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How can we develop supervisors for the modern doctorate?

Anne Lee^{a,b}

^aDepartment of Social Studies, University of Stavanger, Stavanger, Norway; ^bSchool for Education, University of Bristol, Bristol, UK

ABSTRACT

This paper explores supervisor development in the light of information generated by the Erasmus-funded project on the modern doctorate. It is structured in four phases. Firstly examining interview data to isolate some distinguishing features of the modern doctorate. Secondly re-examining that data to see if these distinguishing features can be mapped on to an existing framework of approaches to research supervision. Thirdly looking at the survey responses relating to that same framework. Fourthly, having found coherence with the five approaches, the initial outcomes from a Norwegian project are examined. The project worked with experienced academics nominated to 'support and develop their colleague supervisors' primarily by designing and leading supervisor development programmes. The findings show that the original framework is also appropriate for supervisors of the modern doctorate and that there are some important organisational factors that need to be taken into account when developing the developers of supervisors.

KEYWORDS

Doctoral education;
professional doctorates;
research supervision;
supervisor development;
transformative education;
research education

Introduction

What is a modern doctorate and who undertakes this qualification? Fillery-Travis et al. (2017) have summarised the literature surrounding these phenomena and emphasised it as a transformational process which embeds notions of employability outside academia. They argue that the traditional doctorate is too narrow. Arguably, the modern doctorate challenges traditional PhD education because it focuses on knowledge transfer as well as knowledge creation (Muller 2009), it includes the professional doctorate where the focus is on practice, but is not restricted to that, and allows research methods that other programmes might deem unacceptable such as action research (Armsby, Costley, and Cranfield 2017). It might generate a licence to practice professionally such as the Psych D. Sometimes it will consider alternative forms of presentation to a straightforward thesis and therefore might also include some doctoral programmes in creative practice where the principal item for assessment could be an artefact such as a musical composition, work of art or a film (Fell, Haines, and Flint 2011). The survey data discussed later in this paper supports earlier work describing the demographic description of those who undertakes the modern doctorate as including more experienced, part-time, mature students (Hutchings 2017).

The development of supervisors is a relatively new area of academic staff development, and the responsibility for managing this provision (if it exists at all) moves (sometimes uneasily) between different parts of the university's organisation: educational/academic development centres, a director

CONTACT Anne Lee  Dr.Anne.Lee@outlook.com

of research, research student support and human resource management in most universities. The development of those supervising modern doctorates is a relatively new and under-researched area. This paper will explore what we know about the development of supervisors of both the modern and traditional doctorates. It will do this by summarising the differences and similarities between the two genres and testing whether the conceptions of supervision that were outlined in a framework by Lee (2008, 2012) are still relevant.

Methods

There are three sources of data to be considered and although the second source includes survey data it is mainly the qualitative findings from that survey that are of interest to us.

Firstly we consider the transcripts of interviews of supervisors who are engaged in supervising the modern doctorate and which were carried out as part of the Erasmus-funded 'Superprofdoc' project (2017). The research methodology used by the project was Appreciative Inquiry (AI) (Cooperrider, Whitney, and Stavros 2008; Cousin 2009) where partners gathered and analysed the rich stories and examples of emerging supervisory practice in the field. This resulted in the design of semi-structured interviews and a survey instrument.

Over 40 interviews of supervisors who had experience of supervising modern and traditional doctorates were carried out by a series of different interviewers and fully transcribed. The criteria for agreeing those who could be interviewed were set by the interview team (those who had experience of working on modern doctorates) and then snowball or chain sampling was carried out to identify participants who met the criteria (Quinn Patton 1990, 176). The interviewers had a pre-agreed list of 'trigger' questions which they then followed up with individual responses as appropriate. Twenty of the transcriptions were reviewed again for this paper, hand coded and thematically grouped. This process of intensity sampling stopped when saturation of each of the concepts searched for was reached. The first theme that was searched for was to look for the differences and similarities between the traditional PhD and the modern doctorate, then the data were searched against a framework of five approaches to supervising research (Lee 2008). This framework as a method of analysis was chosen because of its wide use as a supervisory development tool over the last nine years (Lee 2012; Lee and Murray 2015). Whilst the original framework has been tested elsewhere, validity needs to be checked each time. The analysis was reviewed for this paper by three separate researchers to confirm credibility (one in the UK and two in Norway). Confirmation bias is still a potential issue and is, to a certain extent, addressed through the multiple data sources running through the paper, and the fact that the author was not involved in any of the interviews or transcriptions carried out under the Superprofdoc project which provided evidence of the proposed concepts.

