



Exploring the professional development of online and distance doctoral supervisors

Journal:	<i>Innovations in Education and Teaching International</i>
Manuscript ID	RIIE-2019-0389.R2
Manuscript Type:	Original Article
Areas of Interest: Keywords:	doctoral supervision, distance and online supervision, professional development, adult learning, supervisor development

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Abstract

The supervision of doctoral students has been evolving in the last decade. Supervisors supervise students on campus or at a distance and supervision takes place in formal or informal environments with the latter occurring more often through online encounters. This context of supervision has changed supervisory practices and students' own approaches to learning. This paradigmatic shift demands a rethinking of how supervisors develop themselves and how they learn to cope with the challenges of 'modern' supervision. To date, little has been said or written about the development or training of doctoral supervisors who supervise students online or at a distance. This paper aims to fill this gap by presenting a model for the professional development of supervisors in these contexts. This model can be adapted and implemented by institutions that wish to support supervisors who support students online or at the distance.

Keywords: doctoral supervision, distance and online supervision, professional development

Introduction

In the UK, the USA and Australasia there has been an exponential growth in online doctoral education, which is especially targeted at non-traditional students, such as working professionals, part-time students and adult learners who cannot come to the campus regularly (Albion & Erwee, 2011). These programmes also have higher attrition rates (Albion & Erwee, 2011; Ames et al., 2018), which require institutions to address the multidimensional factors that contribute to attrition, such as students feeling a sense of depersonalization and isolation, and the lack of collaborative learning environments (Ames et al., 2018). Arguably, online or distance supervision inevitably affects the way supervisors and students work, as well as their expectations, roles and responsibilities. This paradigmatic shift demands a rethinking of supervisory practices and the

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3 reconfiguration of the existing learning environments/spaces. In this context, it is urgent
4 to rethink the professional development of supervisors, who, at some stage in the
5 supervisor journey, need to supervise students online and at a distance.
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9 Little has been said or written on the development or training of supervisors for
10 online or distance supervision. Most of the literature on the subject explores the role of,
11 or approaches to supervision that takes place in more 'traditional' environments (Halse
12 & Malfroy, 2010), where supervision occurs mainly in face-to-face (f2f) encounters and
13 where the student is physically located in the university. For this paper, we define
14 distance doctoral supervision as a supervision process characterised by the research
15 student and supervisor or tutor working at a distance mediated by learning technologies.
16 The supervision is mediated by virtual learning environments where students and
17 supervisors rely on technology to communicate or build communities of practice,
18 involving greater connectedness, collaboration and more intense relationships between
19 themselves (Maor & Currie, 2017) or within the wider academic community (Loureiro,
20 et al., 2010).
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30 Although there is increasing demand for distance doctoral studies, educational
31 research is raising questions about the quality and challenges of distance supervision
32 (Erichsen et al., 2014; Nasiri & Mafakheri, 2015), and the training of supervisors (Halse
33 & Malfroy, 2010; Spiller et al., 2013).
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37 In this conceptual paper, we intend to explore the topic of distance research
38 supervision and the challenges that supervisors face in their supervisory practices, as
39 well as the theoretical foundations of adult learning theories, and provide a model for
40 the professional development of distance doctoral supervisors.
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51 **Distance research supervision**

52 Doctoral supervision is a traditional role in the profession, typically supported by the
53 'passing of the torch' method, which leads to supervision wisdom and is typically
54 conducted intuitively by professors who mentor their PhD students in an apprenticeship
55 model (Maor et al., 2016). Scholars often work collaboratively as part of research teams
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3 and, within their day-to-day routine, share their methods, findings and research outputs
4 with their supervisors and fellow colleagues. Traditional supervision is done in a one-to-
5 one relationship and in f2f environments, albeit with an important community element
6 between fellow researchers.
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10 However, those working synergies have been challenged by the emergence of
11 non-traditional doctorates targeted at non-traditional students, as referred to in the
12 introduction. These doctorates can include accelerated programmes or professional
13 doctorates delivered through blended learning or flexible scheduling, or fully at a
14 distance (Singleton & Session, 2011). In this context technologies play a major role
15 since they have become the vehicle for teaching and supervision. Technology is already
16 having an impact on how doctoral research is conducted, whether on campus or at a
17 distance, which is causing a set of challenges.
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25 The first challenge in distance doctoral supervision is driven by space and
26 temporal distance. The supervisor and supervisee may live on different continents and
27 in different time zones, which may create issues with finding mutually convenient times
28 to meet (Nasiri & Mafakheri, 2015; Wisker et al., 2007) and even lead to a feeling of
29 isolation or sense of loneliness for both parties. This feeling of isolation may lead to a
30 lack of focus, disconnectedness, a feeling of being unsupported, and too much reliance
31 on the supervisor (Bolliger et al., 2010), contradicting a key objective of most
32 postgraduate research, which is to promote 'independent research and critical thinking'
33 (Nasiri & Mafakheri, 2015, p. 1965). This leads us to a second challenge, which is
34 management of expectations and communication (Ames et al., 2018). As a result of the
35 detachment caused by the distance it is likely that the supervisor will not know the
36 supervisee before the supervision process starts and thus there is a strong need for
37 further informal conversations to ensure that the environment is conducive to
38 meaningful encounters. The challenge is therefore to create an environment where
39 students can safely interact with their fellow students, agree methods of distance
40 communication, and clarify forms of communication and learning expectations. This is
41 essential for building trusting relationships, marked by high levels of professionalism.
42 The communication challenges are often mitigated by increasing the number of
43 videoconferencing meetings and the amount of individual support and by improving the
44 community support aspects of the programme. The importance of developing online
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3 supervision communities has been strongly advocated by authors such as Crosta et. al
4 (2015) and Wikeley and Muschamp (2004).
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7 A third challenge relates to culture and language diversity. Distance learning
8 cohorts are typically more diverse in terms of nationalities, cultures, religions and
9 languages so there is an expectation that there will be some language and cultural
10 barriers. Wisker, et al. (2007) argue that when not properly addressed, those cultural
11 barriers may trigger misinterpretation and potentially clashes between the supervisor
12 and the supervisee.
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18 In summary, it is crucial for supervisors to understand the challenges, problems
19 and pedagogical implications of working with doctoral students online or at a distance
20 in order to build structures that support effective interactions and supervisor-supervisee
21 relationships in virtual encounters (Roumell & Bolliger, 2017) and create connectedness
22 between the distance doctoral student and the research community (Maor et al., 2016).
23 Current supervisors may never have experienced distance supervision or may have
24 limited digital skills to work in and through virtual learning environments (Singleton &
25 Session, 2011) with students they have never met in person, and therefore require
26 ‘support in developing the range of skills appropriate to supervising doctoral students at
27 a distance’ (Albion & Erwee, 2011, p.84). The traditional mode of supervision is being
28 replaced by a new one that few have experienced or are comfortable with. The
29 challenges presented here set the ground for the need for the professional development
30 of supervisors, who must learn how to cope with these challenges.
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43 **Professional development: Theoretical foundations**

