

OPPORTUNITIES AND COMPLEXITIES OF TWO SYNCHRONOUS DISTANCE RESEARCH SUPERVISION MODES

Namrata Rao, Anesa Hosein & Cath Mazuro, Liverpool Hope University, UK
Email: raon@hope.ac.uk

Abstract. Research supervision is a process of fostering and enhancing learning, research and communication at the highest level (Laske & Zuber-Skerritt, 1996). Hasrati (2005, p. 557) argues that supervision is ‘crucial’, ‘pivotal’, ‘at the heart of most research training’, ‘at the core of the project’, and also, ‘the single most important variable affecting the success of the research process.’ Whilst a good deal of student supervision takes place at the face-to-face level, there is a growing trend towards more innovative and technology-oriented approaches, particularly with distance students. This can pose both opportunities and complexities for supervisors. This paper reviews and examines a range of communicative styles that different types of supervision afford. Following, the findings of two case studies are presented which explored the perspectives of supervisors who used verbal and non-verbal synchronous communication approaches when supervising students online.

Keywords: Research supervision; distance learning; synchronous online supervision

JEL classification: Z000

1 Introduction

It is widely acknowledged that the advancement of information technologies will revolutionize the future of global education (see for example Hanna, 2000; Evans Nation, 2000). Advancing technologies have provided greater opportunities for increasing numbers of students to study in virtual learning environments, reducing the constant need for actual physical presence in the classroom. Furthermore, technologies create opportunities for additional levels of support, these that can complement traditional face-to-face interaction. The research supervision process has also been influenced by these developments, and there is now a burgeoning trend towards virtual styles of supervision, whether these form a part, or in some cases all of the tutor-student supervision communications. There is no doubt that the provision offers certain benefits in that it offers a much more flexible learning space, reducing geographical boundaries and increasing opportunities for communication. However, given the range of communication types (for example synchronous or asynchronous) and the range of learning preferences that students may have, it would be unwise to suggest that the benefits are universal. This paper presents two case studies of supervisors who were involved in a dual model of research supervision with both undergraduate and postgraduate students. Both face-to-face and virtual (synchronous) supervision methods were used, and the extent to which of these approaches were found to facilitate or impede the research process is examined. The perspectives of the two supervisors on the challenges of this particular approach are discussed.

2 Literature Review

2.1 *What is research supervision?*

Franke (2002) points out that research supervision can be regarded as a knowledge and relational process between the student and supervisor, where the student is given the opportunity to acquire the knowledge and skills needed to be able to work as an independent researcher. It is a process of fostering and enhancing learning, research and communication at the highest level (Laske and Zuber-Skerritt, 1996). As Hasrati (2005, p. 557) notes, ‘Supervision is said to be ‘crucial’; ‘pivotal’; ‘at the heart of most research training’; ‘at the core of the project’; ‘the single most important variable affecting the success of the research process.’ It has been acknowledged that a sound pedagogical relationship between supervisor and student is vital (Crawford Seagram, Gould, and Pyke 1998). Close interaction between supervisor and their students, with regular meetings; contribute to them completing their theses more quickly (Elmholtz 2003).

2.2 *Types of supervision: face-to-face Vs online (synchronous and asynchronous)*

Supervision has been classified into various types. The more conventional form requires formal face-to-face interaction with the supervisor. According to Anderson (cited in Jamieson and Gray, 2006) different supervisors adopt different approaches to mentor their students that could be placed along two continuums between active and passive, direct and indirect. Direct-active supervisors tend to initiate contact, set up scheduled meetings, and exercise a directive role; indirect-active supervisors encourage students to make contact when they need it and provide advice, seek student's opinions, explanations and justifications; indirect-passive supervisors adopt a listening, non-directive approach, waiting for students to think things through and solve their own problems. A balance needs to be struck between student support and autonomy, so that the student can be encouraged to think and become an independent learner and researcher (MacKeogh, 2006).