Secondly the evidence from the survey administered for Superprofdoc project is considered. The terms 'advisor' and 'supervisor' are used interchangeably. 'Advisor' is more commonly used in the USA and 'supervisor' in Europe. There were a total of 124 supervisors and a total of 270 candidates who replied to a questionnaire from across Europe and the USA (contacted by the survey team, similar sampling technique but a separate sample from the interviewees cited above). They included respondents working in health, education, business and industry and the supervisors were academics who could all supervise modern doctorates. In this paper the focus is on the evidence from the survey, much of it qualitative, that will help to support supervisor development activities. The framework of five approaches was adapted by the survey designers to meet their needs for part of the survey, and this adaptation is in itself interesting.

Finally we include data from the first phase of an evaluation of a pioneering workshop for 14 experienced academics from a range of theoretical and applied disciplines including health, physical and social sciences, business studies and art history. The spread of disciplines included is important because they represent different theoretical traditions but all could be (and most have been) also involved in supervising modern doctorates. These participants had been nominated by six different Norwegian universities to lead supervisor development activities in their own institutions. This

evidence is presented by the author as part of a collaborative inquiry where the author as a participant led the workshop and is following the progress of the participants over a period of at least three years. The theoretical traditions that informed the questions asked include systems theory 'how and why does this system function as a whole' and ecological psychology 'how do individuals seek to accomplish their goals through specific behaviours in specific environments?' (Quinn Patton 1990).

What does the literature tell us about developing supervisors for the modern doctorate?

Studies of various aspects of research supervision have proliferated rapidly in the last 10 years, the first paper quoted in Taylor's extensive bibliography was published in 1983, and subsequently he has found another 35 (Taylor 2017). The development of supervisors through courses, workshops, mentoring and awards is a relatively new area of academic staff development (Kiley 2011; Taylor and McCulloch 2017), questions about evaluating supervisor development activities as well as whether and how supervisors should be accredited have only just begun to be asked (McCulloch and Loeser 2016). Surely we need to know more about the impact of such interventions? For example: there is substantial interest in developing online or distance learning programmes for supervisors. Is it possible to do a cost-benefit analysis to establish whether such programmes inform behaviour, knowledge or attitudes and do such programmes stand the test of time or do they rest on a shelf (or a hard drive) because no-one is responsible for managing and updating them?

The work on developing supervisors inevitably takes many forms: some emphasise the collective institutional responsibility (Hammond et al. 2010; NAIRTL et al. 2012; McAlpine 2013), where others seek to illuminate through qualitative research and creating opportunities for supervisor reflection (Pearson and Brew 2002; Guerin, Kerr, and Green 2015; Turner 2015).

Supervisors of the modern doctorate are still mostly drawn from academia, co-supervisors drawn from industry, professional and creative practice need further study.

Whatever form it takes, supervisor development offers a refreshing portal through which academic development activities can be organised. Academics can become jaded with educational development activities, having been forced to attend courses certifying them to teach in Higher Education at the very time when, as new employees, they are busy planning to undertake new teaching commitments. However, the same group can subsequently be re-enthused by the thought of research supervision. The idea that they might be able to support the transformation of individual or small groups of doctoral candidates and at the same time enhance their own reputation as researchers is a powerful stimulant.

A framework for approaching supervision was first published in 2008 and has subsequently been refined and developed both through further research and by working with hundreds of supervisors in workshops in mainland Europe, Africa, Australia, UK, Eire, Scandinavia and the Middle East (Lee 2008, 2012; Lee and Murray 2015; Hutchings 2017).

This framework is used later in the paper to analyse much of the data. It suggests that effective supervisors move through and combine a number of the following approaches depending on their preference and the type of situation they are facing:

- (1) The functional approach emphasises performativity and offers the opportunity of measuring progress through project management tools, risk analysis, milestones and record keeping. It is identified by the intent to achieve objectives.
- (2) Enculturation offers a sense of belonging (to the cohort, the discipline, the culture), it emphasises being part of a group, having a sense of direction, working to the standards of that group and is identified by the supervisor's intent to include the candidate in a number of epistemological ways.
- (3) Critical thinking emphasises intellectual rigour, offers the opportunity of thinking in new ways, encourages the ability to analyse and recognise flaws in arguments and is identified by

the supervisor's intent to analyse and enable the candidate to analyse what is being planned or presented.

