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Roisin Donnelly

Technological University Dublin, roisin.donnelly@tudublin.ie

Marian Fitzmaurice

Technological University Dublin, marian.fitzmaurice@tudublin.ie

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Development of a Model for Blended Postgraduate Research Supervision in Irish Higher Education

Roisin Donnelly, Dublin Institute of Technology; Marian Fitzmaurice, Dublin Institute of Technology.

Corresponding author: roisin.donnelly@dit.ie

Introduction

By tradition, postgraduate supervisors work with their students on an individual basis. However with increasing numbers of part-time and international students, and the current resource challenges being faced by Irish higher education institutions, supervisory relationships are now likely to be conducted in a more collaborative and connected way and new approaches are being developed to cope with the expanding student numbers, and the diminishing ratio of supervisors to students. Indeed, the recent National Strategy in Higher Education to 2030 calls for the sector to innovate and develop if it is to provide flexible opportunities for larger and more diverse student cohorts (DES, 2012). Sustainability is important in this initiative, specifically for continuing to build research capacity on Masters' programmes and to promote the value of the 'cascade' effect of group feedback in the supervision process. This effect of the link between feedforward and feedback amongst fellow students and supervisors will be discussed in more detail in a subsequent section of the chapter.

While collaborative study groups are by no means new to postgraduate supervision, and there are numerous variations of supervisory groups that might be possible, a Blended Group Supervision (BGS) Model used across two programmes – the MSc Applied eLearning and the MA in Higher Education in the Dublin Institute of Technology – is explored in this chapter. Alongside the recognised economic advantages afforded by group supervision, pedagogic reasons for introducing the model centre on overcoming the sense of isolation that can often be a key feature for many postgraduates, even for those based in the same institution as the supervisor. The principles of Connectivism are used to explore group supervision for encouraging the exchange of ideas, and mentoring of students in relation to good practice in the research process and inducting them into the academic community. The introduction of a community of support for students from the outset of the programme has been shown to have an impact on the students' writing processes and facilitated the students' enculturation into the particular discipline. From the supervisors' perspective, group supervision enables the development of supervision skills and overcomes feelings of seclusion which can also be an issue for supervisors, as often the only opportunity research supervisors have to discuss the supervision process is at assessment and moderation stages. The chapter concludes with a proposed model to support BGS based on evidence with regard to the function group supervision can serve in higher education. It is hoped that this model will encourage other supervisors to interrogate their own supervision in light of the practice of colleagues.

This chapter has emerged from the discourse on sustainability, specifically that Irish higher education needs an alternative model of postgraduate research supervision to sustain the demands for Level 9 and Level 10 programmes from all learners including professional and adult learners. Undoubtedly, the practice of postgraduate research supervision has been developing over the past number of years in Ireland and elsewhere. Indeed, in some of the key higher education journals, recent conversations have been emerging on specific issues such as alternative supervision practices (Dysthe et al., 2006), Masters and Doctoral supervision experiences (Franke and Arvidsson, 2011). Despite this, Petersen (2007) has argued that postgraduate supervision, while heavily researched from an effective practice perspective, remains essentially an under-theorised field.

While much research has focused on doctoral supervision, this chapter aims to explore supervision practices at Masters level for professional learners in a higher education institution in Ireland. Certainly some of the key issues that have emerged in the literature on supervision at doctoral level are relevant to the case of two-year Masters research programmes also. Important factors for the supervisor of both levels include avoiding conflict of interest between themselves and their student, as well as experiencing the possibilities of having heavy workloads which can disrupt the level of supervision. This is especially important as the number of students being supervised is increasing, and due to diminishing available resources, the ability of individual staff to carry out their other duties is becoming more constrained. All this can result in less time being available for supervision of each student and the quality of their supervision experience perhaps suffering.