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45 The purpose of professional development is to instigate learning. In Marsick’s words,
46 ‘learning is the way in which individuals or groups acquire, interpret, reorganize,
47 change or assimilate a related cluster of information, skills and feelings’ (Marsick,
48 1988, p. 88). It is also primary to the way in which ‘people construct meaning in their
49 personal and shared organizational lives’ (p. 88). Many studies written in the 1980s
50 reveal that a large percentage of learning takes place on-the-job rather than through
51 formal training (Kaplan et al., 1985). However, formalising learning is also important,
52 as it provides structure and ‘space’ for academics to reflect and have discussions with
53 each other.
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3 The model we propose is grounded in the theories of adult education and
4 organisational learning such as Mezirow's transformative learning theory (1981), Halse
5 and Malfroy's professional work facets (2010) and Lave and Wenger's work on
6 Communities of Practice (CoP) and situated learning (1991) because these represent
7 how learning should take place in the workplace. We believe that distance supervisors
8 should learn in their professional settings by engaging with both formal and informal
9 learning and by having the opportunity to reflect on and discuss their work with their
10 peers in a community of practice. Learning occurs when supervisors change or shape,
11 for example, their own approaches to supervision or support student work. These are
12 important elements of the theories presented below.
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26 **Transformative learning theory**

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28 The transformative learning theory accounts for the need to develop professional skills
29 that are intertwined with organisational learning and self-reflection, as well as different
30 forms of workplace learning, which are implicit and informal or situated and formal
31 (Evans, 2018; Sawyer, 2002). According to Evans (2018), informal learning occurs
32 when participants engage with 'forms of professional learning and development that are
33 not explicitly labelled or signposted as such' (p. 6). Formal learning, on the other hand,
34 is more explicit and usually takes place through formal training.
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41 Mezirow (1981) identified three types of learning, Instrumental, Dialogic and Self-
42 reflective, that should be considered in any form of professional development.
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45 Instrumental learning refers to task-oriented problem solving, with a focus on
46 technical learning where reflection is usually that of single cause-effect as in single-loop
47 learning (Marsick & Watkins, 2015). In this case, supervisors identify a problem,
48 formulate a hypothetical course of action, try it out, observe the effects and evaluate the
49 results. Learning is prescriptive and usually takes place in formal learning environments
50 such as workshops and seminars.
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55 Dialogic learning takes place in work settings where learners have the
56 opportunity to question organisational norms and assumptions. Reflection is carried out
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3 critically as in double-loop learning - learning includes active questioning about
4 previously held beliefs or information.
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7 Self-reflective learning is the way in which we learn to understand ourselves and
8 is directed at personal change. The focus is on the development of supervisors' identity
9 and role, and the need for self-change. Instrumental, dialogic and self-reflective learning
10 cannot be easily separated and should be considered in terms of how academics learn in
11 their professional settings.
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22 **'Professional work' facets**

23 Halse & Malfroy (2010) theorised the doctoral supervision process as professional work
24 and, based on empirical analyses, developed a framework for the supervisory process.
25 Labels were assigned to each facet to capture the substantive and theoretical features of
26 the data in the following categories:
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- 31 1. The *learning alliance* is the agreement between the supervisor and the student to
32 work on a common goal, namely the production of a high-quality doctorate; in a
33 distance education setting expectations are particularly relevant while
34 negotiating goals and tasks. Here distance supervisors are expected to discuss
35 how to reach a consensus and overcome barriers for timely completion.
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- 38 2. *Habits of mind* refer to both a disposition and a mode of behaviour. They
39 involve the capacity to learn and reflect on the principles for making particular
40 decisions, and to exercise the judgment and disposition to apply these principles
41 in unfamiliar or unforeseen situations in ethically appropriate ways. Habits of
42 mind are necessary to ensure that supervisors are open to supervising and
43 practising *vivas* and mock *vivas* in 'third spaces' and are willing to move away
44 from their comfort zone in terms of supervision and PhD examinations.
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- 47 3. *Scholarly expertise* is central to the work of doctoral supervision. Scholarly
48 expertise, in this context, is the theoretical knowledge acquired through
49 reflection and thinking. In this domain, it is important for supervisors to develop
50 their knowledge around the context of distance doctoral education; theories of,
51 and approaches to supervision; the role of both the supervisor and the
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3 supervisee; distance learning theories; research ethics; and feedback on students'
4 work.