- (4) Emancipation has a core value of enabling the candidate to become autonomous, it offers the candidate support in discovering a personally meaningful framework, supporting personal transformation and is identified by the supervisor's intent to develop others in whatever direction they choose.
- (5) Relationship development has the core value of love (in the sense of the Greek 'Agape'). It is altruistic, benevolent and demonstrates goodwill. It emphasises friendship, wisdom in managing boundaries, agreeing expectations and preventing conflict.

The ideas on supervisor development that emerge from what has been published so far lead to several apparently useful recommendations including:

- (1) cross disciplinary groups seem to be important to facilitate the understanding of the benefits of different disciplinary practices (Golde and Walker 2006; Golde 2007),
- (2) a focus on the kind of researchers supervisors are aiming to produce is useful (self-sufficient and innovative, outward looking researchers with a marketable skill, focussed on a precise field, enhanced professional or personal transformation) (Guerin, Kerr, and Green 2015; Åkerlind and McAlpine 2017),
- (3) small groups led by a combination of senior researchers and academic developers working on carefully written case studies, video clips and exercises informed by some relevant statistics are most likely to be successful,
- (4) input from doctoral candidates can prompt useful discussion,
- (5) too much pre-prepared material is not helpful (Murphy, Griffin, and Higgs 2010).

While we have glimpses of the attractiveness and effectiveness of supervisor development activities for academics, we know even less about what supervisors from employers collaborating on the modern doctorate might need and value. This paper gathers information from three different sources to propose a programme of activities and further research in this field (interviews, survey data and feedback from a programme evaluation). The paper introduces the initial findings from a longitudinal evaluation of an innovative 'Training the Trainers' project run for supervisor developers from across universities in Norway.

Data Source 1: analysing the interview data

The data are drawn from interviews with over 40 supervisors of professional or modern doctorates. The countries covered through these data include the UK, USA, Ireland, Netherlands and Italy.

Many quotations are deliberately included throughout this paper, the intention is to make the raw data as accessible and compelling as possible. Quotations from the interviews are used in this next section to illustrate the following conceptions: the issue of the balance between theory and practice, the practical value of the outputs, the complexity of the supervisory teams created and the different demographic status of the candidates undertaking the modern doctorate.

The issue of the balance between theory and practice runs through many of the interviews.

'The Prof Doc is more likely to focus on and tackle a practice issue' ... the same interviewee expanded this line of thought: If you think of students in their work contexts 'they are more likely to be agents of change' where they need to be innovative and learn how to take people with them if they are leading a break between custom and practice.

Another noted how valuable the outputs are in practice 'in the context that they are working in, they can pick up a report, a piece of work, and go: yeah, interesting but methodologically flawed', and another interviewee gave this helpful example:

a PhD student might do a project to determine what the elements are associated with job satisfaction. A (professional doctorate) student would take that knowledge and then implement a programme intended to improve job satisfaction and then look for the change in job satisfaction in the cohort they're evaluating in relationship to that change.

When we look at what the interviewees said about the quality of knowledge they had differing views: 'they are pushing the boundaries of professional kinds of knowledge ... it's trans disciplinary ... it's almost creating new types of professional knowledge'. Others felt that modern doctorate students tended to need more supervision, especially at the beginning of their programmes. 'Certainly we have had students who think they can use it as some form of market research', 'Practice based students think they can get away with the stuff they give to their directors' and 'Dprof students do waffle a lot and lack quality of thought'.

There was an acceptance that the supervisory team will be made up with people who have very different backgrounds: 'I think we should be talking about supervisory teams ... you might have one who is more hands on or more out of the university' ... but the same interviewee said that 'The supervisor's intellectual vigour should be the same'.

Student status is likely to be different, they are more likely to be mature students and to undertake their studies part-time, often through some element of distance learning. They have different reasons for undertaking these programmes, often directly careers oriented. The interviewees noted that this makes different demands on the supervisors: 'there are different demands on the supervisors in terms of trying to help the candidate to balance, to structure their time, to keep to agreed milestones, to stay in contact'. And 'I had to track her down, otherwise she would just go off ...' In a similar vein there is a tension for students between managing a busy career and this demanding type of study.