Postgraduate research student supervision involves a lengthy personal and professional relationship between student and supervisor, where the supervisor must help the students acquire research skills and expertise without interfering with their intellectual and personal development, and even their enthusiasm and interest which brought them to the research in the first place. Within this process, the value of collegiality in postgraduate supervision cannot be underestimated. Traditionally, when one envisages the research supervision process, it is conceived primarily in terms of a one-to-one relationship with a supervisor. In today's busy academic environment, with supervisors having many diverse demands from their practice, less time can be spent on individual postgraduate supervision than is ideally possible. The demanding supervision process is made more complex by the increasing numbers and diversity of today's graduate students. Wisker et al. (2007) argue that with increasing numbers of part-time and international students, supervisory relationships are likely to be conducted at a distance as students study alongside other commitments. Isolation can often be a key feature for postgraduates, whether based in the same institution as the supervisor or not, and more particularly for international students or those studying at a distance. It can also be an issue for their supervisors.

Previously what had been regarded by academics as a private space has moved to welcome the potential of collaboration and, as Hammond and Ryland (2009:17) report, has shifted to 'being more visible, more open for discussion, reflection and negotiation'. With the dramatic increase of learning technologies available in higher education today, what has been described as a lonely endeavour by students and

supervisors alike, need not be so. Cullen et al. (1994) argue that supervision should be conceptualised to encompass a broad view of postgraduate education that includes more than the one-to-one interaction of student and supervisor. They believe that there is a need to go beyond individual supervisory interaction and restructure practice to ensure that responsibility for quality is shared and co-ordinated.

Through the use of blended group supervision (BGS), where students can utilize group feedback to develop independence and increased ability to self-assess through virtual peer learning, these supervision issues can be tackled. Specifically from the supervisor perspective, group supervision tutorials can be useful for exploring the 'teaching' aspects of supervision (conceptual and theoretical issues, research methods, academic writing formats, genre demands, and quality criteria). This chapter introduces a model of BGS that can create a research community of support both for students and for their supervisors, building upon an effective social and intellectual climate for postgraduate research.

The purpose of this chapter is to offer supervisors guidelines on how to unify the use of relevant learning technologies and group supervision at postgraduate level in order to provide more effective support for students in what has previously been considered a solitary form of study. The chapter begins with an overview of the context of the two Masters programmes, the MSc Applied eLearning and the MA in Higher Education, and is followed by a discussion on the development of a model combining group supervision tutorials, virtual peer learning sets and individual supervision. This model, which has been tested within a professional development context is built on critical feedback which is available to allow future iterations to develop. We argue that this is one viable approach to meet the challenges of sustainability in research supervision today, and it has potential implications for supervision practice across all disciplines.

Context and Rationale

Research supervision takes place in the second year of both part-time Masters programmes. The students on both programmes are either educators in different disciplines and higher education institutions or consultants/trainers from industry settings. Essentially, these participants were interested in exploring and developing learning, teaching or eLearning within their professional practice. There were different assessed outputs from the second year of each programme – an eLearning project applied to practice, a journal paper and an ePortfolio for the MSc Applied eLearning and a thesis for the MA in Higher Education. There was also a weekly forum in the Blackboard virtual learning environment (VLE) for discussion and critiquing of journal articles and the sharing and highlighting of local, national and international conferences and resources in the fields of learning, eLearning and applied educational research. In future iterations of the programmes, it will be useful to explore the potential of Open Educational Repositories (OER) which are discussed in this book, in the chapter by Ann Marcus-Quinn.

The majority of the participants in this study were new to the field of educational research and the academic research community. There was a sense that they could benefit from increased intellectual support to enable them to think, learn and

research in ways that were new to them and to explore puzzling questions and issues within the research culture and the specificity of their own professional practice. It was important that research supervision on the programmes underscored the interconnectedness of the academic and practice realms in higher education. The majority of the supervisors on the programme were experienced at Masters level supervision, each having previously supervised over twenty taught Masters.

At a social level, learning and indeed research involves interacting with other individuals, and increasingly technology. This chapter describes context-specific research on postgraduate supervision, which explores general principles in supervision and also focuses on improving supervision practice in its local settings. Learning and research involve interacting with other individuals. Specifically, this research is concerned with discovering what, if anything, is transferred during the interactions between two, three or more postgraduate research students and their supervisors in group setting.