With technology becoming an ever more significantly entrenched aspect of the learning environment, more and more students are being encouraged to adopt e-learning strategies. Supervision itself is being transformed, and it seems that online supervision is growing in popularity among both students and supervisors because of the flexibility it offers. Supervisors can now communicate with and mentor their students through a range of media for example emails; SMS, Skype, MSN messenger as well as tele/video-conferencing and blogs (Pearson and Ford, 1997; Sinclair, 2004). The use of technology to bridge space and time pushes the relationship into new ontological and pedagogical spaces leading to a reconfiguring of absent presence into "virtual presence" (Evans and Green, 1995:5). Both blended (combination of face to face and online) and exclusively online supervision modes are being encouraged. However, online supervision modes can be synchronous and asynchronous. Asynchronous supervision involves a time lapse in the communication process; messages are posted and responses are given at a relatively later point in time. Synchronous supervision involves virtual contact via a network interface and is immediate. It may involve instant messaging (e.g. Google 'talk') or virtual face-to-face interaction (e.g. Skype). This is an important difference, and throws up some key considerations. Firstly, a lapse in the response given to students could mean that the student has had time to work on their research question, therefore the tutors response may be irrelevant when it arrives. It may also lead to impatience in students if responses are delayed. However writing out the message offers the student time to think and reflect during the writing process itself, which could possibly lead to greater levels of autonomy and self-confidence. On the other hand, synchronous supervision offers real-time communication, and whilst it does at some level, afford much of the same features as face-to-face, it still, in the same way as asynchronous approaches, loses many of the contextual affordances and communicative signals that a physical conversation offers. Secondly, both approaches may typically depend upon the writing styles and skills of students and supervisors.

This paper presents two case studies of supervisors who were involved in a dual model of research supervision with undergraduate and postgraduate students. Both face-to-face and virtual (synchronous) approaches were used. The perspective of the supervisors is drawn upon and a discussion provided in relation to some of the technical, ethical and logistical issues that were encountered. These issues are compared to some of the advantages that were found, and a general discussion of this dual approach as a pedagogical strategy is discussed.

3 **Methodology**

The paper presents the case studies of two lecturers at a university in Northwest England who were involved with postgraduate and undergraduate research project supervision. The case studies were conducted with the participants over a one-year period. The conventional model of supervision involved face-to-face communication, however, in an attempt to allow flexibility for postgraduate students with other commitments, and also international and off-campus students, the model was tailored to help maximize opportunities for contact. This dual model (face-to-face and virtual) was also offered to undergraduate students whose circumstances were similar and felt that the model would suit them. It is noted that not all students 'chose' to take this approach, so findings may be limited to those who felt that this particular approach was more suited not only to their life circumstances, but also their individual learning styles and preferences.

This research forms part of a larger study, which intends to explore the perspectives of students and supervisors towards online and face-to-face supervision, with a view to develop a more research informed pedagogy of

supervision. In the present paper, case studies of two supervisors one who was engaged in synchronous online supervision using Google talk and the other using Skype for synchronous online supervision are presented. They were asked to comment on their experiences of the two synchronous online supervision modes and were given the following these key questions to provide focus (See Table 1).

Questions
1. Are there any advantages offered by online synchronous supervision (Google talk or Skype) for you as a supervisor? If yes, please comment.
2. Are there any challenges posed by online synchronous supervision (Google talk or Skype) for you as a supervisor? If yes, please comment.
3. In your opinion, does online synchronous supervision (Google talk or Skype) offer any advantages for the students? If yes, please comment.
4. In your opinion, does online synchronous supervision (Google talk or Skype) have any disadvantages for the students? If yes, please comment.
5. If given a choice, would you prefer online, face to face or a blended approach to supervision and why?

Table 1: Questions for the supervisors engaged in two modes of synchronous online supervision

The responses of the two supervisors were compared and contrasted. One supervisor (S1) used ‘Google talk’ whilst the other (S2) used ‘Skype’ for the synchronous online supervision sessions.

4 Results

4.1 Advantages offered by online synchronous supervision for supervisors

Some of the more pertinent comments given by the two supervisors are provided below to illuminate their experiences and the issues that emerged. Both acknowledged the flexibility offered by the synchronous online supervision sessions, in that it allowed them to maximize and organize their time more effectively. (S1) felt it alleviated some of the need for paperwork, which is necessary for keeping records of students’ progress. The electronic record generated as a result of the Google ‘talk’ could be stored and archived. S2 had similar comments about the process.

