Title: **Articulating and developing supervisory skills through collaborative action research**

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Abstract

Postgraduate master's dissertation supervision is one of the least understood aspects of academic practice. Using action research, twenty-five master's supervisors aimed to develop a better understanding of the complexities and challenges involved in this role. Through focus groups, individual interviews and monthly workshops, they developed and piloted resources for new supervisors. The main complexities and challenges identified and articulated were: understanding the student; accepting the unpredictability of their progress; tailoring support; giving constructive feedback; developing their personal understanding of supervision. Following the project, those involved reported increased awareness and confidence in their supervisory role and changes in their academic practice.

Key words: Action Research, Master's, Postgraduate, Supervision, Supervisor

Introduction

The critical importance of supervision during the capstone master's dissertation project is acknowledged by both students and academics. Students expect that a supervisor will be able to guide them as they develop their academic abilities, and find goal oriented, constructive feedback helpful in understanding their progress (de Kleijn, Mainhard, Meijer, Pilot and Brekelmans, 2012), but they also believe that an effective relationship is central to the supervisory process (Leman, 2015). In particular, they appreciate a friendly informal approach, the demonstration of a supervisor's genuine interest, and an 'empathetic appreciation' of the ways in which external factors can impact upon the experience of undertaking academic study (Drennan and Clarke, 2009; Anderson, Day and McLaughlin, 2008).

The developmental element of supervision, where supervisors seek to cultivate students' critical understanding and research skills has also been acknowledged (Bamber, 2015). Hughes and Tight (2013) identified that the 'journey' metaphor is popular within the literature, as it conveys the experience of progress, difficulty and change experienced by many students. Several authors recommend a flexible approach, arguing that the supervisor's role may change over time, as students develop research and critical thinking skills and take more ownership of their projects (de Kleijn, Meifer, Breklemans and Pilot, 2014; Moriarty, Danaher and Danaher, 2008; Grant, 2003).

Many academic disciplines have recognised the need for better understanding and development of supervision for some time (Bamber, 2015; Guerin, Kerr and Green, 2013; Blas, Jasman and Levy, 2012; Pearson and Brew, 2002) and some have argued that, despite its importance, supervision is the least understood aspect of higher education

> *There is growing recognition that higher degree research supervision is a crucial aspect of learning and teaching given the growing pressure on universities, faculties, disciplines and supervisors to increase enrolments, diversify offerings and prioritise timely completion. (Hamilton, Carson, and Ellison, 2014 p9).*

In recent years, supervisor training has become more established (Lee, 2012). Mandatory preparation for doctoral supervisors has been introduced in many universities, and there have been subsequent moves to promote consistency of practices within and between institutions (Hamilton, Carson, and Ellison, 2014; Jasman, 2012; Halse, 2011). Recognition of the need to develop this aspect of academic practice has not normally included master's level supervision, despite an acknowledgement of this need (Bamber, 2015; Blas, Jasman and Levy, 2012).

Pearson and Brew (2002) identified the need to have supervisors 'surface their mental models of supervision' (p143) to develop training for supervisors and Antman and Olsson (2007) argued that, in order to develop any aspect of practice, peer scrutiny and discussion are required. They, and others (Halse, 2011; Apsland, 2003) advocated that academic staff should document and share their experiences in order to tap into existing knowledge of practice.

Study design

An exploration of supervisory experiences involved 20 academic staff, who were experienced supervisors, from Healthcare and Education Departments within an English post-92 University. Due to significant increases in student numbers on post graduate taught programmes, additional supervisors were needed. Coghlan and Brannick (2014) suggest that while seeking to provide solutions to existing issues within a particular situation, the adoption of an action research approach can also contribute to the knowledge base about the practice involved. The aim of the project was to achieve a better understanding the complexities and challenges involved in the practice of supervision of postgraduate students undertaking their final dissertation projects. While those who took part were able to describe their experiences of supervising students, almost all struggled to define what educational strategies they used, as they had not previously been asked to articulate these. It was apparent that some of them lacked confidence that they were 'doing it right'. Even experienced supervisors struggled to explain the ways in which they had developed the strategies they used. Several expressed a wish to reflect more upon this element of their practice with colleagues, and these discussions became the first phase of a collaborative action research project which was facilitated by the Faculty lead for learning and teaching development, who was also a supervisor.