Development of a Model for Blended Group Supervision: introducing Connectivism

Group supervision with students at Masters level has been undertaken previously and successfully. Pearson (2000) discusses group supervision as a strategy for reducing isolation, supporting students, encouraging the exchange of ideas, and mentoring students in relation to publishing and job-seeking. Qualitative phenomenological research by Samara (2006) and Dysthe et al. (2006) reveals that supervisor development skills can be enhanced by this approach which also has an impact on the student writing process and their enculturation into the discipline. Group supervision work at the University of Ottawa has proved successful in the context of counsellor professional practice (Paré et al., 2004).

Kandlbinder (1998) examined a group of supervisors at the University of Sydney who undertook training in a variety of methods to improve their supervisory practices. These methods included training supervisors to use Internet resources, involving them in group workshops and holding peer discussion groups and reviews on supervisory practices. This change in supervisory practices was developed in response to the concerns of students that the quality of supervision was inadequate. Arguably, it is also not too far removed from the 'learning circle' strategy employed by Manathunga and Goozée (2007) at the University of Queensland to contend with the concept of private pedagogical space in the context of supervisor training.

Blending the use of technology with face-to-face postgraduate supervision has been developing apace in recent years. Although conducted in the area of distance education for Doctoral students, the work of Rodger and Brown (2000) with a focus on sophisticated ICTs to support informal social networks is interesting in the context of this present research. Interaction with the students using ICT resources and resultant discourse about these resources is central to learning. Other fields have benefited from supervision being supported with the use of technologies; for example Wright and Griffiths (2010) explored the experience of using both real time and asynchronous communication tools to supervise on a counselling programme at a distance. Technologies are also regularly used to support both on and off-campus research students and there is an expanding literature on advising off-campus

students (Manathunga, 2007). The key issues facing such remote students can be summarised as social isolation, difficulties in accessing the research culture (intellectual isolation), lack of access to resources, lack of face-to-face interaction with supervisors, and difficulties in maintaining a balance between work, study and family. These specific challenges can be addressed with the use of appropriate technology and such support needs to be pedagogically sound. Therefore, as a subtle and demanding form of 'teaching', blended group supervision can benefit from exploration theoretically.

Connectivism has been heralded as a theory for the digital age (Siemens, 2004), and was seen as a fresh way of conceptualizing learning in the last decade. It was considered useful to explore the pedagogy of group research supervision in this chapter through the lens of connectivism, where control is shifting from the supervisor to a research student who is becoming more autonomous. Clearly, all forms of teaching and learning, including research supervision, are being impacted though technology. Connectivism recognizes the significant trends in learning contexts that both include informal aspects and the influence of technology on thinking processes.

Key principles of connectivism that inform the process of blended research supervision on the programmes are that:

- learning and knowledge rest in diversity of opinions;
- learning is a process of connecting specialized nodes or information sources;
- nurturing and maintaining connections is needed to facilitate continual learning;
- the ability to see connections between fields, ideas, and concepts is a core skill;
- currency (accurate, up-to-date knowledge) is the intent of the group supervision process and activities; and
- decision-making is itself a learning process.

We would argue that the combined principles of connectivism emphasise the capacity of our postgraduate students to be active autonomous learners.

Connectivism could be seen in practice in three stages on the programmes: at individual supervision level, group supervision and in virtual support sets. Siemens (2004) has posited that a connected community is the clustering of similar areas of interest that allows for interaction, sharing, dialoguing, and thinking together. Indeed, Cormier (2008) acknowledges that connectivism enables a community of people (working with learning technologies) to legitimize what they are doing.

To improve the existing research project supervision on the two Masters programmes, a three-layered approach combining individual supervision, face-to-face themed supervision groups and virtual student peer supervision sets was introduced. It was intended that each of the three methods would supplement the others and help participants complete their studies on time.

Figure 1 illustrates the blended supervision model on the programmes including the different stages of the educational research process and the accompanying

technologies used to support each stage. This model enables the research and learning to be closely connected throughout the entire supervision process.