‘If there is a paper I recommended that they can read, but I vaguely recall it, I can immediately look it up and send them the link to the paper or the details of the paper. In face-to-face, the student would have to send me a message reminding me to send the paper details and I would only do it when I get time.’ (S2)

In addition, S1 felt this helped her in keeping track of the communication with the students without having to do any additional paper work by just reviewing the electronic Google ‘talk’ record.

‘The online Google chat automatically generated a record of the supervision sessions that I could revisit before the next session with the student. This was particularly handy in keeping track on what was discussed and the targets that were agreed in the previous session.’ (S1)

S2, working in shared office space, highlighted how she typically had to seek out and arrange alternative rooming in order to maintain privacy and confidentiality for face-to-face meetings. This could lead to many lost hours over the course of a term. In addition to this, it was remarked how students attending face-to-face meetings often forgot to bring along the required documentation/information with them to help support their visits. Already being at their computers for the synchronous sessions meant that they were more likely to have the materials at hand and could

retrieve them fairly quickly, thus avoiding delays and the potential need to arrange further follow-up sessions. S2 also pointed out the simplicity of being able to 'send' materials that she felt were relevant for the student to read.

4.2 Challenges posed by online synchronous supervision for supervisors:

As S1 and S2 were engaged into online supervision using Google 'talk' and Skype respectively, the nature of problems they encountered were slightly different. However, both agreed that reliability of the ICT facilities was key to the success or failure of such supervision sessions.

'One of the biggest issues is the technology failing. Sometimes, you cannot get a good internet connection (on either ends) or Skype won't sign in, or microphone does not work, and it means that the supervision session is spent more on ensuring that each other can hear the other person and debugging what computer problems might be wrong.' (S2)

Both felt that the lack of actual physical interface could sometimes lead to issues of conflicting and sometimes frustrated expectations.

'The lack of the face-to-face interaction and the absence of non verbal cues in supervision sessions on Google talk sometimes made it difficult for me to comprehend whether the student had understood my comments.' (S1)

'Sometimes it becomes difficult to explain to students exactly what is wrong with their writing without being there physically.' (S2)

As one of the postgraduate students being supervised by S1 was an international student who recognized that limitations in her linguistic skills could considerably hamper the communication process when using Google 'talk'. The facility requires that thoughts and ideas be articulated quickly and effectively. S1 also found that synchronizing times for these sessions could become challenging due to the difference in time zones. A more minor issue experienced by S1 was the asynchrony in posting responses across continents, which sometimes led to unpredictable delays.

4.3 Advantages offered by online synchronous supervision for students:

According to both S1 and S2 online supervision offers flexibility for the students as well; they could structure their supervision around the students' other study and personal commitments. This was particularly the case for mature postgraduate and undergraduate students.

'One of my postgraduate students worked as a full time teaching assistant and often found it difficult to come for the face-to-face supervision sessions. However, this option of being supervised online using Google-talk worked particularly well for her as it allowed her to structure her study schedule around her work commitments.' (S1)

'I think also the students do not have to waste the travel time in – they could use that time better. Also they are able to schedule meetings at unusual but mutually convenient times which is an advantage I think to the working students and students in different countries.' (S2)

S2 felt the students would benefit from the human interface of Skype and would not really feel too much at loss by missing the face-to-face session, as they are still able to see, hear and talk to their supervisor via Skype. S1 suggested that the electronic record of the Google talk session would be useful for the students to refer back to when acting on the feedback received for their work and this she felt was a distinct advantage over the face-to-face session where the students often lose focus in an attempt to multitask.

'I have often found that the students in face-to-face sessions in an attempt to record the conversation get distracted and don't grasp the feedback that is given. They come to me or email me with queries that might have been resolved in the previous session. This often leads to wastage of valuable time.' (S1)

4.4 Disadvantages of online synchronous supervision for students:

Both supervisors felt that some of the challenges they faced in supervising the students online via their respective communication types could be experienced equally by the students. According to S1, clarification of doubts could prove particularly challenging for students who might struggle to articulate their ideas in the limited cognitive space offered by the instantaneously nature of Google 'talk'. To communicate queries in a written form could often be more complicated for students than asking them verbally and therefore such students may benefit from a face-to-face supervision mode. S2 further emphasized that there are opportunities offered by face-to-face supervision, which students supervised by an online mode, may often be devoid of.