Another supervisor noted that managing the relationships with these candidates and their expectations is complex because they 'are often high achieving people' ... so 'when they get into it, they realise it is too difficult to combine with their other commitments and it is very hard for them to (give up)'.

Summarising this section, there seem to be the following specific elements that come to the fore for a supervisory team who are working on modern professional doctorates, but they are certainly not exclusive to them:

- (1) Being proactive to keep in contact with candidates over a longer time frame.
- (2) Supporting candidates to manage time and career pressures whilst learning how to do academic work.
- (3) Engaging with the creation of new professional, transdisciplinary knowledge.
- (4) Enabling candidates to cope with changes in identity from expert to student.
- (5) Supporting the development of social (as well as intellectual) skills so they can become effective agents of change.

It is possible to map these five approaches on to the five elements that we identified above as coming to the fore when discussing the essence of the modern doctorate.

Functional	Enculturation	Critical thinking	Emancipation	Relationship development
Being proactive to keep in contact with candidates over a longer time frame	Supporting candidates to manage time and career pressures whilst learning how to do academic work	Engaging with the creation of new professional, transdisciplinary knowledge	Enabling candidates to cope with changes in identity from expert to student	Supporting the development of social (as well as intellectual) skills so they can become effective agents of change

This analysis above suggests that we can move to the next stage where we apply the five approaches to supervising both modern and traditional doctorates.

What conceptions of supervision do supervisors of both modern and traditional doctorates hold?

If we accept that these five themes are key for the successful supervision of the modern doctorate as well as PhD studies, then we need to categorise, conceptualise and deepen them.

After the initial review it became appropriate to review the interview transcripts again to see if there was substantial evidence of supervisors describing the use of any of these different approaches. It was possible to allocate most of the transcripts amongst the five approaches and below are some examples.

Functional

Supervisors talked about the institutional framework within which they worked and the benefit of timetables, milestones and measurable tasks.

OK, so one thing that comes up for me, and this is quite bureaucratic, it's the supervisory knowledge of policies, processes and procedures.

I think to a great degree, I am very methodical, I am keeping the student organised ... and stay on track and not to tackle something that is a life's work because it is (just) a dissertation.

Enculturation

Enculturation as an approach that uses scaffolding and fading to enable the candidate to master appropriate research methods. It also has resonance when thinking about the enculturation of international students into the national or regional culture of a university.

The importance of belonging to a group came through quite strongly:

I have a cohort of students right now that are all planning to finish around the same time and I honestly think that part of the reason they have been able to stay on track is because they have been so close as a cohort.

There is the need to be enculturated into the ways of the discipline such as how to do a literature search and who the key authors are:

They have to be fully conversant with the literature.

One supervisor describing a mature PhD student with industrial experience illustrated how supervising the PhD student could differ from the professional doctorate. Usually the professional doctoral candidate is expected to use (and examine) their past knowledge within their research. In this case the supervisor is asking the candidate to embrace a new identity:

so I told her ... forget about her past, I'm really not interested in her past. When they start embarking on that journey with me, the first day onwards, forget about the past.

Enculturation into academic life, the discipline, the group and for international students, enculturation into a national culture, are all part of an important approach to research supervision.

Critical thinking

This approach values philosophical rigour, the strength and validity of the argument which needs to be tested in as many ways as possible.

One student said to me that they want their supervision session to have 'intellectual vitamins' another emphasised the importance of 'original thinking and criticality, it's not about the process.

Another looked in some detail at the nature of knowledge:

I would say I am quite liberal in understanding what we might call knowledge, from intuitive through to presentational, through to, you know, academic if you like. If you want to give it those labels

Different disciplines have a very different sense of what ‘proof’ can mean, and this supervisor referred to something that is a key part of critical thinking:

what does it really mean when you say you are going to make a unique contribution to knowledge?

Emancipation

Here we saw explicitly some of the issues that arise when supervising doctorates in creative practice:

When I am supervising artists ... it’s about how a supervisor negotiates that relationship between helping them continue that professional and important trajectory whilst knowing that the PhD inevitably slows them down.