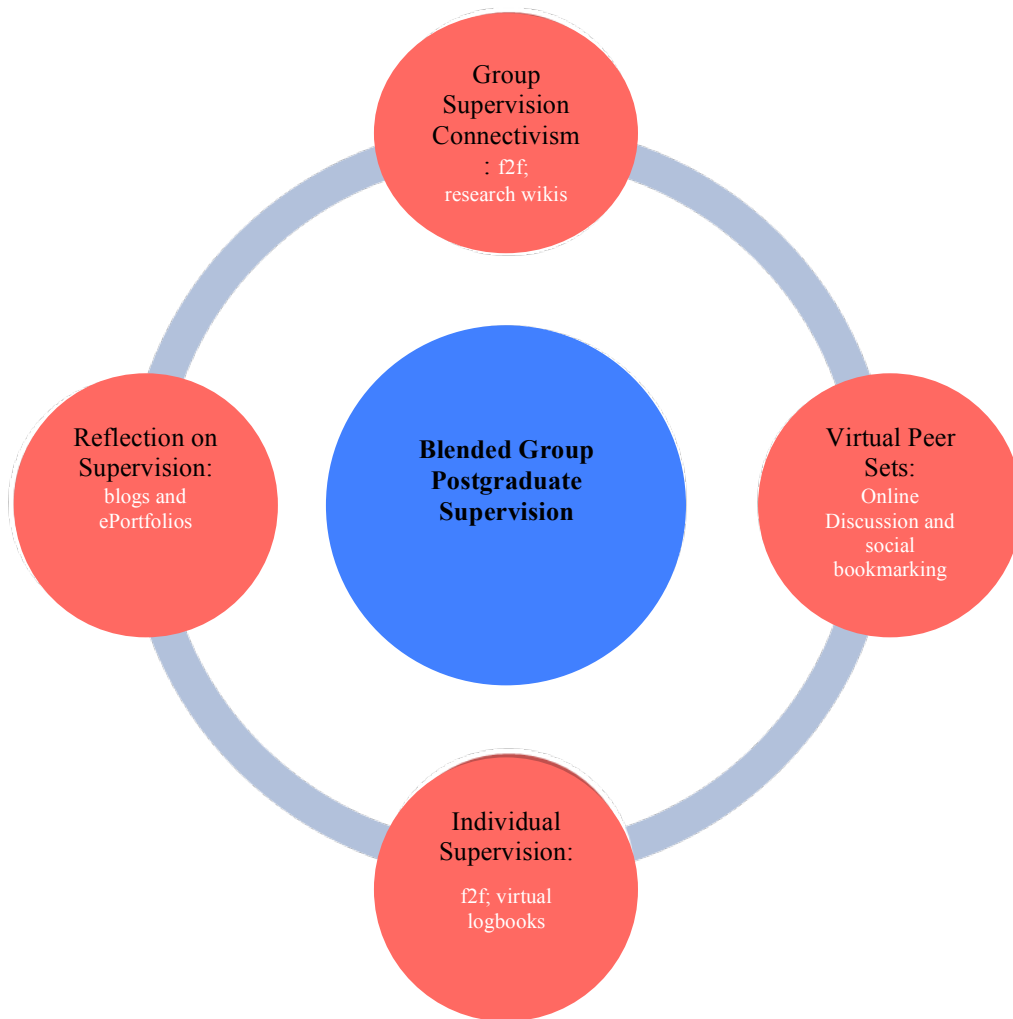


Figure 1: Towards a Blended Group Supervision Model for Postgraduate Education

Individual supervision

This adhered to institutional regulations and was aimed at providing specific advice on the research project/thesis and supplying the necessary quality assurance. These individual face-to-face (f2f) supervision practices included specific dialogues between the student and the supervisor (institutional routines, the use of resources and repertoires and ways of thinking, talking and acting). Online logbooks were then used to record a basic framework of meetings between the student and supervisor. These were established in the virtual learning environment, Blackboard, as private discussion board topics. Although the use of research online logbooks is far from new as a practice in research supervision, in the context of these programmes, the logbooks proved invaluable for reflecting on the dialogue between the student and supervisor and allowing flexibility through their asynchronous nature.

