practice is a central focus, i.e. in practice-based research.

The unique characteristics of practice-based research found in creative arts disciplines like music open up a range of opportunities for exploring innovative and improved models for research supervision and training. Institutions and their staff are increasingly recognising that practice-based research, where creative practice is carried out or creative output is produced as an integral component, demands considerable fluidity in supervisory practices. Evans and Gandolfo (2009) suggest that academia is structured in ways that are individualistic, competitive and hierarchical, discouraging rather than facilitating collaboration; with focus on exploring supervisory approaches in practice-based visual arts and creative writing research, those authors advocate a supervisory approach that positions the supervisor not as an expert or master, but alongside the student, sharing the ownership and responsibility for the research. Such models may align more easily with the processes and characteristics of practice-based research in the arts disciplines, where fostering creativity, vision and imagination in research students may be as crucial a part of research supervision and training as the development of more academic skills.

From these foundations, this paper examines and problematises the characteristically hierarchical nature of one-to-one supervision in research higher degrees in music. The study is situated within a wider Australian-led research project (2012–2013) that aimed to identify innovative approaches, tools and strategies to support successful practices. This current paper draws on data gathered through an online survey on practice-based research training, completed by 72 supervisors and 73 students from across 11 countries in Europe, Asia, Australia, Africa and the Americas over a six-month period to May 2013. To increase validity and reliability within the scope of the study, survey data are triangulated with two further sources: first, insights from forums and workshops on research education conducted during 2012 and 2013 at higher music institutions in the UK, Belgium and the Netherlands, along with observations of research pedagogy at those institutions; and second, a series of ‘dialogue forums’ and semi-structured interviews with supervisors and students at one Australian conservatoire. Five forums (two with HDR students and three with HDR supervisors) and 10 interviews (five with students, five with supervisors) were facilitated over a period of eight months to February 2013. Forums and interviews were transcribed, analysed and interpreted, themes being generated inductively. Survey data were analysed and interpreted separately, then compared with those from the forums and interviews. Further information on approach and method are detailed in Harrison (2013a).

Student and supervisor preferences in supervision

The present study confirmed that preferences of supervisors and students about the content of research supervision indeed did not always align. The majority of supervisors who responded to the survey, for example, thought it ‘very important’ to advise their students on locating resources (33 of 47, or 70% of supervisor respondents), developing writing skills (30 of 47, or 64%) and academic protocols and processes (28 of 47, or 60%). Thirty-five of 48 supervisors (73%) felt that presenting at conferences were a ‘very valuable’ part of their students’ research training, as opposed to only 53% of students.

Students reported that they felt it was important for their supervisors to advise them on publishing, scholarships, symposia and other matters that may have an impact on their 'overall progression and development', both during their studies and beyond. These data point to the diversity of skills that may (arguably should) be developed through the course of a research higher degree, as well as the difficulty in reaching a consensus on which of these skills should be the focus of research supervision. This is true both at a general level and at the level of each individual student: student needs will differ widely, both in terms of their current abilities and their future professional (and personal) aspirations.

Some supervisors did refer to the importance of providing 'professional and personal guidance and mentoring' to their students, but as Hockey and Allen-Collinson (2000) found in interviewing 50 supervisors of practice-based research students, balancing pastoral and intellectual support was a recurring theme, and proved a challenge for some. The supervisors frequently acted as therapists, and the study investigated whether it was appropriate for these activities to fall under the supervision banner and whether training in therapy was beyond their designated institutional remit. Several comments made in interviews and dialogue forums and through the survey indicated that supervisors were sometimes faced with decisions regarding the reasonable bounds of the supervisor-student relationship:

I am not a therapist and make a distinction so that should students have personal issues I recommend that they find an appropriate person to fulfil the therapeutic relationship. (Supervisor survey respondent #60, 16 May 2013)

Because of the autoethnographic nature of his study, we were getting into his personal life, but that was starting to become very, very complicated because he was learning a lot of things about himself that he had to confront and challenge. I'm not a psychologist, but he was coming to me with a number of psychological issues. (Student interview #2, 10 April 2013)

The impossibility of a single supervisor being able to fulfil all the needs of their students suggests the importance of facilitating students' access to a range of diverse resources during their studies. For research-related matters, this could involve the distribution of supervision among a team (Dysthe 2002; Samara 2006). Some of the institutions engaged in this study already had a team-supervision approach in place, most commonly with two supervisors but sometimes with three or more. It is worth noting that even in with a supervisory team, student-supervisor hierarchies can still remain.

