

Literature Review

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RESEARCH SUPERVISION AT DISTANCE IN  
HIGHER EDUCATION: A REVIEW

Suzanne Miller, Finn Miller, Katie Baddock and Sally Baddock

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## RESEARCH SUPERVISION AT DISTANCE IN HIGHER EDUCATION: A REVIEW

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### INTRODUCTION

Research supervision in higher education has traditionally been conducted via face-to-face meetings between research supervisors and their learners. More recently, and especially since the onset of the global COVID-19 pandemic, research supervision has pivoted to include fully online distance modes, typically including videoconferencing tools, email and online document sharing. We reviewed twenty articles that specifically focussed on online research supervision practice for masters and higher-level research students. This article does not purport to be a full systematic literature review, rather we have coalesced insights about the benefits, challenges and potential threats posed by conducting research supervision online – both for supervisors and their research students – to provide some guidance for supervisors who are incorporating distance supervision into their teaching practice. We present some recommendations for best practice and propose some new avenues for ongoing scholarship in this area focussing specifically on professional alignment between supervisors and students, and the possibilities inherent in distance supervision practice for those historically excluded from higher education due to geographical distance.

Internationally, there is a history of conducting tertiary education at all levels at distance and online. Specifically in relation to the provision of research supervision at distance, online modalities were a relatively under-explored avenue before being catapulted into the limelight as a result of the COVID-19 pandemic in 2020 and the mass global migration to the digital space (Shin & Hickey, 2020). Subsequent lockdowns served as a catalyst that brought e-learning to the forefront of typical pedagogy and vastly proliferated its utilisation in higher education. When considering research supervision at distance, this rapid expansion comes with the need to ascertain how it affects the formation of the integral relationships between supervisors and students, its effectiveness as a method of delivery, as well as exploring the relevant benefits and challenges associated with distance supervision to determine which strategies can be employed to mitigate against the challenges. Most notably, there is strong evidence from within the wider academic community that the suite of available communication modes and technological advances available in the digital sphere have sped up thesis completion times and easily facilitated the development of communities of practice (Elliot & Makara, 2021).

### SEARCH STRATEGY

To compile this review, key words were entered into the search engines of the ERIC database, Google Scholar, ProQuest Central and Taylor and Francis Journals. Search terms included combinations of “distance”, “online”, “postgraduate”, “higher education”, “supervision”, “research supervision”, “Masters supervision”, “thesis” and “dissertation.” Abstracts were reviewed for relevance and studies were only included if they specifically referred to masters or doctoral level study where research supervision was conducted at distance, yielding the 20 articles included in this review.

## PROLIFERATION OF RESEARCH SUPERVISION AT DISTANCE

Prior to the radical online migration enforced by the global pandemic, online learning including distance supervision was in a phase of steady growth. Augustsson and Jaldermark (2014) argued that "...more students than ever before participate in higher education through computer-mediated communication. In 2010, the United States (US) higher educational system had 6.1 million online students, approximately 31% of all students, an increase of 1.5 million students from ... 2008" (p. 2). It cannot be understated that digital learning increases the flexibility with which students can navigate thesis completion as being unrestricted by location and time considerations allows students to manage study their around their lives, particularly for "non-traditional students, such as working professionals, part-time students and adult learners who cannot come to the campus regularly" (Huet & Casanova, 2021, p. 2). Online learning modes are beneficial for postgraduate students in particular, as evidenced in Australia and Aotearoa NZ, where 40 per cent of the student body are concurrently employed as academics and whose investment in completing a PhD is associated with their professional and working environments (Andrew, 2012). We can conclude that digital learning and research supervision were already popular methods and were gaining traction within the academic sphere well before it was necessitated by the global pandemic.

## THE SUPERVISOR-LEARNER RELATIONSHIP IN DISTANCE MODES

The relationship between supervisors and learners has long been regarded as an integral factor in supporting a learner's success. Bruce et al. (2008) noted that graduate students with supportive mentorship relationships tend to be more actively engaged in their programmes, are more satisfied, and more productive than those with less supportive relationships. In the online environment the supervisor by extension becomes a representative of the entire academic institution, thus placing an even higher significance on the role. However, while the method of delivery in distance supervision may be different, Gray and Crosta (2019) argue that fundamentally the attributes of an effective supervisor are consistent irrespective of whether learners are on or off campus.