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7 4. *Techné* comprises the craft knowledge – technical skills or instrumental practice
8 - and the creative, productive use of expert knowledge to bring something into
9 existence or accomplish a particular objective. Within the supervisory process,
10 this knowledge can be combined in three areas: (i) what technical competencies
11 and skills are needed by the students; (ii) when it is appropriate to use these
12 skills; and (iii) why these skills are important; and the capacity to communicate
13 these reasons to students.
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15 5. *Contextual expertise* comprises an understanding of the contemporary climate of
16 universities in relation to doctorates and doctoral education; the 'know- how'
17 regarding access to the infrastructure and resources needed by students; a
18 knowledge of faculty and university policies, procedures and requirements for
19 each stage of the candidature; an understanding of the tensions between different
20 approaches and methods in the production of a doctorate; and the capacity to
21 advise students on how to traverse this complex territory.
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31 These five facets are important key competencies in supervisors' development and
32 should be included in any professional development course for distance supervisors.
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41 **Communities of practice**

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43 Communities of practice have been widely used in the professional development of
44 academic staff and specifically supervisors (Hill & Vaughan, 2018; Wisker et al., 2007).
45 Communities of practice have been defined as groups of people who share a passion for
46 certain topics and for deepening their expertise and knowledge through continuous
47 interaction (Lave & Wenger, 1991). A community of practice entails three key
48 elements: the domain (the topic that unites the community), the community (of
49 individuals with a shared interest) and practice (experiences and encounters that
50 individuals share with their counterparts). Communities of practice build upon the
51 characteristics of a working team or group – a number of people who are able to interact
52 with one another, are psychologically aware of each other, and perceive themselves as
53 members of a team or group. However, while they are often built from groups and
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3 group projects, communities of practice differ from groups in several ways; notably
4 they aim to create an ongoing sense of community that all members invest in and
5 contribute to, with shared values. We argue that communities of practice are important
6 elements in professional development as they enable informal conversations about
7 supervision to be part of a strategic approach to embedding reflexivity from a private
8 practice to a communal one – being able to share and discuss one’s own practice -
9 whilst maintaining the personal and individual focus through individual practitioner
10 inquiries (Hill & Vaughan, 2018).
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17 In the case of the professional development of supervisors, we also encourage
18 the use of more formal structures of learning such as workshops and mentoring schemes
19 to provide support to those professionals who are less experienced (McCormack &
20 Pamphilon, 2004).
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31 **Proposing a model for online and distance doctoral supervision development**

32 The professional development model has three dimensions based on the theories
33 presented above: (i) workshops/courses/seminars - focused on more formal training and
34 promoting instrumental, dialogic and self-reflective learning; (ii) a college of mentors –
35 focused on formal, dialogic and self-reflective learning; and (iii) an online community
36 of practice – focused on informal, dialogic and self-reflective learning. These learning
37 dimensions can occur in parallel or sequentially.
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49 **Workshops/seminars or courses**

50 Formal modes of learning can occur, as previously explored in the literature, in different
51 formats: workshops, seminars or courses/programmes. Independently of the format, we
52 suggest a series of blended-learning opportunities to encourage supervisors to reflect
53 and learn within the different environments. Learning is achieved through practice and
54 through ‘conversations’ that learners engage in with themselves, and with their peers
55 and teachers (Laurillard, 2002). Learners build their own concepts and revise them
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3 based on these ‘conversations’ and ‘practices’. This dialogical process is easier to
4 replicate in traditional f2f environments. Guidance, instructions, feedback and
5 assessment for understanding are core parts of the dynamics of a traditional f2f
6 environment and they are made available to learners implicitly. In an online setting,
7 these actions, to some extent, need to be replicated through explicit narratives and
8 activities. In online or distance supervision supervisors cannot supervise PhD candidates
9 over a f2f ‘coffee’ (Hemer, 2012). They need to create more guidance, narratives and
10 structure to guide online students in their research path. They should also ensure that
11 synchronous and asynchronous communication channels are available to give prompt
12 feedback as this will mitigate the sense of isolation that supervisees typically feel. In
13 this environment, academics will experience learning in a formal setting, through
14 dialogue and self-reflection. The content will address the pedagogy and challenges of
15 distance supervision; and ‘learning alliance’, ‘techne’ and ‘contextual experience’
16 competencies, such as institutional regulations and procedures.
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32 **College of mentors**