In this study, students expressed a range of views about team supervision. Some students felt this was a good idea, mostly for the diversity of perspectives, skills and experience that model affords:

The diversity and strengths of each supervisor can assist in and enrich various facets of the research as well as [the student] having access to the relevant contacts that each might have. (Student survey respondent #45, 30 December 2012)

Other students liked the idea of a team of supervisors considerably less, primarily citing the concern that the team 'could become too dispersed' or 'cause confusion and misunderstandings since everyone may have different ideas' (a concern raised in Burnett 1999, who found that conflict sometimes arose in 'dissertations meetings' when the supervisor and meeting facilitator offered the student differing advice). One student felt that two supervisors 'work[ed] well' because of the different perspectives each brings,

adding: 'I think more could be confusing; one, not enough' (student survey respondent #68, 8 May 2013). Another preferred only one supervisor:

I would prefer not to [have team supervision] as conflicting ideas may add difficulty to the process and may potentially prolong my progress. It may also be difficult to organise spontaneous meetings with more than one supervisor. (Student survey respondent #34, 7 December 2012)

Another student suggested that a single supervisor may be sufficient, but only if he/she is 'good':

If the supervisor is good, one is all I want because you can waste time following different pathways from different sources. If one supervisor wasn't good, then I'd prefer two to counterbalance things. (Student survey respondent #16, 30 September 2012)

Some students suggested that an even wider network of support would be beneficial:

I think two [supervisors] is adequate to be meeting on a regular basis, however I think it would be very useful at times to be able to give my work to/have meetings face-to-face with other academics at the institution. (Student survey respondent #38, 10 December 2012)

Like students, supervisors had divided views on whether they preferred to work within a team of supervisors. Some supervisors felt this was (or would be) beneficial for both students and supervisors:

Yes, because it brings a suite of experience and skills to the student's experience. (Supervisor survey respondent #34, 16 December 2012)

Yes, in fact if this way of working should be effective it should be based on peer-to peer learning between supervisors. (Supervisor survey respondent #39, 18 December 2012)

Other supervisors were ambivalent or against working in a team – both for reasons of independence as well as the considerations of potential 'confusion' for the students. In the survey, when asked whether they would like to work in a team, supervisor responses included:

I like the idea that I can provide the necessary supervision the student needs, although I am not closed to joint supervision. (Supervisor survey respondent #23, 7 December 2012)

Sometimes I do work in a team. A team that works is a dream and the way life should be. A team that does not work is pure hell particularly for the candidate. (Supervisor survey respondent #46, 20 December 2012)

Where to from here?

The findings of this study confirm that predominantly or exclusively hierarchical model of HDR supervision and training is neither ideal nor sufficient, on at least three grounds: One is the difficulty inherent in a single supervisor being required to meet all the needs of the HDR student, from research-related, to emotional and psychological, to the development of a broad-ranging set of graduate attributes. Through the survey responses, dialogue forums and interviews, the students in this study identified a range of extra-supervisory experiences and activities that had a positive effect on their learning, including presenting at

conferences; participating in faculty-based colloquia and seminars, university-wide training sessions and reading and writing groups; becoming actively involved in ‘the practical side’ of the research field beyond their studies; preparing articles for peer review; interacting and networking with colleagues and visiting professionals and researchers; utilising website-based institutional training resources; engaging in reflective practice and observation; reading other dissertations; and reading books on the research process. Activities mentioned by supervisors as having a positive effect on their students’ learning included preparing journal articles for peer review; co-authoring or co-presenting research papers with supervisors; participating in faculty-based colloquia and seminars, public presentations, media interviews, performances, workshops, training in research and writing skills; and reading widely. Nearly a decade ago, Boud and Lee (2005) called for ‘more systematic attention to be paid to the breadth and diversity of learning activities and relationships in research education’. The findings of this present study lend weight to Boud and Lee’s proposition that research pedagogy should move beyond the vertical supervisor–student dyad to a more horizontal model, for example, utilising communities of practice (Lave and Wenger 1991; Wenger 1998), with the supervisor only one of many resources at the student’s disposal.