'Some students never get to meet their supervisors and perhaps a real rapport between the two may never develop. Unlike students in a university, these students would not have the research environment or the ability to "happen upon" their supervisor and ask questions.' (S2)

4.5 Preferences for online, face-to-face and blended approach for supervision

When both S1 and S2 were asked to comment on their preference for a supervision mode, both were in agreement that a blended approach was preferable.

'While both modes have their own pros and cons, I feel a blended approach would work best for me. The face-to-face session allows a better bond to form between the student and the supervisor, which can be sustained via online synchronous virtual supervision.' (S1)

'I think most of the times I would prefer a blended approach providing the student is okay with technology in general and tend to keep appointments online. I think it is important for the student to see their supervisor as a real-life person possibly once or twice a year but online supervision the rest of the time.' (S2)

Finally, even though the cohort consisted of undergraduates and postgraduates students no apparent differences were identified in the opportunities and challenges offered by the two synchronous online supervision modes.

5 Discussion

The results provide a starting point for analyzing the effectiveness of two online synchronous modes from supervisor's perspective and give some important clues with regards to how these are placed in comparison to the traditional modes of supervision. This is particularly important considering that there is already a shift in the supervision of distance students from traditional face-to-face supervision to synchronous virtual supervision in Australia (Andrew, 2012) and Ireland (MacKeogh, 2006). UK is following this trend (Heinze and Heinze, 2009); there is an increased pressure to identify more student friendly approaches to learning to enrich student experience and to keep pace with other quality providers in Higher Education around the world. Furthermore, an increased number of students wish to undertake their University studies around their work and family commitments due to financial constraints in the present times.

The results of the study revealed many advantages for the supervisors and students engaged in synchronous online supervision. The Google 'talk' and Skype are widely used and freely available. Therefore, this offers an obvious advantage to the use of these as interfaces for online synchronous supervision modes. These offer a flexibility in the supervision schedules in terms of time and space which has its implicit advantages both for the students and the supervisors making the process more time efficient. The appointments are much easier to arrange, re-schedule or cancel making the process more streamlined. Furthermore, it is easy to send or receive documents, if

needed, during the online supervision session to maximize the output. The use of Google 'talk' in supervision also helps in organizing the content of the online interactions by providing a log for future references. Skype on the other hand has the advantage over Google talk in that the supervisor could be virtually face-to-face with the student and the latter could benefit from the human interface, as they are still able to see, hear and talk to their supervisor. This would be expected to facilitate greater bonding and promote trust building between the student and supervisor. The physical presence of the supervisor may be vital to develop a sound pedagogical relationship between the supervisor and the student as Crawford Seagram et al (1998) suggest. Evans and Green (1995) have discussed the idea of 'virtual presence' when discussing the use of technology in online supervision. However, whether the virtual presence on Skype offers value similar to the actual physical presence of the supervisor needs further research. The 'virtual presence' in the face-to-face session can be considered to be more holistic where the student can see and speak to the supervisor whereas in the Google 'talk' it can be argued this virtual presence is of a more 'elusive' nature. Further, research needs to be done on how these differences in the nature of virtual presence can have an impact on the supervision process.

One of the main issues raised by online supervision is the replacement of the 'physical presence' with a 'virtual presence'. Whilst the knowledge aspect might be communicated, online synchronous supervision mode may lead to a compromise in the relational process, which Franke (2002) recognized as important to give the student an opportunity to acquire the knowledge and skills needed to be able to work as an independent researcher. The success or failure of these online synchronous supervision sessions is highly dependent upon on the availability of the necessary IT equipment and the comfort and confidence of the students and supervisors in using Google 'talk' and/or Skype. Both supervisors felt that face-to-face traditional mode provided better opportunities especially for students with limited communication, technological and linguistic abilities. There is a fear of dissatisfaction on both sides if there is a lack of such facilities and abilities. Whilst the ease of re-scheduling online sessions is an advantage, one could argue both sides may feel more at ease cancelling an online session as compared to a face-to-face session at short-notice. Those students who might have limited proficiency in written English would struggle to keep up with the speed on communication expected for a successful supervision session using Google 'talk', thus defeating the very purpose for which these sessions. The supervisor can readily provide supplementary materials including reference articles relating to the student's area of research during an online session. However whilst this may have saved time in terms of speeding up the locating and transferring of materials, it is at the same time questionable how far this could actually be impeding students in developing skills of information searching and selection. To continue along this line, it is perhaps worth setting boundaries so that students do not become overly reliant upon tutors providing this particular form of 'instant gratification'. Whilst the written communication of Google 'talk' session serve as a log for the session and the log of the Skype session can be maintained by recording these session one could argue whether this could raises any issues in terms of permissions of using these as minutes and recording these. However, taking appropriate permissions in advance probably can prevent this; students and supervisors could come to an agreement that is acceptable to both.