The selection and allocation of supervisors to their learners is also of crucial importance. Woolderink et al. (2015) stress that a cohesive relationship between learner and supervisor is integral to the successful completion of the study process. Gray and Crosta (2019) similarly report that students who perceive that they are actively involved in selecting supervisors are more likely to make good progress and express satisfaction in their experience, in particular when they feel their values are shared by their supervisor. A foundation of trust and a genuine shared commitment to the success of the student is fundamental to the development of this relationship. While some concern exists that the early growth of this relationship may be stunted in the online environment due to the lack of face-to-face contact, Augustsson and Jaldermark (2014) argue that this can be mitigated by using technologies that facilitate the social aspects of supervision – for example, computer conferences, chat, and social network sites. Supporting this argument Huet and Casanova (2021) suggest that digital platforms may actually improve the learning pedagogy, noting that supervision where students and supervisors rely on technology to communicate or build communities of practice, involves greater connectedness, collaboration and more intense relationships. This has been noted to include relationships between both themselves as partners within the supervision (Maor & Currie, 2017) but also within the wider academic community (Loureiro et al., 2010).

## THE BENEFITS OF TECHNOLOGY USE IN SUPERVISION AT A DISTANCE

Frequently discussed as a benefit of online supervision is the flexibility it provides for both learners and supervisors alike. This flexibility is unparalleled in respect to location of study, time management, scheduling and the jurisdiction over one's own pace of learning (Harrison et al., 2014). This flexibility is particularly advantageous for enabling research students to remain in their place of employment, family, communities and networks as the primary advantage (Andrew, 2012). Students undertaking higher education are often juggling their studies

alongside their wider life commitments, and reduced constraints around time and geography allow the involved parties more opportunity to manage their time (de Beer & Mason, 2009). Following the shift from face-to-face to online encounters, Elliot and Makara (2021) noted a gradual acceptance of the online space as a good alternative which created ease for those who found it difficult to get to campus. The flexibility to schedule virtual meetings removes the grievance of travel time and widens the window of available meeting times. Meanwhile, the utilisation of both synchronous and asynchronous communication by means of an online forum reduces gaps in communication (Karunaratne, 2018). With the barrier of geography removed and all aspects of study being completed remotely, research supervision at distance provides a medium through which thousands of previously disadvantaged students can access education (Harrison et al., 2014). This opens the door of higher education to a far wider audience and extends the possibility of tertiary study in the pursuit of professional and personal development for those for whom it may have previously been unattainable.

The immense range of information and communications technology (ICT) tools is credited with assisting the transmission and retention of knowledge and data in higher education. Thesis tracking databases exist which collate information about student progress and supervision meetings, retain copies of all documentation including writing drafts and feedback, ethics committee engagements and approvals and track institutional administrative processes relevant to the learner's enrolment, thesis production and examination. Abhari et al. (2019), contend that utilising ICT tools and computer systems in the process of supervising a thesis can improve the effectiveness and efficiency of the interaction between the students and supervisors which consequently enhances the quality of the postgraduate thesis. Notable benefits include a reduction in the thesis completion timeframe, an improvement in the scientific standard of the thesis, improved efficiency in the procedure, amplified creativity on the student's behalf, augmented flexibility and enhanced motivation (Abhari et al., 2019). Thesis tracking software can significantly improve supervisor efficiency, reducing the administrative workload by automatically recording and registering communications. Pollard and Kumar (2021) note that "the nature of the online environment in which mentoring takes place also creates a written record of interactions which can be referenced for reflection, clarification, or even pedagogical research" (p. 6). Palmer and Gillaspay (2021) confirm that verbatim records capture information accurately and are "much fuller and detailed than handwritten jottings" (p. 5).