Supervision groups

Consisting of two or three supervisors and their Masters students meeting face-to-face based upon similar project themes/methodologies (scheduled to meet 2-3 times per semester). These tutorial meetings were focused on the project scope, research process and issues in academic writing common to all students. Their purpose was to provide personal and disciplinary support for the students and enable them to better appreciate their project progress, along with helping them address specific common problems spanning the data collection and analysis phases of a research project/study. Similar to Alison Clancy's chapter in this book where the cross-pollination of ideas is prevalent, the exchange of ideas and perspectives on academic knowledge exposes the students to different intellectual challenges, as well as allowing them see how different supervisors reason, argue and give feedback on the research project. Students could also provide inspiration to each other when needed. During each group tutorial, all students presented their work for feedback; in advance of the tutorial, all work was emailed to the rest of the group, with 2-3 areas highlighted on the key issues on which they wished to receive commentary.

The aim was to provide diversity in feedback and peer review on student work along with what Dysthe et al. (2006) call enculturation into the research discipline. Multiple readers of the presented work provided critical opposition and thus helped develop the students' ability to handle different perspectives in their research project. The process provided opportunities for dynamic, interactive, free-flowing discussion and feedback from each student's own supervisor and at least one other supervisor. As the virtual learning sets and the supervision groups both acted as a first filter for work, the text then handed into the individual supervisor can often be a more polished draft.

Research wikis were established by a number of the students themselves as an organic form of engagement with each other and as a collaborative layer to encourage the participation of other researchers; these were preferred by some of the more technically engaged students over email contact as a way to form communities of interest in their specialist projects and seen as a fertile workspace for their research ideas. In terms of meeting the challenge of sustained wiki engagement i.e. managing to encourage further student update of the research wiki, it is anticipated to use the insights of the active few who began the process and who commented favourably on the time-saving aspects of the technology. These insights focus on the usefulness of research notes taken using the wiki which were immediately available for other group members to view and develop, and which they felt enabled them to spend more time collaborating, and less time managing their collaboration tools.

Virtual peer supervision sets

These included all Masters students in the same small groups as the face-to-face sessions. It was integral to the impact of these sets that investment was made in establishing mutual trust amongst the students as part of the face-to-face programme inductions as it is acknowledged that peer exchange is rooted in existing relationships and a certain degree of reciprocated trust. We established early on that peer exchange necessitates a minimum shared knowledge of the context so as to make sense of what peers have to say about their work and that it requires a will to learn on the part of all the students. That will to learn implies that students need to

be able to admit that they do not know all the answers, which, in turn, requires there to be mutual confidence and a relatively non-threatening atmosphere within the virtual peer set.

Studies in the US (Lovitts, 2001) have shown that all research students require both social and academic integration in order to successfully complete their research studies in a timely fashion. Creating opportunities for social and academic interaction with supervisors, with other students, and with the institute's broader research environment is of vital importance. By providing personal support, the virtual peer sets, which were based on openness and personal commitment to one another, helped students develop the ability to combine criticism with support and also served as a first filter for research ideas and shared resources. The emotional side of carrying out and writing a research project is usually privatised and often under-communicated; consequently, in this study, the students were encouraged to exchange experiences and frustrations, and discuss research-related issues. The mutual trust established at this juncture was an important prerequisite for the effective functioning of the group supervision. Emilsson and Johnsson (2007) reported that group supervision sessions were distinguished by an open-hearted manner and communicative frame of mind by all involved, which they interpreted as trust. Similarly, Carroll et al. (2008) see as the crux to engaging learners in an online environment the creation of a place where people feel comfortable, trusted, and valued.

However, technology can present its own challenges to the research supervision process. While the availability of technology can address resource issues, at other times it can be a major source of frustration (Hedberg and Chorrent-Agostinho, 2000; Youngblood et al., 2001). Pearson (2000) argued that in some cases, both supervisors and students have limited training or knowledge of specific software programs needed for their studies. However, in this age of electronic communication, interactions using technology should be at least as robust as many of those conducted face-to-face, and this remains the case to this day.

It is essential from the outset to establish for all supervisors and students, what access they have to the tools and media being proposed. Early on in the blended design for the programmes, it was considered useful to map out what the technological environment would be like. As part of the study, it was important to investigate how well the supervisor and student could exploit the virtual communications available to them. Sussex (2011) argued that the web can mask student characteristics and skew communications. He reported that a combination of media, involving maximum immediacy and personal interaction combined with recording for later review, has been shown in practice to yield the richest and most flexible supervision.