A second reason to break down the hierarchical master-apprentice model of research training is the need for a well-rounded skill set upon graduation. For the majority who find employment outside of academia, music HDR graduates are likely to face ‘a lifetime of specialised work requiring multiple advanced skill sets in which they will continually learn and re-learn skills for performance in roles that may not have been invented yet’ (Bridgstock and Hearn 2012, 5). The eight dimensions of graduate capability identified by Cumming et al. (2009) – inquiring, analysing, producing, communicating, teaching, managing, thinking and interacting – can be acquired through a number of means, structured (e.g. formal courses/training), semi-structured (peer-learning, dialogue, mentoring) or unstructured (student initiated internships, paid employment). What is distinctly unlikely is that all eight dimensions of capability may be solidly acquired through reliance on a single method of learning, with heavy reliance on one or two individuals, such as is the case in a hierarchical one-to-one model of research supervision. Almost half the students who took the survey in this study (24 of 51 respondents, or 47%) felt only ‘a little prepared’ or ‘not prepared’ for life beyond their degree, with responses indicating considerable anxiety about life post-graduation:

I am afraid my degree will not give me satisfying job opportunities and I am not satisfied with the job I have at the moment. (Student survey respondent #64, 7 May 2013)

I think I know what needs to be done to pursue academic life but I also don’t think I have any time or means to make those preparations, hence when the end comes I [am] going to be out in the cold. (Student survey respondent #48, 7 December 2012)

This raises the question of the extent to which current models of research supervision and training sufficiently meet the needs of students (and industry). The fact that almost half the students in this study felt ‘only a little prepared’ or ‘not prepared’ for life post-graduation indicates considerable scope to improve HDR pedagogy for these students.

A third possible rationale for ‘horizontalising’ research education stems from those atypical instances where the supervisor–student relationship deteriorates, is dysfunctional, or simply does not ‘gel’. This current study did not gather data on the less positive experiences or aspects of supervision (for students or supervisors), and existing research

on the extent of dysfunction in HDR supervisory relationships is minimal. However, anecdotal evidence indicates that maintaining an optimal relationship throughout candidature can be a challenge for students and supervisors alike. This issue is not easy to investigate, not least because of the issue of power differentials that obtain. In their research, for example, Harrison and Dwyer (2014) met with difficulty in getting students to frankly share their less positive experiences of supervision, a challenge they suggest may be attributable to the themes of 'fear, power and hierarchy' that arose in at least one student's account of the supervisory relationship.

As an outcome of this study, a series of dialogue forums (Bohm, Factor, and Garrett 1991; Harrison and Dwyer 2014) were trialled at the authors' institution, with the intent to create a non-hierarchical collaborative platform for students and supervisors to share experiences and ideas around supervision and research training, and ultimately to improve HDR learning and teaching experiences and practices. Preliminary feedback from supervisors and students indicate that the forums represent a potentially powerful platform for the exchange of ideas, tools and experiences that may help break down the hierarchical structures of HDR learning and teaching, encourage peer teaching and learning, reduce reliance on the master-apprentice model (i.e. on a single supervisor), increase the pool of resources available to students, help build relationships and support networks between and among students and supervisors and reduce isolation in the HDR process for both students and supervisors. As such, the dialogue forums may prove to be one step towards 'horizontalising' the research pedagogy at this conservatoire. This extends to the examination process, where the public aspects of work are under scrutiny, and where collaboration play a key role. This topic has been explored by Morley some time ago and more recently by this author (see Draper and Harrison 2010; Webb, Brien, and Bur (2011; Emmerson, 2013). Further research will be needed to determine the success of this approach in terms of improving student and supervisor experience and improving graduate outcomes.

If, as Manathunga and Goozée (2007) contend, research education is based on a flawed assumption that research students have the skills to work autonomously and that academics know how to be effective supervisors by dint of having been through the process as students, the importance of exploring innovative pedagogical models and improving existing HDR training practice is clear. The relatively recent rise of practice-based research in creative arts disciplines opens up possibilities for imaginative explorations of new models of research pedagogy that steer away from exclusive or heavy reliance on the canonised, hierarchical, master-apprentice-style supervision. The potential benefits of doing so are many, including improved graduate outcomes, greater student preparedness for life post-degree, reduced isolation and stronger support networks. These non-hierarchical models hold potential to improve research education well beyond the confines of the creative arts industries that have been the focus of discussion in this paper.

Disclosure statement

No potential conflict of interest was reported by the authors.

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