## COMMUNITIES OF PRACTICE

The ease of communication and breadth of networking possibilities provided by online learning spaces also easily facilitates the formation and development of communities of practice, considered an integral element of the learning experience. Members of a community of practice assist each other, engaging in joint activities and shared discussions, building mutually supportive relationships that enable them to learn from each other (Manyike, 2017). Despite the potential geographic distance, members of Elliot and Makara's (2021) study recognised how during the pandemic "the online mode enabled mutual learning, growth and continuous benefits from being part of a close-knit, supportive scholarly community... In our community, the online platform served as a crucial channel for continuously nurturing members in a reciprocal manner, particularly during this period characterised by a greater sense of isolation" (p. 9). This was also noted by Shin and Hickey (2020) in their COVID-19 pandemic-related exploration of student experience. These online spaces were not merely channels for information-sharing but served as places which enabled improved learner wellbeing.

Palmer and Gillaspay's (2021) study followed a supervisor whose normal face-to-face group of students made the digital shift. Following the change "the community has grown to include supervisors and candidates beyond my supervision, postgraduate taught students, staff who just enjoy chats about learning, managers and education developers from across this university and others too" (p. 6). In a surprising twist, online social media platforms, once thought to be a distraction and a vortex to lack of productivity, have blossomed into an indispensable tool for academics to further their networks and communicate knowledge and findings. Social networks like Twitter have been adopted by the academic community for their ease of use and their frequent, communicative and

non-intrusive exchanges. Twitter was reported as “serving the function of answering quick questions, referring one another to research or other resources, and also contributing to relationship building” (Maor & Currie, 2017, p. 8). Users were active in referring one another to online blogs of academic communities that dealt with aspects of their research areas. Interviews with students in Maor and Currie’s study highlighted that using Twitter to communicate was ‘by a lightyear’ the most useful. One student had to convince her supervisor of this: “At first he’s ‘oh no, a waste of time’ and now he’s on it more than me! [Laugh], which is great, and I benefit from it as well. He disseminates a lot of information through it and we have quick exchanges that would be awkward over email. It would be too formal” (Maor & Currie, 2017, p. 8).

Communication through this modality is also more frequent, with some supervisors communicating with students via the platform two to three times a week. One long-term supervisor noted that this was “in stark contrast to 20 years ago, when she was doing her PhD and there were only two or three meetings per year” (Maor & Currie, 2017, p. 7). Regular and frequent communication is commonly reported as being significant to the development of trust and feelings of confidence in the supervisor-student relationship; therefore the utilisation of these networking tools can strengthen the ongoing relationship between both parties. This is supported by the use of video conferencing, which in the same study was considered a fantastic tool for supervision when students are not in the same geographical area as supervisors. Maor and Currie (2017) confirm that most supervisors reported anecdotes about successful relationship building and successful completions with candidates in different locations as a positive feature of distance supervision. The tools and technologies available to distance students sufficiently allow for clear communication, the facilitation of vast and profound networking, the development of communities of practice and potentially the significant reduction of administrative tasks for supervisors. It can be expected that, as the capabilities of the technology evolve, so too will the continued benefits and possibilities to further advance the pedagogy.

## CHALLENGES ASSOCIATED WITH DISTANCE SUPERVISION

While clear evidence exists for the benefits of online supervision, some argue that the medium is lacking in certain aspects of study in which traditional face-to-face and campus-based methods excel. Within the literature, a commonly discussed issue confronting distance students is the feeling of isolation and loneliness that can accompany their distance. In a traditional setting, students would typically be engaging in ‘present’ human contact with both supervisors and peers constantly – to discuss ideas and receive constructive feedback that would in turn benefit and progress their learning experience. Andrew (2012) argues that distance students miss out on the ambiance of the campus and on identification with the university, suggesting that discussions via video conferencing technologies are an inferior means of communication given that “body language engenders real listening and speaking ability” (p. 8). The belief that a lack of subtle non-verbal communications between parties can lead to misunderstandings is shared by de Beer and Mason (2009) who affirm that the inability to effectively read and gauge body language cues along with facial expressions is a distinct disadvantage of online supervision (p. 12).

This specifically needs to be considered during the transmission of feedback between supervisor and student. When providing feedback online, it can be perceived as harsh since there is “an absence of auditory, visual and physical cues which would otherwise soften the constructive criticism” (Gray & Crosta, 2019, p. 13). Online learning may exert limitations on group research work which may be a feature even within thesis work. Torka’s (2021) study reported that:

An advisor in experimental quantum physics, a field that usually relies on close group interactions in labs, noticed that ‘we are not going into the science as deep any longer... It seems also that the project is more fragmented... people are working much more on their individual projects rather than on something together.’ (p. 7)

The rapid advance of different technologies also poses its own set of problems.