Both supervisors unanimously agreed that a blended approach was preferable to a sole face-to-face or synchronous virtual supervision as this allowed the best of both modes. Face-to-face interactions are key to promote a bond between the student-supervisor dyad. Once established, synchronous virtual modes of supervision like Google 'talk' or Skype can be used to maintain this relationship. Our findings are similar to those of Andrew (2012), Sinclair (2004) and Pearson and Ford (1997) who advocate the use of synchronous ICT technologies such as Skype, MSN messenger and video-conferencing. The study should be extended to a larger sample size to deduce more inferences.

6 Conclusion

Blended supervision, combining the benefits of both the face-to-face interaction and synchronous online supervision, between the student and supervisor should be adopted. Innovations in technologies should be embraced to further enhance distance learning and supervision.

7 References

- Andrew, M. (2012). Supervising doctorates at a distance: three trans-Tasman stories. *Quality Assurance in Education*, 20 (1), 42-53.
- Crawford Seagram, B., Gould, J. & Pyke, S.W. (1998). An investigation of gender and other variables on time to completion of doctoral degrees. *Research in Higher Education*, 39(3), 319–35.
- Elmholdt, C. (2003). A Case study of the Danish Ph.D. education seen from a student’s viewpoint: Constraints and affordances. *Nordisk Pedagogik*, 4, 197-204.
- Evans, T., & Green, B. (1995). Dancing at a distance: postgraduate studies, ‘supervision’, and distance education, cited in *Graduate studies in education: innovation in postgraduate research and teaching*. Paper presented at the 25th Annual National Conference of the Australian Association for Research in Education, Hobart, November 26-30, 1995, available at: www.aare.edu.au/95/paper/evant95488.txt
- Evans, T., & Nation, D. (2000). *Changing university teaching: Reflections on creating educational technologies*. London: Kogan Page.
- Franke, A. (2002). *Different ways of experiencing doctoral student supervision: A study of doctoral student supervisors*. Gothenburg: Department of Education, University of Gothenburg.
- Hanna, D., & Associates. (2000). *Higher education in an era of digital competition: Choices and challenges*. Madison: Atwood Publishing.
- Hasrati, M. (2005). Legitimate peripheral participation and supervising Ph.D students. *Studies in Higher Education*, 30(5), 557-570.
- Heinze, A., & Heinze, B. (2009). Blended e-learning skeleton of conversation: Improving formative assessment in undergraduate dissertation supervision. *British Journal of Educational Technology*, 40 (2), 294–305.
- Jamieson, S., & Gray, C. (2006). The supervision of undergraduate research students: expectations of student and supervisor. *Practice and Evidence of Scholarship of Teaching and Learning in Higher Education*, 1(1), 37-59.
- Laske, S., & Zuber-Skerritt, O. (1996). *Frameworks for Postgraduate Research and Supervision*. Lismore: Southern Cross University Press
- MacKeogh, K. (2006). Supervising undergraduate research using online and peer supervision. In M. Huba (ed) *7th International Virtual University Conference, Bratislava 14-15 December 2006*. Technical University Bratislava: Bratislava. 19-24.
- Pearson, M., & Ford, L. (1997). *Open and flexible PhD study and research*. Centre for Educational Development and Academic Methods, Australia National University, Canberra.
- Sinclair, M. (2004). *The Pedagogy of ‘Good’ PhD Supervision: A National Cross-Disciplinary Investigation of PhD Supervision*, Department of Education, Employment and Workplace Relations, Australian Government, Canberra.
- Stacey, E. (1999). Collaborative learning in an online environment. *Journal of Distance Education*, 14 (2), 14-33.