Another emphasises autonomy:

I think if you keep impressing on the that they will become the subject expert because they will be steeped in it and you’re not, that their confidence could grow.

You want to enable them to discover their own voice.

Others emphasised the process of changing a student’s world view and see supervision doctoral level work as a transformative personal process as well as an intellectual journey.

Relationship development

Whilst the supervisor working from the critical thinking approach can separate the person from the work, this never happens if the supervisor is coming from the relationship development approach: A student said

what made her awesome was that when I was in her office, I was the centre of her world.

Shared values, respect for each other and agreeing expectations are an important precondition for successful relationships. The difficulties that some supervisors have when working with experienced mature professionals, often found undertaking a modern doctorate, were described by this supervisor:

I think we put the candidates, before they even come through the door, on a pedestal, saying they are high level professionals, professionals in a senior position, within the organisation, who bring with them a range of expertise, who are knowledgeable in their own right. Well, excuse me, if they are knowledgeable in research what on earth do they want a professional doctorate for?

What are the boundaries between the supervisory relationship and friendship? Supervisors can see this quite differently. Contrast these two attitudes:

So don’t talk to me about stuff that isn’t directly relevant to your doctorate, because I’m not interested and I don’t want to be your friend.

So you get to know your students quite well, they get to know you. They have my mobile number ... that’s never been abused in all the time I have been here.

Such contrasting views from supervisors can lead to a rich debate in a supervisors’ development forum.

Data Source 2: the survey of both candidates and supervisors

What are the candidates seeking?

A majority of candidates indicated that they had chosen their own research topic which suggests that professional doctorates are not always driven by employers wanting to further their own specific knowledge creating agenda. We need more information to know how much dialogue there was

between the candidate and employer in order to gain funding (where that applied), so the answer may not be quite as straightforward as it first appears.

Some of the terms from the five approaches to supervision informed a question asking candidates what they rated most highly in academic and workplace supervisors. The candidates seem to value most highly the academic advisors ability to offer *functional* advice (e.g. procedural, milestones, project management) and critical thinking skills. In spite of evidence elsewhere suggesting that *enculturation* becoming a member of the discipline, department or team is important for a feeling of belonging (Pratt et al. 2015) this was rated the least important by these survey respondents. Further work is needed to establish whether or not this is because enculturation in the place of study (the university) is replaced by being enculturated in the workplace (mostly employment) and what the impact of that might be. The table below shows the ratings for 5 and 4 + 5 on a five-point Likert scale. Another interesting point is that the questionnaire designers took out completely the category called 'emancipation' where the core value is autonomy and personal growth, and replaced it with a category the titled 'transferrable skills'. This is entirely understandable given the focus on work-based doctorates, but transferrable skills do not show up as something that candidates are expecting to gain from their academic supervisors (Table 1).

Candidates were also asked what they rated as most important in their workplace advisors or supervisors and here the picture is also surprising. Whilst they are understandably not expecting quite as much functional advice from their workplace advisors, they are also not expecting as much help in gaining transferrable skills as they do from their academic advisors (Table 2).

What supervisors think is important

We can compare the two tables above with the responses from supervisors when they were asked what they thought was important. In Table 3 the numbers are all absolute numbers, the total number of respondents who rated this approach as important, they are not percentages.

Table 1. Most highly rated approaches to supervising research in academic advisors.

	Important (5)	Important + somewhat important (4 + 5)
Functional	66.32%	92.64%
Enculturation	28.42%	61.05%
Critical thinking	61.05%	88.42%
Relationship development	42.55%	81.91%
Transferrable skills	48.42%	84.21%

Table 2. Most highly rated approaches to supervising research in workplace advisors.

	Important (5)	Important and somewhat important (4 + 5)
Functional	50%	77.27%
Enculturation	43.94%	75.76%
Critical thinking	56.06%	80.03%
Relationship development	50.77%	81.84%
Transferrable skills	56.06%	76%

Table 3. What supervisors thought was most important for academic supervisors to offer.