34 Academic development has long used mentoring as a strategy to promote collaboration
35 and the exchange of practices between more and less experienced academics (McAlpine
36 & Winer, 2002). In our model we propose the development of a college of mentors,
37 which aims at creating a safe collegial environment where more experienced
38 supervisors mentor colleagues with less experience in distance supervision. The college
39 intends to create a formal and dialogic environment where self-appointed or appointed
40 supervisors can share their supervisory experiences in a f2f environment, without
41 feeling judged by their peers, and exchange supervisory experiences, which can be
42 challenging for both parties. The role of the mentor can change to the one of the mentee
43 and vice-versa, since the learning does not have roots in the level of seniority, or
44 experience of the supervisor. The college of mentors intends to build a collaborative
45 learning environment – a ‘mentoring circle’ - moving away from more traditional
46 mentoring models where learning was seen as a means of transmitting knowledge from
47 mentor to mentee and the partnership was often protective and paternalistic (Darwin &
48 Palmer, 2009). Independent of the seniority of the supervisors, each will play a leading
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3 role in reflecting on their experiences, anxieties and dilemmas, with the aim of learning
4 from each other.
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7 This formal environment needs to have a gatekeeper who is in charge of
8 matching the supervisors, preparing the briefs to introduce the scheme and its
9 advantages, and organising institutional events where supervisors can meet to discuss
10 their experience. This college can be facilitated by Graduate Schools because of their
11 privileged access to supervisors and their role in supporting the training of supervisors.
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16 Due to the novelty of distance supervision, both the mentors and the mentees are
17 still grasping the best approaches to supervising students at a distance and to creating a
18 supervisory relationship built on trust. The college of mentors can also serve as an
19 anchor for shadowing experiences. Shadowing in the workplace has proved to be very
20 effective in medical learning environments (Kitsis & Goldsammler, 2013). The
21 observation of more experienced supervisors while supervising at a distance will be a
22 valuable learning experience for more unexperienced supervisors because they will
23 learn, *in loco*, the implicit and explicit supervisory approaches, roles, values and
24 behaviours.
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32 Although the structure of the college is formal, supervisors will be given the
33 opportunity to self-reflect on their practice in an experiential environment and develop
34 the professional work facets related to habits of mind and contextual expertise.
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40 **On-line community of practice**

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42 The informal online community proposed in this framework is intended to be used in
43 conjunction with more formal learning as the latter will provide the learning structure
44 and the former will provide opportunities for more informal discussion between users
45 with shared interests.
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50 The community of practice (CoP) can include any supervisor who is interested
51 in being part of this community, from the institution or outside. It intends to provide
52 participants with the opportunity to start interacting with colleagues who they may not
53 have met in person and, therefore, create a virtual encounter where they can interact
54 with colleagues from other institutions or countries. This multicultural experience will
55 allow them to expand their horizons, share habits and procedures and become more
56 informal in their discussions with other supervisors that they may not have met before.
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3 This will ensure a safer and more collegial environment where supervisors will feel
4 more open to sharing successful practices as well as facing the challenges of supervising
5 at a distance.
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9 In a CoP, members will be able to learn through practice, explore online tools,
10 and experience communication challenges and ways to engage with content and
11 learning. All of these features are relevant for those who are engaged in a distance
12 supervision setting because online communities are a major feature of distance doctoral
13 programme but their effectiveness in creating authentic learning communities of inquiry
14 among students still requires deeper thinking. A study conducted by Crosta and
15 colleagues (2015) found that distance doctoral students, engaged in a learning
16 community of inquiry, were not always challenging each other's contributions and that
17 a social presence seemed to be missing from the community. Therefore, we propose a
18 model of an online community that engages supervisors to create a space for cognitive
19 and social interactions based on Hoadley and Kilner's (2005) framework for
20 communities of practice: (i) what do we want to share and discuss (content)?, (ii) how
21 are we going to organise the dialogue? (conversation), (iii) how are we going to
22 organise the groups inside the community and who will be the gatekeeper of the
23 community? (connections), (iv) what is the context of this community (context), and (v)
24 what do we plan to achieve with the community? (purpose). These five steps will help
25 supervisors to organise and manage the community of practice.
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38 In these CoPs supervisors can develop the five professional work facets as
39 presented earlier in this paper, depending on their interests or needs. The facets are
40 interrelated and can be developed over time and in different learning environments.
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49 **Mode of delivery**

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51 The rationale for this model rests on exposing distance supervisors to similar learning
52 contexts to their students, making them explore different communication channels and
53 learning at a distance, and ensuring that they are able to engage in conversations in an
54 environment that they are comfortable with. This is why the mode of delivery of any
55 continuous professional development offer needs to be clearly considered, since it will
56 have an impact on how supervisors reflect on their learning. Evidence tells us that
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3 traditional f2f sessions and group work are important for allowing supervisors to have
4 the opportunity to learn from each other through a process of ‘conversational enquiry’
5 (Spiller et al., 2013).
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9 We also believe that participants need to be confronted with the challenges of
10 online education: the sense of isolation and belonging, translating materials to a new
11 mode of delivery, managing students’ expectations and online communication. All of
12 the above are better understood when we experience them as learners and then link them
13 to a supervisory experience. Thus, the more contact supervisors have with online
14 learning encounters the better prepared they will be to replicate good practice in their
15 supervisory strategies and the more capable they will be of responding to the challenges
16 of distance supervision. Hence, there is an argument for delivering distance supervision
17 professional development using both f2f and distance encounters, and thus allowing
18 participants to actively engage in activities online that force them to be confronted with,
19 and reflect on the challenges of distance education, as well as to discuss their learning
20 and shared practices in a more collegial and synchronous environment.
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34 **Conclusion**

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36 This paper explores the challenges of distance supervision, presents the relevance of
37 professional development theories and proposes a model that can be used for continuous
38 professional development for distance supervisors.
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42 In conducting this study, we acknowledged that one of the biggest challenges for
43 online and distance doctoral education is guaranteeing the quality of doctoral
44 supervision (Suhonen & Sutinen, 2014). Since most of the existing formal supervision
45 development still consists, in many countries, of isolated workshops or seminars, we
46 advocate the importance of institutions building a supportive environment where
47 supervisors can professionally develop their knowledge and skills to supervise students
48 and exchange experiences that can enrich their own understanding of how distance
49 students learn. This is particularly relevant as evidence suggests that the number of
50 distance doctoral programmes is increasing. We believe that the model suggested in this
51 paper addresses these challenges and may be adopted by any HE institution that wants
52 to provide better support to its distance supervisors.
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3 The model intends to be flexible and address the needs of distance supervisors
4 by engaging them to build and advance knowledge in more formal learning
5 environments and allowing them the ‘freedom’ to learn in informal environments with
6 their peers. It is important to create an environment where supervisors can reflect on
7 their learning experiences and their impact in practice. The model we propose will
8 encourage institutions to reflect on how academics learn in professional settings, as well
9 as the learning environments and the required competencies to be effective supervisors.
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22 **Disclosure statement**