The previously noted advantage of online supervision transcending geographic barriers may be something of a double-edged sword, as due to residing in different time zones or on different continents, supervisor and learner may have difficulty with finding reciprocally convenient times to meet (Huet & Casanova, 2021). Supervisors also reported the potential for extended working hours given the perception that they are perpetually available to respond to students queries via technology, and the intrusion upon the supervisor's work-life balance resulting from this situation (Maor & Currie, 2017). This flexibility could blur the lifestyle balance of both the supervisor and learner and negatively affect the mental wellbeing of both. While online supervision initiates introductions and relationships between participants of different backgrounds which then opens studied content to an enormous variety of perceptions, care must be taken to adapt to different cultural expectations to avoid causing confusion or offence. Individuals from different cultural and societal backgrounds can experience differences in both culture and language which has the potential to affect the quality of the relationship (Gray & Crosta, 2019). This may be particularly true when dealing with Indigenous communities: in Aotearoa New Zealand, Māori education is "customarily undertaken in face-to-face teaching situations, involving the application of knowledge regarding Māori custom and tradition" (Fisher, 2009, p. 2). This may put Māori learners at a distinct disadvantage in this format, highlighting the importance of embedding tikanga practices such as whakawhanaungatanga (relationship building), manaakitanga (reciprocal respectful ethic of care) rangatiratanga (enabling student agency) and kotahitanga (a sense of connection and unity) (Rātima et al., 2022).

Advances in communication technology provide countless supervisors and learners a wider network in which to share and discuss knowledge and nascent findings. Social media, discussed earlier as providing significant advantages, however is not without its own limitations. By discussing their research on social media, research students could be incorrectly quoted and credited by the media as experts and as such could be seen as an authority in an area that they may not yet know much about or represent (Maor & Currie, 2017). This requires an extra layer of due diligence that students and supervisors alike must enforce while using these platforms as a learning tool. Further, the rapid progress in the capabilities of information technologies is constantly evolving and new tools and platforms are released with great frequency, sparking concern that "a significant time in such long-distance discussions might be spent on exploring and talking about a new technology or software instead of a clear focus on research issues" (Nasiri & Mafakheri, 2015, p. 3). This misallocation of time could potentially lead to abundant distractions and a diminished quality of work on behalf of the student as they scramble to stay 'up to date' with the latest technology. Such technology is also vulnerable to cyber security risks, and confidential data can be hacked and misused should an institution not apply the required level of security to prevent data breaches.

## OPTIMISING THE EFFECTIVENESS OF DISTANCE SUPERVISION

From the reviewed literature, the most fundamental mitigation to the challenges found in online provision of research supervision is the development and maintenance of communities of practice. The common issue of feeling isolated is vanquished by regular communication between supervisors and a committed group of peers who create a sense of community that all members invest in and contribute to, with shared values (Huet & Casanova, 2021). The benefit is not limited to learners; these authors also stress the importance of communities of practice focussed on the continued professional development of supervisors with the objective of further improving the online supervision experience for all. Frequent communication via video conferencing platforms and email make sufficient headway in enabling students to feel connected to their programs and assure them that their supervisors are invested in their experience of graduate education and professional development (Bruce et al., 2008). This can be achieved by organising regular online 'thesis drop-in' sessions where the group of learners can discuss the joys and challenges of thesis study while also addressing the need for social engagement and the sharing of life events outside of study that are so integral to relationship-building.

At the start of the supervisor-learner relationship it is imperative that supervisors initiate an open and honest conversation with their student aimed at exploring any cultural differences embedded in communication methods, and styles of building working and social relationships (Gray & Crosta, 2019). During this dialogue, a clear set of expectations, such as appropriate contact hours and platforms for communicating, should be agreed upon by both parties to ensure a cohesive relationship. Engaging the student in the selection of supervisors has been shown to be beneficial (Gray & Crosta, 2019) and a negotiated supervision contract which can be revisited as necessary throughout the candidature provides both flexibility for changing circumstances and certainty as to the mutual expectations of supervisor and learner. Mindfulness of supervisors when providing feedback is important: organising a videoconference to share a document online for discussion can reduce the perception of feedback landing harshly when it is delivered as a series of tracked changes on a document with no nuanced verbal encouragement to accompany it.