In seeking to develop an understanding of the practice of supervision, this research approach was appropriate.

> *Action research is the study of a social situation carried out by those involved in that situation in order to improve both their practice and the quality of their understanding* (Winter and Munn-Giddings, 2001 p9).

McNiff and Whitehead, (2006) explain that action research projects often encompass a number of phases or cycles, the findings from each feeding into the next. This project comprised of four phases, outlined below:

Phase 1

Initial discussions with 20 supervisors identified the need for, and benefits of, an exploration into the practice of supervision. Thirteen supervisors from Health and seven from Education participated in focus groups or individual interviews.

Phase 2

Through individual interviews, thirteen supervisors considered their experiences, co-constructing explanations of their supervisory practice, and proposed some collaborative activities through which they could further explore supervision.

Phase 3

During a yearlong series of monthly workshops, twelve of these supervisors discussed the nature of supervision, considered both theoretical and practical aspects, and reflected on their experiences both as students and as supervisors. They identified several significant elements of supervision which informed the creation of preparatory resources for new supervisors.

Phase 4

Piloting of the resources involved eight new supervisors in two workshops. The materials included an overview of dissertation processes within the Departments, an outline of a variety of supervision models and strategies, examples of some supervisory dilemmas with possible actions, and suggestions for supervisor development. Developed during the previous phases, these resources incorporated five key messages, outlining the complexities and challenges of supervision.

Ethical considerations

Following approval by the Faculty ethics committee, all master's supervisors in the Departments of Education and Health were invited to be involved, with informed consent, in the project. A particular challenge of collaborative action research is ensuring the anonymity of research participants while acknowledging ownership of the project outcomes through the different phases and subsequent dissemination (Coghlin and Brannick, 2014). Colleagues became aware of other individuals' involvement in the project only after meeting at focus groups or workshops, and data analysis and outputs used pseudonyms. Reflecting the collaborative approach taken, those attending workshops had opportunity to participate in data analysis and dissemination of findings. Three supervisors were involved in the analysis and five in subsequent presentation of findings at regional and international conferences.

Data analysis

The materials created during the different project phases included audio recordings and transcripts of conversations, summaries of workshop discussions (collated from flip charts, feedback and post-it notes), e-mail conversations, and personal reflections from some of the supervisors involved. Miles and Huberman's (1994) four stages of coding were used in the data analysis, which was undertaken by one person, following which another two of the supervisors undertook independent analysis of a sample of the data, and contributed to clarification, recognition and confirmation of emergent themes. Interview transcripts and themes were confirmed with all participants to ensure that they accurately reflected their comments and experiences.

Findings

During this collaborative exploration of supervision, those involved accepted that they had some expertise in this aspect of academic practice. They also recognised that the existing situation, where all those new to the role had to start from scratch and learn about supervision through experience, was wasteful and unnecessary. The decision to develop resources for other supervisors emerged from a gradual acknowledgement that the findings of this study constituted an authentic evidence base on the practice of supervision, which could be of value to others. Through these processes five key messages, that explain some of the complexities and challenges inherent within supervision, were articulated and are outlined below.

Key messages about supervision

1) Understanding the student 'When going through the dissertation process with a student, a successful outcome will often involve becoming aware of their goals, expectations, and the influences that may impact on their ability to study'.

Gaining an understanding of student goals and the pressures and influences that can affect their study is important in effective supervision. A common issue is the need to ensure that students have a realistic perception of their existing knowledge, of what is required and what they can achieve within the tight time constraints for a master's dissertation project, as some initial ideas might be overly ambitious.