In the collaborative environment provided by the virtual peer learning sets, choices needed to be made amongst the students themselves as to how they would manage time, set their own learning goals, find resources, and try out new tools and make them work. Arguably, while still in relatively early stages of development, technology is permitting new ways of seeing information and impacting interactions. Over a decade ago, Evans and Pearson (1999) made a case that supervision needs to be delivered in a more flexible manner for part-time students such as those on these

programmes. As in this study, de Beer and Mason (2009) utilized the online infrastructure to keep all records and logbooks pertaining to the students online, with the online documentation becoming dynamic evidence of the research process. The use of logbooks in supervision has had a long history. Yeatman (1995) recommends the log to manage the process of negotiation positively without administratively overloading the process. The log entries serve as a basis for clarifying diverse perceptions and clearly setting out what is achieved and agreed upon at each session.

There has been useful research conducted on the disadvantages of fully online supervision. Alterkruse and Brew (2000) listed lack of human contact, limited opportunity to view non-verbal communication, and limited bonding between supervisor and student. McConnell (2005) has produced seminal work on the use of technologies to support communities for learning purposes. While not specifically referring to group supervision, he argues that it is all too easy to include group work in a collaborative learning design, on the assumption that the technology itself will support the work of the group. However, while email and online discussion boards can be helpful, research students also need to be able to bounce ideas off supervisors, reading their verbal and non-verbal reactions as they go and developing extended interactions between one another. Arguably, these dimensions are missing from supervisor-student interactions that do not take place face to face.

As Moriarty et al. (2008) posit, continuing to grow access to the academic research community is another important issue for students. Wright (2003) identifies isolation from the community and the support networks it creates as a major problem for flexible learning for postgraduate students. Although in the related fields of remote supervision and distance education, Hartley et al. (2001) suggest that, when considering the possibility of study, students should create their own support networks with staff and peers to reduce the possibility of isolation. Kabay (2004) discusses a UK university's establishment of an online portal to increase the sense of belonging to an academic community for remote students. Early studies such as Stacey's (1997) identify the establishment of university online discussion forums where students can discuss their research with each other as another useful tool in making students feel a part of the community. Stacey found that both students and staff regarded the online facility as an invaluable resource in helping them to feel motivated to continue with their studies. Similarly, Wisker et al. (2003) reported that students enjoyed using electronic bulletin boards and discussion lists to talk with their fellow students and staff and thus feel part of the academic community. More recent studies such as Jones et al. (2011) and Crossouard (2009) suggest that such uses of technology for supervision are now commonplace with the latter reporting findings on the use of email for tutor's formative assessment in the early stages of postgraduate supervision.

Promoting Connectivism within Group Supervision

Adhering to the principles of connectivism was key for a positive climate of learning within the supervision process. The challenge was to move toward a space that aggregated content and to imagine it as a community, a place where dialogue happens, where students feel comfortable and where interactions and content can be easily accessed and engaged with, a place where the personal meets the social

with the specific purpose of learning. However, for this trust to grow, as with any new initiative, promoting the benefit of the approach to those who will be undertaking it is important. This can best happen at the start of the programmes by making clear to the students the value of participating in all three supervision approaches. To maximize their participation, students were shown how to engage in peer review of the projects, which can provide a systematic way of developing shared knowledge and interest among them for each other's work. Similarly, as the giving and receiving of feedback is core to the process of group supervision, training in feedback strategies was provided in order to give the students the tools they need to comment on each other's work. This is of course integral to the introduction of any new supervisors to the process also.

In addition, at the beginning, and crucial to the climate of the sessions, the team emphasised the importance of personal commitment to all students – especially to their supervision group (mutual obligation, regular attendance and thorough preparation needing to be built in). From a logistical point of view, it was important that clear routines should be established early on – supervision groups require a rigorous framework regarding frequency of meetings, work delivery, type and length of submissions, feedback, and discussion on how best to communicate. Realistic time allocation plays a key role in the three forms of supervision; this is vital in order to avoid overloading students and supervisors. The use of time should be monitored and discussed, the purpose of each forum clearly defined and understood by all in advance and work for discussion on the eLearning projects carefully selected to provide common points of interest for all. Additionally, the value of multiple perspectives needs to be recognized in terms of the advantage of having supervisors who belong to different research traditions coming together in the same group. In this way, divergent voices, multiple perspectives and critical thinking are more likely to occur and students need to be encouraged to see any disagreements as productive.