## **FUTURE POSSIBILITIES**

One study (Fannin & Perrier, 2019) has posited the idea that when the supervisor and learner are from the same professional discipline, there could be an added impetus within that relationship, which they have described as an alternative feminist pedagogy of “birth work accompaniment and PhD supervision” (p. 136). They suggest that when the research learner and supervisors are both midwives, there is a unique synergy between them: for the supervisor, assisting a research student with the ‘production’ of a thesis holds some resonance with working as midwife alongside a birthing person to ‘produce’ a baby. This is a fascinating potential for ongoing scholarship in the research supervision area, particularly when this supervision relationship is being conducted at distance. This certainly merits further research consideration as to its applicability in other professional contexts such as Occupational Therapy or the Creative Arts sector. Further opportunities exist for research that examines how lower income or rurally-based learners can be more adequately accommodated within the realm of online research supervision as there remain inequities in access to expensive hardware materials and stable internet connectivity.

## **CONCLUSION**

Since the onset of the global pandemic, flexibility in education, and indeed in many other sectors, is of paramount importance. Given what we know, it is clear that digital learning and online research supervision offer an extensive suite of benefits that allow both learners and supervisors to excel in their field. The technology allows us to communicate both synchronously and asynchronously conveniently without impinging too drastically on the balance of our lives, especially considering the volume of students who are juggling multiple responsibilities in our rapidly evolving world. The ability to participate in higher education regardless of geography also extends an open palm of education to a wider audience than ever before and provides a springboard into the realm of academia for those who might have been excluded in the past. The medium does indeed have its limitations, however creative strategies can be employed that mitigate against these challenges and provoke wider thinking and problem-solving opportunities.

**Suzanne Miller**, Associate Professor, is the Postgraduate Programmes Leader in the School of Midwifery at Te Kura Matatini ki Otago | Te Pūkenga. A supervisor at distance for Master of Midwifery students, Suzanne was motivated to understand how to make online supervision the best possible experience for learners, prompting this review of the literature.

🌐 <https://orcid.org/0000-0002-0648-9543>

**Finn Miller** is a content writer and research assistant. Fascinated by the expanding horizons of emerging technologies, Finn aims to democratise education inclusion.

**Katie Baddock** has a BA majoring in psychology. She works freelance as a writer and research assistant and has a keen interest in sustainability and new uses of technology.

**Sally Baddock**, Professor, College of Health, Te Kura Matatini ki Otago |Te Pūkenga, has been an educator in the health sciences for over 30 years. Her research includes Sudden Unexplained Death in Infancy (SUDI) and infant sleep, midwifery education and midwifery practice. She is passionate about engaging with master of midwifery learners and their research.