> Daisy: I think it's just when they start dipping their toe in the water and start realising how much they don't know, it's quite daunting really because they have so much to read and they don't know what of the literature to actually focus on because they

haven't really understood what would be the best way to research what they want to research.

Others may have more pragmatic goals, and these differences can influence the approach taken by both student and supervisor. These different attitudes can be due to personal circumstances, or their reasons for undertaking the master's programme.

> Lucy: I think they have got to find their own way through it because people do master's programmes for different reasons. I mean, not everyone does it for career development… I was working with one student who didn't want it to progress her career, she wanted it because she knew her career wasn't going to progress much further, but she wanted something interesting to think about, so her spin off from doing it was to develop a regional group of like-minded people.

Many postgraduate students undertake a master's programme on a part time basis after a gap from previous academic study, some may have travelled from abroad, and a high proportion have family responsibilities. Conflicting demands can affect the time they have available for their studies, and impact upon their confidence levels, which is often apparent to supervisors. Several colleagues highlighted the importance of 'going through' the process with the student, so that they felt supported throughout. The supervisors in the study clearly articulated the importance of this:

> Bethany: I do think you actually need to grow the relationship with them, that they, you know, they have a respect for you and you have a respect for what they are doing… by being genuine, by being honest, telling them kindly if it is not right.

The value of mutual trust and respect has been advocated by many authors, including Wisker (2012) and Sharakis-Doyle and McIntyre (2008).

2) Accepting the unpredictability of their progress. 'You cannot fully predict when students will need advice, guidance, support, challenge, reassurance or encouragement'.

Although both student and supervisor are aiming for successful completion of the dissertation, student progress is likely to consist of several stages and intermediate goals. The achievement of these can be unpredictable and the process may not be steady, with students needing varying levels of support at different times. An awareness of the need to be flexible in working around students' development was evident from the supervisors. They recognised that students developed at different rates and that sometimes their progress was unpredictable:

Bethany: It's not a straightforward thing where you can say 'I can give you an hour then and an hour then', because it's down to when they have done - that sort of conceptual shift … 'Ah now I get it'… So, I think you have got to be flexible.

Working with part time students who also have professional roles, or with international students, who have other external pressures, can mean that it is difficult to predict when students might want to access support, and this might not fit with a regular pattern of supervision meetings:

Thea: You do hear people saying: "Oh, well I'm going to have to take two weeks off work to do this", so you feel then the need to help them at that time, so I suppose it forces you into their timescale. So, you feel like you should give them that time when they need it.

Pearson and Brew (2002) recognised that students learn a lot about themselves throughout the dissertation process and suggested that it takes confidence on the part of the supervisor to allow them time and space to pursue ideas, as this requires flexibility, maturity and trust. Most master's students do not have this luxury of time, as they may only have weeks to undertake their project, while getting to grips with unfamiliar research principles and processes. In recognition of this tension, supervisors helped students to appreciate the challenges involved:

Lucy: It was just a piece of paper with a long line … there's the cap and gown at the end, to get there what do you need to do when. And actually, asking the student with post-it notes just to track back and look at, … in order to submit then, you need to have a full draft ready for then, and then you need to have this done for then, ethics approval has got to be, so they were actually drawing out their own timeline.

3) Tailoring support 'Although students have responsibility for their progress and the quality of their work, you may be involved in assessing and anticipating their needs and creating strategies to help them to achieve the skills and understanding required to reach the required outcomes'.

Hemer (2012) acknowledged that supervisors are influential in the direction of the study and in ensuring the standard of the work is as required and recognised that there is potential to abuse that influence. The need to 'let go' to allow the student to develop the project with the awareness that they have control was recognised by the supervisors:

Neil: And to me, the important thing is, it's about ownership, it's the student's piece of work and if you are kind of quite clear. I am either involved with them because I am interested, I have knowledge, some level of expertise … but in terms of their question, to me they are the expert. They are going to develop into the expert; do you know what I mean? So that is, it's kind of their ball and they have got to run with it.