From a connectivist perspective, the opportunities provided by digital resources can be effectively harnessed to enrich the supervision dialogue, but this requires different thinking about effective supervision practices. Undoubtedly, there will continue to be ongoing challenges with the use of technology in the supervision process. Pearson and Ford (1997) and Pearson (2000) emphasised the importance of supervisory practices changing to suit the varying needs of students studying by flexible learning modes. Having the use of virtual peer supervision does provide clear benefits for dialogue; as far back as 1997, Beattie and James argued that the use of electronic communication where students and staff were required to use technology to talk to each other resulted in some students having more confidence to raise issues and discuss problems than they may otherwise have had in face to face situations. However, challenges still persist: Pearson (2000) discussed the difficulties supervisors faced in adapting to using new technology to communicate with students in flexible modes of learning, and argued that successful supervision in flexible learning still involves some traditional methods such as occasional face-to-face meetings. She argued that a mix of traditional and newer supervisory methods must be used for the best kind of supervision to occur. More recently Mason (2011) explored student engagement with an online discussion forum and reported negative findings. Students understood the benefits of the task, but did not participate due to time pressures and lack of motivation. The reasons for this were found to be

inadequate explanation and encouragement to do the task, and insufficient moderator participation.

Key Issues for Supporting Group Supervision

In each of the three approaches, it is important to find a balance between free dialogue and systematic and prepared feedback. In our discussion boards in Blackboard, there was a tendency for most students to share their learning and work with each other; honesty was core to this (there were instances of students posting 'I don't understand' to each other, without a sense of awkwardness or embarrassment). Peers encouraged each other to reformulate ideas, ask questions, and build confidence in their applied research. All this pointed towards the virtual space being seen as a sanctuary for their work. However, in the face-to-face group supervision tutorials, there was, to an extent, a sense of anxiety of sharing unfinished work. To counter this, at the beginning of each tutorial, supervisors found it useful to introduce some models for feedback such as peer response strategies. This was complemented by a balancing of support and critique by peers and supervisors alike, with many suggestions and new ideas for research being discussed. Finally, supervisor feedback in individual supervision sessions focused on the regulations, the end product of the modules, the overall structure of the project and on all levels therein, on revision within the confines of thesis writing, and on when the project/thesis had reached postgraduate level.

As Brew and Peseta (2004) have observed, supervisory styles are often based on the supervisor's own experiences of being supervised. This can work in either direction, with them using it as a model for their own supervision or as something against which to react. Further work is needed on the programmes in helping everyone involved more fully to understand that a range of supervision strategies can be important and that forms of co-supervision can be helpful if the roles are clearly allocated.

Making direct use of several supervisors in a group setting enabled the nurturing and maintaining of connections for the students. This was very important for facilitating continual learning. Although supervisors made their own connections between ideas and provided current knowledge in the field in the individual sessions, it was the potential of being able to capitalise on the multiple supervisors' ability to see connections between fields, ideas, and concepts as well as provision of currency (accurate, up-to-date knowledge) which was the added value of the group supervision process and activities. A direct advantage was that students learned more about the nature and structure of their own and each other's project at its various key stages.

Diverse opinions were typically expressed through discourses and clarified, contested, and refined through critical dialogue in the supervision tutorials. Often, sense making was performed through continuous discourses that co-constructed and negotiated meaning on a project idea. While the students reported the benefits accrued from positive peer feedback on their projects, when looked at within a connectivist framework, learning and knowledge emerge from diversity of opinions. This diversity was most easily recognised by the modelling of critical thinking on the topic by the supervisors in the group tutorials. Through exposure to the supervisors'

expertise and experience, the students claimed to have learnt to think more critically. This manifested itself in their changed understanding of the knowledge base on their research topic, and in developing the ability better to contextualise and evaluate information from the variety of sources that they were drawing upon for their projects.