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24 No potential conflict of interest was reported by the author.
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28 **Notes on contributors**

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Exploring the professional development of online and distance doctoral supervisors

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Exploring the professional development of online and distance doctoral supervisors

Abstract

The supervision of doctoral students has been evolving in the last decade. Supervisors supervise students on campus or at a distance and supervision takes place in formal or informal environments with the latter occurring more often through online encounters. This context of supervision has changed supervisory practices and students' own approaches to learning. This paradigmatic shift demands a rethinking of how supervisors develop themselves and how they learn to cope with the challenges of 'modern' supervision. To date, little has been said or written about the development or training of doctoral supervisors who supervise students online or at a distance. This paper aims to fill this gap by presenting a model for the professional development of supervisors in these contexts. This model can be adapted and implemented by institutions that wish to support supervisors who support students online or at the distance.

Keywords: doctoral supervision, distance and online supervision, professional development

Word count: 49294996

Introduction

In the UK, the USA and Australasia there has been an exponential growth in online doctoral education, which is especially targeted at non-traditional students, such as working professionals, part-time students and adult learners who cannot come regularly to the campus regularly (Albion & Erwee, 2011). These programmes also have higher levels of attrition rates (Albion & Erwee, 2011; Ames, Berman, & Casteel, 2018), which require institutions to address the multidimensional factors that contribute to attrition, such as students' feelings of a sense of depersonalization and isolation, and the lack of collaborative learning environments (Ames et al., 2018). Arguably, online or distance supervision inevitably affects the way supervisors and students work, as well as their expectations, roles and responsibilities. This paradigmatic shift demands a rethinking of supervisory practices and the reconfiguration of the existing learning environments/spaces. In this context, it is urgent to rethink the professional development of supervisors, who, at some stage in the supervisor journey, need to supervise students online and at a distance.

To date, little has been said or written on the development or training of supervisors for online or distance supervision. Most of the literature on the subject explores the role of or approaches to supervision that takes place in more 'traditional' environments (Halse & Malfroy, 2010; McCormack & Pamphilon, 2004), where supervision occurs mainly through face-to-face (f2f) encounters and where

the student is physically located in the university. For this paper, we define distance doctoral supervision as a supervision process characterised by the research student and supervisor or tutor working at a distance mediated by learning technologies. The supervision is mediated by virtual learning environments where students and supervisors rely on the technology to communicate or build communities of practice, involving greater connectedness, collaboration and more intense relationships between themselves (Maor & Currie, 2017) or within the wider academic community- (Loureiro, et al., 2010)(authors, 2010).

Although there is an increasing demand for distance doctoral studies, educational research is raising questions about the quality and challenges of distance supervision (Erichsen, Bolliger, & Halupa, 2014; Nasiri & Mafakheri, 2015), and the training of supervisors (Halse & Malfroy, 2010; Spiller, Byrnes, & Bruce-Ferguson, 2013).

In this conceptual paper, we intend to explore the topic of distance research supervision and the challenges that supervisors face in their supervisory practices, as well as the theoretical foundations of adult learning theories, and provide a model for the professional development of distance doctoral supervisors.

Distance research supervision

Doctoral supervision is a traditional role in the profession, typically supported by the 'passing of the torch' method, which leads to supervision wisdom and is typically conducted intuitively by professors who mentor their PhD students in an apprenticeship model (Maor, Ensor, & Fraser, 2016). Scholars often work collaboratively as part of research teams and, within their day-to-day routine, share their methods, findings and research outputs with their supervisors and fellow colleagues. Traditional supervision is done in a one-to-one relationship and in f2f environments, albeit with an important community element between fellow researchers.

However, those working synergies have been challenged by the emergence of non-traditional doctorates targeted at non-traditional students, as referred to in the introduction. These doctorates can include accelerated programmes or professional doctorates delivered through blended learning or flexible scheduling, or fully at a distance (Singleton & Session, 2011). Technologies play a major role since they have become the vehicle for teaching and supervision. Technology is already having an impact on how doctoral research is conducted, whether on campus or at a distance, which is causing a set of challenges.

The first challenge in distance doctoral supervision is driven by space and temporal distance. The supervisor and supervisee may live on different continents and in different time zones, which may create issues with finding mutually convenient times to meet (Nasiri & Mafakheri, 2015; Wisker, Robinson, & Shacham, 2007) and even lead to a feeling of isolation or sense of loneliness for both parties. This feeling of isolation may lead to a lack of focus, disconnectedness, a feeling of being unsupported, and too much reliance on the supervisor (Bolliger, Supanakorn, & Boggs, 2010; Nasiri & Mafakheri, 2015), contradicting a key objective of most postgraduate research, which is to promote 'independent research and critical thinking' (Nasiri & Mafakheri, 2015, p. 1965). This leads us to a second challenge, which is

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10 management of expectations and communication (Ames et al., 2018). As a result of the detachment
11 caused by the distance it is likely that the supervisor will not know the supervisee before the supervision
12 process starts and thus there is a strong need for further informal conversations to ensure that the
13 environment is conducive to meaningful encounters. The challenge is therefore to create an environment
14 where students can safely interact with their fellow students, agree methods of distance communication,
15 and clarify forms of communication and learning expectations. This is essential for building trusting
16 relationships, marked by high levels of professionalism. The communication challenges are often
17 mitigated by increasing the number of videoconferencing meetings and the amount of individual support
18 and by improving the community support aspects of the programme. The importance of developing online
19 supervision communities has been strongly advocated by authors such as Crosta et. al (2015) and Wikeley
20 and Muschamp (2004).