The supervisors spoke at length about the need to assess the abilities and needs of individual students, in order to identify the nature and extent of support that they might require. Drawing upon such assessment to build upon their student's strengths and address any weaknesses is advocated by several authors (de Kleijn et al, 2014; Doloriert et al, 2102; Anderson et al, 2006; Pearson and Brew, 2002). Some colleagues explained that they incorporated this understanding of the individual with their previous experience of supervision, to anticipate problems and look out for these:

Daisy: I've had situations where I've worried ... some very interesting conversations and discussions, but because I've not seen any written evidence of that, I got quite worried.

This use of individualised support which is designed in response to student need was described by Wood, Wood and Middleton (1978), who used the word 'contingency' to describe this educational strategy. The supervisors highlighted the importance of students' skills in finding and keeping focus, reviewing literature, project management, critical thinking and academic writing. A range of strategies, which could be useful in relation to each of these areas, were identified and included in the resources for new supervisors.

4) Giving constructive feedback 'Your assessment of a student's progress and feedback on their work can help them to undergo what may be a transformative educational experience'.

Within discussions, supervisors acknowledged the impact which undertaking master's level study could have:

Lucy: I think it's quite a powerful experience going through a master's programme, you know, for whatever reason you do it. I think it can affect people quite profoundly and I think they do need support as they make those kinds of transitions.

One way of preparing students for periods where they might find their study more challenging was by emphasizing the time and effort required for this level of study:

Rosie: I suppose the message to the student is, 'This is going to be hard, it's not going to be an easy road, but the encouraging bit is once you do get immersed in that, you start to get excited by it'.

A key strategy in supporting and advising students through their dissertation project is giving them feedback on their work. The discussions identified that the nature of the feedback is important – that it should be constructive, honest, and timely, and build on the student's existing knowledge in order to help them move forward. Doloriert, Sambrook and Stewart, (2012) highlighted the impact which feedback can have on students and advocated that both students and supervisors should be aware of the emotional response it could evoke. The balance required is described by Manathunga (2005), who has coined the phrase 'compassionate rigour' to acknowledge the need to provide empathy and support while giving rigorous feedback.

5) Developing their personal understanding of supervision 'Your personal experiences of being supervised can affect your approach to supervision, but you may also find the way in which others have conceptualised the supervisory role, or discussion with other supervisors, helpful'.

One of the factors identified in the literature as being most influential on supervisors' approach to this role is that of their own experience of being supervised. It has been suggested that individuals may try to emulate supervision strategies that they felt were helpful, and to avoid those which they perceived as less positive (Guerin, Kerr and Green, 2015; Blas, Jasman and Levy, 2012; Doloriert et al, 2012). Some of the supervisors described how they drew on their own experiences or shared their memories of being supervised with their students. One supervisor echoed her own feelings as a student in describing her approach to giving feedback:

Emma: I'm certainly careful to be positive about how I frame my comments as opposed to 'Well, you didn't do that very well', or 'That needs major revision' … Because I think you can really destroy somebody's confidence and that would just be an awful thing to do.

While acknowledging the impact of personal experience on supervision skills, Guerin, Kerr and Green (2015) and Blas et al (2012) proposed that the development of a conceptual understanding of supervision is also important for supervisors. Pearson and Kayrooz (2004) recommended that support for academics, which involved some discussion on the nature of supervision, and feedback on their practice, was essential. They argued that otherwise, supervisors would be subject to unrealistic expectations that could cause resentment and reduce their openness to professional development on this aspect of their role.