Peer learning in the context of research supervision has featured explicitly in postgraduate supervision for some time. Boud and Lee (2005) argue that peers can and do learn from each other while supervisors learn with and from students, through such processes as learning by being challenged, becoming aware of new literature and resources, and through exposure to new data.

However, one of the remaining challenges of blended supervision from the supervisor perspective is the cost-effectiveness of the practices. There are examples of claims that group supervision is more cost-effective than one-to-one supervision, with de Beer and Mason (2009) viewing blended learning in a postgraduate supervision context as a possible solution to the supervisor resource problem. They report on using a blended approach to facilitate postgraduate supervision with the intention of reducing research supervisors' workloads and improving the quality and success of Masters and Doctoral students' research output. Their findings suggest that the supervision process was improved with a blended approach, the administrative workload of the supervisor was reduced, and a dynamic record of the supervision process was created. They argue that the results to date imply that traditional supervision practice needs to be revisited and modified to include digital procedures. We would argue that in the future, there is a need to discuss in advance the distinct advantages of group supervision that are not offered by having one supervisor alone; this has not always been clear to supervisors. We would also emphasise that while the connections made between ideas in the provision of specialist knowledge by one supervisor alone are important, the group tutorials allow this to be further developed.

6 Ps: Recommendations for Introducing Group Supervision

The following section offers guidance for introducing group supervision to a programme drawing on the lessons learnt from the research.

Attribute	How to support the introduction of group supervision
Positive Climate	Essential to cultivate a positive climate of learning within the supervision process: think 'community', a place where dialogue happens, where students feel comfortable and where interactions and content can be easily accessed and engaged with.
Promote Trust	To grow a sense of trust (as with any new initiative) it is important to promote the benefit of the approach to those who will be undertaking it. This can best happen at the start of the programme by making clear to the students the value of participating in all three supervision approaches.
Peer Participation	To maximize their participation, students need to be brought through how to engage in peer review, which can provide a systematic way of developing shared knowledge and interest among them for each other's work. Similarly, as the giving and receiving of feedback is core to the process of group supervision,

	it is useful to provide training in feedback strategies in order to give the students the tools they need and how to comment on each other's work. This is also integral to the introduction of any new supervisors to the process.
Personal Commitment	At the beginning, and crucial to the climate of the sessions, it is useful to emphasize the importance of personal commitment to all students – especially to their supervision group (mutual obligation, regular attendance and thorough preparation needing to be built in).
Perspectives	The value of multiple perspectives needs to be recognized – the advantage of having supervisors who belong to different research traditions coming together in the same group. In that way, divergent voices, multiple perspectives and critical thinking are more likely to occur. Within this, students should be helped to see any disagreements as productive and not threatening.
Practices made explicit	From a logistical point of view, clear practices and routines should be established early on – supervision groups require a rigorous framework regarding frequency of meetings, work delivery, type and length of submissions, feedback, and discussion on how best to communicate. Realistic time allocation plays a key role in the three forms of supervision; this is integral for avoiding overloading students and supervisors, and the use of time should be monitored and discussed, the purpose of each forum clearly defined and understood by all in advance and work for discussion on the students' work carefully selected to provide common points of interest for all.

Conclusion

This chapter seeks both to promote further discussion about blended postgraduate supervision and offer the practitioner a foundation on which to facilitate a connected supervision experience. The primary goal in working with postgraduate supervisors and their students is to support an intellectual process of close examination of the connections between supervisory strategies and actions, and the technology being used to support them. Key to this is making explicit the rationale and intentionality underlying those connections. In a world increasingly shaped by socially-driven online interactions, postgraduate supervisors have a vital role to play in building and maintaining supervision communities in which students are both supportive of and feel supported by their supervisor and their peers. Such initiatives have the potential to make them feel a valued part of the community and enable them to make contacts with a larger community within the scholarly world and the world of practice. There is scope for future research on this topic, specifically exploring the impact of blended supervision in specific academic disciplines and on its role in supporting students' timely completion of their postgraduate studies.

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