	Extremely important (5)	Important and extremely important (4 + 5)
Functional	12	23
Enculturation	8	16
Critical thinking	17	22
Relationship development	10	21
Transferrable skills	10	19

These are very small numbers in Table 3 so we cannot extrapolate from them with any certainty, but we can use them to question whether candidates undertaking a professional doctorate might be missing out on the recognised beneficial effect of being a member of a supportive community, perhaps because they are always seen as belonging somewhere else. Enculturation is a complex approach which includes understanding the mores of the discipline, interdisciplinary issues and cross-cultural issues. It can be an important understanding for a researcher to develop if they are to be able to communicate their new-found knowledge to a wide range of audiences and work well in a wide range of different types of teams and organisations (Lave and Wenger 1991; Pearson and Brew 2002; Fenge 2012; Carter and Laurs 2014; Manathunga 2014).

Survey responses to questions about how supervisors are prepared to take on candidates

As the law, procedures and the rules of conduct become more complex, we can expect supervisors to need easy access to regulations and guidance. The EU supervisors in the survey reported receiving guidelines from their university (75%), whereas only 46% of US supervisors reported receiving guidelines. In each case we do not know how the numbers are split between workplace or academic supervisors. The majority of supervisors reported that they did not have to undergo training to advise doctoral candidates (71% in the US and 59% in the UK). When asked in an open question what support or development was offered for industrial/workplace advisors, there was very little described. Five respondents mentioned access to some form of printed resources (handbook, handout, thank you letters from programme directors) two people mentioned an orientation offered by the programme director. Several said they were not aware of any support unless it was asked for and most people did not answer the question.

Major challenges faced by both groups of supervisors

The major challenges that all supervisors mentioned link closely with those mentioned by the hundreds of supervisors that I have also surveyed separately. The quotations below come from survey responses to an open question about the challenges supervisors face, and the comments have again been thematically distributed between the five approaches described before (Lee 2008, 2012).

1. Functional/Time management

The main challenges reported by supervisors in this area relate to time management (both their own and their candidates), the tension between research, paid employment and family life were illustrated.

Those that have not clearly delineated the component of the project, i.e. limiting the scope of the project to a reasonable component.

Their finding time to complete the project, procrastination.

Time. Doctoral students often work full time. They are challenged to produce quality work with limited available time in their schedules.

There were also mentions in this section of employers who did not recognise that supervising students at this level is a workload matter, because the survey was anonymous we do not know if these were workplace or academic advisors, but in my experience this can be a problem in both environments.

2. Enculturation: technical skills

A key challenge in this area was about helping a candidate to learn how to write as an academic.

Most have practice master's degrees and are naive of the process of manuscript development and research. This can be a challenge.

Lack of knowledge about statistics and writing/grammar skills.

I worked with students in a country where English was their second language, so one of my roles was helping them to streamline their writing.

3. Critical thinking

Supervisors commented on the difficulty they had in stopping candidates working at a superficial level:

'his sense of urgency vs my insistence on quality'

Students often don't realize what they have committed to in a doctoral program ... they may not be self-motivated and/or willing to address questions they have.

4. Emancipation vs directing the project

The supervisor who is naturally functional can find a candidate who expects great freedom quite challenging to focus:

They often want to take on too much and then have difficulty completing the project.

They are too diffuse in their interests.

5. Relationship management

There are many relationships to be managed, and the focus is not always just between the primary supervisor and the candidate:

Managing conflict between other faculty advice and my own.

(I am) not sure how hard to push her given the multiple roles she is juggling.

Students often are provided with conflicting direction and advisers feel 'out of the loop'.

All these different types of challenges can become threads that run through case studies used on supervisor development programmes.

Data Source 3: initial findings from a longitudinal evaluation of a 'Training the Trainers' project

A survey of Norwegian universities was conducted in 2016 and presented at their annual national conference on PhD education (Radu 2017). It indicated that there will be a continued rapid increase in the number of doctoral students across the country. Seventeen out of 23 PhD awarding institutions replied to the survey and they estimated that between 265 and 365 supervisors could benefit from supervisor development programmes over the next 5 years. Within Norway various small-scale programmes for new supervisors already exist (e.g. over 100 supervisors had been on a 3-module programme led by the University of Stavanger over the previous 4 years), but there was no capacity to meet the predicted level of demand.

The proposed solutions included offering a pilot programme 'Training the Trainers' to empower experienced academics to lead programmes in their own institutions. The pilot 3-day residential programme was held in Stavanger in August 2017 and 14 participants came from 6 different institutions who between them sponsored the event. Various follow-up activities are planned.