Developmental resource for new supervisors

The guidance pack developed during the project included information on the roles, responsibilities and possible challenges of the role, discussion of possible supervisory dilemmas and a menu of strategies which could be used to facilitate a student's development at the different stages of a dissertation project. It was sent to new supervisors, and discussed during two workshops, where they explored the resources and articulated how they could be used to inform their practice. In evaluating the resources, the new supervisors expressed their appreciation of the information and the reassurance that others before them had found it to be a complex role. Some (anonymised) verbatim comments on key issues, taken from the project discussions, were particularly valued, as they saw this as practical advice from experienced colleagues, which promoted a sense of academic community. They highlighted that discussion with signposting to the relevant material was more beneficial than just reading through it on their own as they found the opportunity to reflect upon their own experiences valuable, and they acknowledged the benefits of learning from others' experiences. Similar findings have been noted previously in the development of doctoral supervision materials (Bruce and Stoodley, 2013).

Impact on the supervisors of their project involvement

The supervisors involved in the different phases of the project highlighted the benefits of exploring their practice with colleagues, as most had not previously been offered the opportunity to do so or had feedback on their supervisory practice.

> Winnie: you don't really know whether you're giving the student good advice or bad advice really. You assume that it's good if they're happy to come back and see you and they pass at the end of the day

This situation had resulted in a perceived lack of collegiality or shared expertise in this aspect of their role, which was different to other elements of academia, such as teaching or research:

> Ken: I think one of the things I found hardest sometimes … is a sense of loneliness

Several of them identified subsequent changes in their practice as a result of their participation in the project:

> Nicola: It's made me a lot more thoughtful actually…it's made me think a lot more about the processes…I think I am having to be a bit more self-aware

Daisy: It's made me a lot more aware of the relationship between me and the student, in terms of like, controlling urges to make sure everything is alright … not being as controlling as perhaps I would be tempted to.

The impact of participating in the project included an increased awareness of their role, more confidence in their abilities and a recognition that sharing and discussing practice were legitimate forms of increasing their supervisory expertise.

Discussion

The relationship between student and supervisor is the focus of much of the literature, and there is agreement that, given that it is likely to last over an extended period, it is an important element of academic practice (Pearson and Brew, 2002). It has been suggested that friendly, helpful relationships based on an insight into a student's perspective are more likely to motivate students and it is acknowledged that effective supervision requires an understanding of how supervisors can best facilitate this relationship (De Kleijn et al, 2012; and Doloriert et al, 2012).

Sharakis-Doyle and McIntyre (2008) suggested that effective supervision requires not only a high level of self-knowledge but also an understanding of the contextual influences and the potential complexities involved in the relationship. Many disciplines take the view that the process of supervision is not just about the production of written work at the required standard but is also about the maturation of the student's understanding and abilities (Cherry, 2012; Green, 2005). It is apparent that a flexibility of approach with a student-centred focus is central to such development. De Kleijn et al (2015) coined the term 'adaptivity' to describe the way in which supervisors respond to a student's changing needs. The individualised consideration of student goals, experiences and progress articulated by the supervisors in this project explain some of the ways in which this approach can be incorporated in practice, and the way in which supervisors balance the demands of supervision in response to their assessment of each student is explored elsewhere (Macfadyen et al, 2019).

The need to articulate the practice of supervision and explain the impact of effective higher education is becoming increasingly apparent, with scrutiny into the value for money and outcomes for students (Gunn, 2018). Although in the UK initial emphasis of such reviews has been on undergraduate study, the intention of the Office for Students is to develop a postgraduate survey, and Gloster and Comanaru (2018) have proposed that this should include

concepts such as rigor, depth of study, exploration of complex ideas and 'stretch', all of which are integral elements of a capstone dissertation project.

The challenges of working on a one to one basis with students, and the centrality of the relationship can be particularly daunting to new academic staff, who may not initially be comfortable with the sole responsibility of supporting students for such a key part of their postgraduate studies - in the UK, the dissertation component normally comprises a third of a master's level programme (Casey, Clark and Hayes, 2011).