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22 A third challenge relates to culture and language diversity.- Distance learning cohorts are typically more
23 diverse in terms of nationalities, cultures, religions and languages so there is an expectation that there will
24 be of some language and cultural barriers (Sussex, 2008; Wisker et al., 2007). Wisker, et al. (2007) argue
25 that when not properly addressed, those cultural barriers may trigger misinterpretation and potentially
26 clashes between the supervisor and the supervisee.

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28 In summary, it is crucial for supervisors to understand the challenges, problems and pedagogical
29 implications of working with doctoral students online or at a distance in order to build structures that
30 support effective interactions and supervisor-supervisee relationships in virtual encounters (Roumell &
31 Bolliger, 2017; Wikeley & Musehamp, 2004) and create connectedness between the distance doctoral
32 student and the research community (Maor et al., 2016). Current supervisors may nhave never have
33 experienced distance supervision or may have limited digital skills to work in and through virtual learning
34 environments (Singleton & Session, 2011) with students they have never met in person, and therefore
35 requiringrequire “support in developing the range of skills appropriate to supervising doctoral students at
36 a distance” (Albion & Erwee, 2011, p.84). The traditional mode of supervision is being replaced by a new
37 one that few have experienced or are comfortable with. The challenges presented here set the ground for
38 the need for the professional development of supervisors, who must learn how to cope with these
39 challenges.
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43 **Professional development: theoretical foundations**

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45 The purpose of professional development is to instigate learning. In Marsick’s words, “learning is the way
46 in which individuals or groups acquire, interpret, reorganize, change or assimilate a related cluster of
47 information, skills and feelings” (1988, p. 88). It is also primary to the way in which “people construct
48 meaning in their personal and shared organizational lives” (1988, p. 88). Many studies written in the
49 1980s reveal that a large percentage of learning takes place on-the-job rather than through formal training
50 (Kaplan, Drath, & Kofodimos, 1985). However, formalising learning is also important, as it provides
51 structure and ‘space’ for academics to reflect and have discussions with each other.
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The model we propose is grounded in the theories of adult education and organisational learning such as Mezirow's transformative learning theory (1981), Halse and Malfroy's professional work facets's (2010) and Lave and Wenger's work on Communities of Practice (CoP) and situated learning (Lave & Wenger, 1991) because these represent how learning should take place in the workplace. We believe that distance supervisors should learn in their professional settings by engaging with both formal and informal learning and by having the opportunity to reflect on and dialogue about discuss their work with their peers in a community of practice. Learning occurs when supervisors change or shape, for example, their own approaches to supervision or support student work. These are important elements of the theories presented below.

Transformative learning theory

The transformative learning theory accounts for the need to develop professional skills that are intertwined with organisational learning and self-reflection, as well as the different forms of workplace learning, which are implicit and informal or situated and formal (Evans, 2018, Sawyer 2002). According to Evans (2018), informal learning occurs when participants engage with "forms of professional learning and development that are not explicitly labelled or signposted as such" (p.6). Formal learning, on the other hand, is more explicit and usually takes place through formal training.

Mezirow (1981) identified three types of learning: Instrumental, Dialogic and Self-reflective, that that should be considered in any form of professional development.

Instrumental learning refers to task-oriented problem solving, with a focus on technical learning where reflection is usually that of single cause-effect as in single-loop learning (Marsick, Watkins, & Watkins, 2015). In this case, supervisors identify a problem, formulate a hypothetical course of action, try it out, observe the effects and evaluate the results. Learning is prescriptive and usually takes place in formal learning environments such as workshops and seminars.

Dialogic learning takes place in work settings where learners have the opportunity to question organisational norms and assumptions. Reflection is carried out critically as in double-loop learning - learning includes active questioning about previously held beliefs or information.

Self-reflective learning is the way in which we learn to understand ourselves and is directed at personal change. The focus is on the development of supervisors' identity and role, and the need for self-change. Instrumental, dialogic and self-reflective learning cannot be easily separated and should be considered in terms of how academics learn in their professional settings.

Five 'professional Professional work' facets

Halse & Malfroy (2010) theorised the doctoral supervision process as professional work and, based on empirical analyses, developed a framework for the supervisory process. Labels were assigned to each facet to capture the substantive and theoretical features of the data in the following categories:

1. The *learning alliance* is the agreement between the supervisor and the student to work on a common goal, namely the production of a high-quality doctorate; in a distance education setting

expectations are particularly relevant while negotiating goals and tasks. Here distance supervisors are expected to discuss how to reach a consensus and overcome barriers for timely completion.