🌐 <https://orcid.org/0000-0003-3095-6735>

## REFERENCES

- Abhari, S., Monem, H., Garavand, A., Bastani, P., & Rezaee, R. (2019). Designing a thesis tele-supervision system for postgraduate medical sciences students. *Journal of Advanced Medical Education Professionals*, 7(4), 191–204.
- Andrew, M. (2012). Supervising doctorates at a distance: Three trans-Tasman stories. *Quality Assurance in Education*, 20(1), 42–53. <https://doi.org/10.1108/09684881211198239>
- Augustsson, G., & Jaldemark, J. (2014). Online supervision: A theory of supervisors' strategic communicative influence on student dissertations. *Higher Education*, 67, 19–33. <https://doi.org/10.1007/s10734-013-9638-4>
- Bruce, A., Stajduhar, K., Molzahn, A., MacDonald, M., Starzomski, R., & Brown, M. (2008). Nursing graduate supervision of theses and projects at a distance: Issues and challenges. *International Journal of Nursing Education Scholarship*, 5(1), e1–12. <https://doi.org/10.2202/1548-923X.1587>
- de Beer, M., & Mason, R. (2009). Using a blended approach to facilitate postgraduate supervision. *Innovations in Education and Teaching International*, 46(2), 213–226. <https://doi.org/10.1080/14703290902843984>
- Elliot, D., & Makara, K. (2021). An online community of international scholars: Enabling spaces for reciprocal academic and psychological support. *Innovations in Education and Teaching International*, 58(6), 693–703. <https://doi.org/10.1080/14703297.2021.1991424>
- Fisher, R. (2009). Should we be allowing technology to remove the “distance” from “distance education”? *New Zealand Annual Review of Education*, 18, 31–46.
- Fannin, M., & Perrier, M. (2019). ‘Birth work’ accompaniment and PhD supervision: An alternative feminist pedagogy for the neoliberal university. *Gender and Education*, 31(1), 136–152. <https://doi.org/10.1080/09540253.2017.1358806>
- Gray, M., & Crosta, L. (2019). New perspectives in online doctoral supervision: A systematic literature review. *Studies in Continuing Education*, 41(2), 173–190. <https://doi.org/10.1080/0158037X.2018.1532405>
- Harrison, R., Gemmel, I., & Reid, K. (2014). Student satisfaction with a web-based dissertation course: Findings from an international distance learning Master's programme in public health. *The International Review of Research in Open and Distance Learning*, 15(1), 182–202.
- Huet, I., & Casanova, H. (2021). Exploring the professional development of online and distance doctoral supervisors. *Innovations in Education and Teaching International*, 58(4), 430–440. <https://doi.org/10.1080/14703297.2020.1742764>
- Karunaratne, T. (2018). Blended supervision for thesis projects in higher education: A case study. *The Electronic Journal of E-Learning*, 16(2), 79–90. <https://academic-publishing.org/index.php/ejel/article/view/1859>
- Loureiro, M. J., Huet, I., Costa, N., Baptista, A., & Casanova, D. (2010). Using ICT to enhance the on-line research supervision process. *Acta Academica Supplementum*, 1, 151–174. <http://scholar.ufs.ac.za:8080/xmlui/handle/11660/2703>



- Manyike, T. (2017). Postgraduate supervision at an open distance e-learning institution in South Africa. *South African Journal of Education*, 37(2), 1–11. <https://doi.org/10.15700/saje.v37n2a1354>
- Maor, D., & Currie, K. (2017). The use of technology in postgraduate supervision pedagogy in two Australian universities. *International Journal of Educational Technology in Higher Education*, 14(1). <https://doi.org/10.1186/s41239-017-0046-1>
- Nasiri, F., & Mafakheri, F. (2015). Postgraduate research supervision at a distance: A review of challenges and strategies. *Studies in Higher Education*, 40(10), 1962–1969. <http://dx.doi.org/10.1080/03075079.2014.914906>
- Palmer, C., & Gillaspay, E. (2021). Digital shifting in doctoral supervision: Different routes to the same destination. *Innovations in Education and Teaching International*, 58(6), 672–681. <https://doi.org/10.1080/14703297.2021.199142>
- Pollard, R., & Kumar, S. (2021). Mentoring graduate students online: Strategies and challenges. *International Review of Research in Open and Distributed Learning*, 22(2), 267–284.
- Rātima, M., Smith, J., MacFarlane, A., Riki, N., Jones, K. L., & Davies, L. (Eds.) (2022). *Ngā hau e whā o Tāwhirimātea: Culturally responsive teaching and learning for the tertiary sector*. University of Canterbury Press. <https://ir.canterbury.ac.nz/handle/10092/1102736>
- Shin, M., & Hickey, K. (2020). Needs a little TLC: Examining college students' emergency remote teaching and learning experiences during COVID-19. *Journal of Further and Higher Education*, 45(7), 1–14. <https://doi.org/10.1080/0309877X.2020.1847261>
- Torka, M. (2021). The transition from in-person to online supervision: Does the interaction between doctoral advisors and candidates change? *Innovations in Education and Teaching International*, 58(6), 659–671. <https://doi.org/10.1080/14703297.2021.1993959>
- Woolderink, M., Putnik, K., van der Boom, H., & Klabbers, G. (2015). The voice of PhD candidates and PhD supervisors. A qualitative exploratory study amongst PhD candidates and supervisors to evaluate the relational aspects of PhD supervision in the Netherlands. *International Journal of Doctoral Studies*, 10, 217–235. <http://ijds.org/Volume10/IJDSv10p217-235Woolderink0852.pdf>.