The need to address any sense of isolation, and feelings of a lack of competence and confidence was highlighted by Emilsson and Johnsson (2007) in the development of a support initiative for supervisors, which involved them receiving supervision themselves. Several strategies to facilitate new supervisors' understanding of the complexities of supervision and to enhance the practice of experienced supervisors have been suggested, and Halse (2011) highlights that these are increasingly participatory, and practice based. Examples include: action learning (Davis et al, 2012); collaborative critique (Guerin, Kerr and Green, 2013); an established supervisor development framework and communities of practice (Pearson and Brew, 2002); self-evaluation (Zuber-Skerrit and Roach, 2004) and story dialogue workshops (McCormack and Pamphilon, 2004).

Involvement in research with colleagues which leads to a deeper understanding of pedagogic practice has been recognised as an effective staff development strategy within higher education for some time (Zuber-Skerrit, 1992). Walker (2001) suggested that the dominant paradigm for academic development was a training tradition which focused primarily on skills, techniques and outcomes, and some have suggested that, as professional development opportunities are not seen as a priority among established academics, commitment to such developmental opportunity would be limited to new academic staff (Staniforth and Harland, 2003). This did not prove to be the case in this situation, as the experience of those involved ranged from 2 – 25+ years in higher education, and the majority had been supervising master's students for over ten years. The collaborative approach adopted was effective in enabling those involved to appreciate and explain the processes and strategies used in supporting students, often for the first time. There are examples of the value of action research to develop the practice of supervision in a number of countries (Blas et al, 2012; Manathunga and Goozee, 2007; Emilsson and Johnsson, 2007).

Tensions related to increasing numbers of students have been reported as impacting on the scope for innovation and creativity within supervisory practice (McCallin and Nayar 2012; Spiller, Byrnes and Ferguson, 2013). Strategies to maximise the use of alternative support strategies have been proposed, including increased use of library and learning support services, and group meetings with students (Wisker, 2012; Hallett, 2010). It is evident from the literature on students' views and experiences, however, that the relationship between student and supervisor is perceived to be to be central to the effectiveness of the supervisory process across a range of disciplines (Leman, 2015; De Kleijn et al, 2012; Doloriert et al, 2012). Both academic and interpersonal skills are valued by students as they expect that the supervisor will be able to advise them about the development of the required academic skills and understanding.

The pressure that developing their identity has on new supervisors who may feel isolated at the time they are required to take on this role, often shortly after joining academia or just after successful completion of their own studies, has been recognised (Lee, 2012). Such feelings were acknowledged by the supervisors in this study, who recognised the need for better preparatory systems and materials for their colleagues.

This study enabled colleagues to undertake reflexive consideration of their practice over an extended period, during which they were undertaking supervision with students. Several supervisors explained that these reflections *within* practice enabled them to become more aware of the approaches they had taken previously, and they found it useful to reflect on how their supervision style might differ from that used by others. The clarity of the messages about supervision that emerged offer insights into the pedagogy of supervision and provide useful guidance for those who may be taking on this role.

Limitations

The nature of the action research approach which underpinned this study has meant that it focused on the practice of academics from two specific departments, within one university. Some elements of the key messages may only be applicable to the professional disciplines of the supervisors involved in the study, but there is resonance with the wider educational literature, which merits further exploration as to their relevance to a wider range of disciplines.

Conclusion

An action research approach enabled colleagues to access tacit knowledge of supervision through collaborative working, facilitated by an academic development lead. The resources which were developed disseminated this new knowledge while helping to enhance a sense of academic community. The key messages articulated through this study are based upon the recognition that supervisory expertise is not a static body of knowledge. They offer insight into the challenges and complexities involved in supervision that may be helpful to supervisors as they guide students through the master's dissertation journey. We suggest that they can be of value to other supervisors as a resource on which they can base their reflections *in* and *on* their practice, but also as an illustration to explain their role to students throughout the process. As such, we believe that the key messages contribute to the established knowledge on supervision and are of benefit for future development of this academic practice.

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