2. *Habits of mind* refer to both a disposition and a mode of behaviour. They involve the capacity to learn and reflect on the principles for making particular decisions, and to exercise the judgment and disposition to apply these principles in unfamiliar or unforeseen situations in ethically appropriate ways. Habits of mind are necessary to ensure that supervisors are open to supervising and practising *vivas* and mock *vivas* in 'third spaces' and are willing to move away from their comfort zone in terms of supervision and PhD examinations.
3. *Scholarly expertise* is central to the work of doctoral supervision. Scholarly expertise, in this context, is the theoretical knowledge acquired through reflection and thinking. In this domain, it is important for supervisors to develop their knowledge around the context of distance doctoral education; theories of, and approaches to supervision; the role of both the supervisor and the supervisee; distance learning theories; research ethics; and feedback on students' work.
4. *Techné* comprises the craft knowledge – technical skills or instrumental practice – and the creative, productive use of expert knowledge to bring something into existence or accomplish a particular objective. Within the supervisory process, this knowledge can be combined in three areas: (i) what technical competencies and skills are needed by the students; (ii) when it is appropriate to use these skills; and (iii) why these skills are important; and the capacity to communicate these reasons to students.
5. *Contextual expertise* comprises an understanding of the contemporary climate of universities in relation to doctorates and doctoral education; the 'know-how' regarding access to the infrastructure and resources needed by students; a knowledge of faculty and university policies, procedures and requirements for each stage of the candidature; an understanding of the tensions between different approaches and methods in the production of a doctorate; and the capacity to advise students on how to traverse this complex territory.

These five facets are important key competencies in supervisors' development and should be included in any professional development course for distance supervisors.

Communities of practice

Communities of practice have been ~~used~~ widely used in the professional development of academic staff and specifically supervisors (Hill & Vaughan, 2018; Wisker et al., 2007). Communities of practice have been defined as groups of people who share a passion for certain topics and for deepening their expertise and knowledge through continuous interaction (Lave & Wenger, 1991). A community of practice entails three key elements: – the domain (the topic that unites the community), the community (of individuals with a shared interest) and practice (experiences and encounters that individuals share with their counterparts). Communities of practice build upon the characteristics of a working team or group – a number of people who are able to interact with one another, are psychologically aware of each other, and perceive themselves as members of a team or group. However, while they are often built from groups and group projects, communities of practice differ from groups in several ways; notably they aim to create an

ongoing sense of community that all members invest in and contribute to, with shared values. We argue that communities of practice are important elements in professional development as they enable informal conversations about supervision to be part of a strategic approach to embedding reflexivity from a private practice to a communal one – being able to share and discuss one’s own practice - whilst maintaining the personal and individual focus through individual practitioner inquiries (Hill & Vaughan, 2018).

In the case of the professional development of supervisors, we also encourage the use of more formal structures of learning such as workshops and mentoring schemes to provide support to those professionals who are less experienced (McCormack & Pamphilon, 2004).

Proposing a model for online and distance doctoral supervision development

~~Based on the theories presented above~~ The professional development model has three dimensions ~~based on the theories presented above, covering both formal and informal learning and by developing different types of learning that allow supervisors to develop the five professional work facets:~~ (i)

workshops/courses/seminars - focused on more formal training and promoting instrumental, dialogic and self-reflective learning; (ii) a college of mentors – focused on formal, dialogic and self-reflective learning; and (iii) an online community of practice – focused on informal, dialogic and self-reflective learning. These learning dimensions can occur in parallel or sequentially.

Workshops/seminars or courses

Formal modes of learning can occur, as previously explored in the literature, in different formats: ~~of~~ workshops, seminars or courses/programmes. Independently of the format, we suggest a series of blended-learning opportunities to encourage supervisors to reflect and learn within the different environments. Learning is achieved through practice and through ‘conversations’ that learners engage in with themselves, and with their peers and teachers (Laurillard, 2002). Learners build their own concepts and revise them based on these ‘conversations’ and ‘practices’. This dialogical process is easier to replicate in traditional f2f environments. Guidance, instructions, feedback and assessment for understanding are core parts of the dynamics of a traditional f2f environment and they are made available to learners implicitly. In an online setting, these actions, to some extent, need to be replicated through explicit narratives and activities. In online or distance supervision supervisors cannot supervise PhD candidates over a f2f ‘coffee’ (Hemer, 2012). ~~Supervisors~~ ~~They~~ need to create more guidance, narratives and structure to guide online students in their research path. They should also ensure that synchronous and asynchronous communication channels are available to give prompt feedback as this will mitigate the sense of isolation that supervisees typically feel. In this environment, academics will experience learning in a formal setting, through dialogue and self-reflection. The content will address the pedagogy and challenges of distance supervision; and ‘learning alliance’, ‘techne’ and ‘contextual experience’ competencies, such as institutional regulations and procedures.

College of mentors

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10 Academic development has long ~~been used~~ using mentoring as a strategy to promote collaboration and the
11 exchange of practices between more ~~experienced~~ and less experienced academics (McAlpine & Winer,
12 2002). In our model we propose the development of a college of mentors, which aims at creating a safe
13 collegial environment where more experienced supervisors mentor colleagues with less experience in
14 distance supervision. The college intends to create a formal and dialogic environment where self-
15 appointed or appointed supervisors, can share their supervisory experiences in a f2f environment, without
16 feeling judged by their peers, and exchange supervisory experiences, which can be challenging for both
17 parties. The role of the mentor can change to the one of the mentee and vice-versa, since the learning does
18 not have roots in the level of seniority, or experience of the supervisor. The college of mentors intends to
19 build a collaborative learning environment – a ‘mentoring circle’ - moving away from more traditional
20 mentoring models where learning was seen as a means of transmitting knowledge from mentor to mentee
21 and the partnership was often protective and paternalistic (Darwin & Palmer, 2009). Independent of the
22 seniority of the supervisors, each will play a leading role in reflecting on their experiences, anxieties and
23 dilemmas, with the aim of learning from each other.

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25 This formal environment needs to have a gatekeeper who is in charge of matching the supervisors,
26 preparing the briefs to introduce the scheme and its advantages, and organising institutional events where
27 supervisors can meet to discuss their experience. This college can be facilitated by Graduate Schools
28 because of their privileged access to supervisors and their role in supporting the training of supervisors.