The programme objectives were to enable participants to:

- (1) experience a range of approaches and materials that can be used in developing research supervisors,
- (2) be confident enough to create and trial their own programmes and materials for some of the topics identified below,
- (3) have feedback on their own approaches to teaching and learning as applied to working at this level,
- (4) identify sources of information that will help them keep up to date and
- (5) become part of a supportive network for future developments and collaborations.

The participants considered the work done by Taylor (2016) for the Higher Education Academy as providing a blueprint for the programme. At the first stage the programme offered resources to demonstrate using the five approaches to supervision: planning ahead and solving problems; looking at the stages that the supervision process has to go through in a chronological order (from recruitment to the final assessment/defence/viva, issues around identity ethics, culture, the trajectory of the doctoral process over time and internationally and working with co-supervisors

A key part of the programme was that all participants had to choose to facilitate a session on a topic of their choice. Culturally this was difficult for some because they did not want to stand up in front of their peers and 'tell them how to do it'. This was an important part of the experience because, of course, a constructivist approach to facilitating supervisor development is not about 'telling them how to do it'.

The first evaluation has been carried out. Participants were asked to write about what they liked about the programme, what they would suggest was changed, what they plan to use (impact) and what help they need going forward.

The course was designed to encourage participants to try out a range of pedagogic approaches and exercises. The feedback was that they enjoyed the relevant content, the variety of ways in which it was delivered, the cross-disciplinary mix of the participants and the pre-course exercises and preparation required (which was extensive).

With such a large group (the course was originally designed for eight participants), allowing everyone to 'have a go' at facilitating a session meant that there was less time to make sure that every session was as good as it could have been. Feedback was offered to each session facilitator and it was important to make sure that everyone felt there had been learning from each contribution, but the amount of learning gain inevitably varied. It is the Norwegian culture to want longer for discussion – but that request is of course not limited to just Norway. We also learned that the three participants who had not previously been on any supervisor development course struggled, and in future we would make previous participation in some form of supervisor training a criteria for selection.

The most interesting impact that we can identify at this stage is the number of universities that are now establishing teams to lead on supervisor development. Two universities are putting together cross-disciplinary groups of experienced academics to organise programmes for their own supervisors – which meets exactly one of the recommendations made by NAIRTL (Murphy, Griffin, and Higgs 2010). Others are collaborating on designing online provision, in house courses and seminars. There is a strong interest in the group maintaining contact and establishing a network for future support. The role of the educational developer is to support these teams, not necessarily to facilitate the actual courses.

Conclusions

In each of these data sets we have seen that the framework of five approaches to supervising research can be useful: in analysing interview and survey data relating to both traditional and

modern doctorates; it is also a useful tool for supporting supervisor development. Supervisors can find it stimulating and challenging to decide what position they want to take on each of these approaches.

The modern doctorate offers a great opportunity for universities to revisit their provision for all supervisors. There are cultural differences and conflicts between workplace supervisors and academic supervisors, but there are also cultural differences between different disciplines and conflicts between academic supervisory teams. A neutral language with which to explore these differences and explore how to avert conflicts is important and the framework of five approaches provides one such neutral language.

The amount of time allowed for supervisor development activities varies enormously across institutions and countries. Some universities run short lunch-time sessions only, some use online programmes and some run intensive accredited programmes where the university makes workload provision for new supervisors to study for several weeks. Many universities are now asking the question 'what makes a qualified supervisor?' and this is easier to answer clearly in the newer universities where procedures have not yet been calcified.

One important question for further research is: how can we create some good practice in supervisor development for supervisors or advisors who are employed in the workplace but need to be included in the academic supervisory team?

We need to ensure that the modern doctoral candidates do not 'fall between two stools' because both supervisors think that the other one is responsible for a particular part of supervision. We need to ensure that workplace supervisors feel an important part of the academic team and are empowered to give feedback to doctoral candidates in a way that will support their work.

In a fast-moving world it will become increasingly important for even experienced supervisors to keep up to date. Both academic and workplace supervisors need to understand more about the growing field of research ethics, intellectual property and both need to know where to go to find the latest regulations that will affect their candidates.

Provision to support supervisor development that is attractive to the academics in their institutions but also open to new and experienced workplace supervisors, could lead to a lower attrition rate and some new and exciting projects.

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