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30 Due to the novelty of distance supervision, both ~~the~~ mentors and ~~the~~ mentees are still grasping the best
31 approaches to supervising students at a distance and to ~~creating~~ a supervisory relationship built on trust.
32 The college of mentors can also serve as an anchor for shadowing experiences. Shadowing in the
33 workplace has proved to be very effective in medical learning environments (Kitsis and Goldsampler,
34 2013). The observation of more experienced supervisors while supervising at a distance will be a valuable
35 learning experience for more unexperienced supervisors because they will learn, *in loco*, the implicit and
36 explicit supervisory approaches, roles, values and behaviours.

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38 Although the structure of the college is formal, supervisors will be given the opportunity to self-reflect
39 ~~about~~ on their practice in an experiential environment and develop the professional work facets related to
40 habits of mind and contextual expertise.

41 **On-line community of practice**

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43 The informal online community proposed in this framework is intended to be used in conjunction with
44 more formal learning as the latter will provide the learning structure and the former will provide
45 opportunities for more informal discussion between users with shared interests.

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47 The community of practice (CoP) can include any supervisor who is interested in being part of this
48 community, ~~and they can be~~ from the institution or ~~from~~ outside. It intends to provide participants with
49 the opportunity to start interacting with colleagues who they may not have met in person; and, therefore,
50 create a virtual encounter where they can interact with colleagues from other institutions or countries.
51 This multicultural experience will allow them to expand their horizons, share habits and procedures and
52 become more informal in ~~their~~ discussions with other supervisors that they may not have met before. This
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10 will ensure a safer and more collegial environment where supervisors will feel more open to sharing
11 successful practices as well as facing the challenges of supervising at a distance.

12 In a CoP, members will be able to learn through practice, explore online tools, and experience
13 communication challenges and ways to engage with content and learning. All of these features are
14 relevant for those who are engaged in a distance supervision setting because online communities are a
15 major feature of distance doctoral programme but their effectiveness in creating authentic learning
16 communities of inquiry among students still requires deeper thinking. A study conducted by Crosta and
17 colleagues (2015) found that distance doctoral students, engaged in a learning community of inquiry,
18 were not always challenging each other's contributions and that a social presence seemed to be missing
19 from the community. Therefore, we propose a model of an online community that engages supervisors to
20 create a space for cognitive and social interactions based on Hoadley and Kilner's (2005) framework for
21 communities of practice: (i) what do we want to share and discuss (content)?, (ii) how are we going to
22 organise the dialogue? (conversation), (iii) how are we going to organise the groups inside the community
23 and who will be the gatekeeper of the community? (connections), (iv) what is the context of this
24 community (context), and (v) what do we plan to achieve with the community? (purpose). These five
25 steps will help supervisors to organise and manage the community of practice.

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28 In these CoPs supervisors can develop the five professional work facets as presented earlier in this paper,
29 depending on their interests or needs. The facets are interrelated and can be developed over time and in
30 different learning environments.

31 32 33 **Mode of delivery**

34 The rationale for this model rests on exposing distance supervisors to similar learning contexts to their
35 students, making them explore different communication channels and learning at a distance, and ensuring
36 that they are able to engage in conversations in an environment that they are comfortable with. This is
37 why the mode of delivery of any continuous professional development offer needs to be clearly
38 considered, since it will have an impact on how supervisors reflect on their learning. Evidence tells us that
39 traditional f2f sessions and group work are important for allowing supervisors to have the opportunity to
40 learn from each other through a process of 'conversational enquiry' (Spiller et al., 2013).

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42 We also believe that participants need to be confronted with the challenges of online education: the sense
43 of isolation and belonging, translating materials to a new mode of delivery, managing students'
44 expectations and online communication. All of the above are-is better understood when we experience
45 them as learners and then link them to a supervisory experience. Thus, the more contact they-supervisors
46 have with online learning encounters the better they will be prepared they will be to replicate good
47 practice in their supervisory strategies and the more capable they will be of responding to the challenges
48 of distance supervision. Hence, there is an argument for delivering distance supervision professional
49 development using both f2f and distance encounters, and thus allowing participants to actively engage in
50 activities online that force them to be confronted with, and reflect on the challenges of distance education,
51 as well as to discuss their learning and shared practices in a more collegial and synchronous environment.
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Commented [A1]: Again, who?

Conclusion

This paper explores the challenges of distance supervision, presents the relevance of professional development theories and proposes a model that can be used for modelling continuous professional development for distance supervisors.

In conducting this study, we acknowledged that one of the biggest challenges for online and distance doctoral education is guaranteeing the quality of doctoral supervision (Suhonen & Sutinen, 2014). Since most of the existing formal supervision development still consists, in many countries, of isolated workshops or seminars, we advocate the importance of institutions building a supportive environment where supervisors can professionally develop their knowledge and skills to supervise students and exchange experiences that can enrich their own understanding of how distance students learn. This is particularly relevant as evidence suggests that the number of distance doctoral programmes is increasing. We believe that the model suggested in this paper addresses these challenges and may be adopted by any HE institution that wants to provide better support to its distance supervisors.

The model intends to be flexible and address the needs of distance supervisors by engaging them to build and advance knowledge in more formal learning environments and allowing them the 'freedom' to learn in informal environments with their peers. It is important to create an environment where supervisors can reflect on their learning experiences and their impact in practice. The model we propose will encourage institutions to reflect on how academics learn in professional settings, as well as the learning environments and the required competencies to be effective supervisors.

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