

Supervising across boundaries: The new professional development challenge

Dawn Duke, Pam Denicolo and Chris France

Professor Pam Denicolo

Summary of points:

- UK Research funding is dependent on demonstrating applicability and relevance (impact) of research outcomes. Applies to researchers at all levels, academics, early career researchers and doctoral researchers.
- Current problems require flexible, holistic approaches using the insights from a range of disciplines.
 - We can no longer work in disciplinary silos, nor simply engage in 'academic' research.
- We require a range of partners or collaborators to ensure a greater understanding of the complexities we face in our research quests.
- Thus, we need not only, to be open to learning about the customs, practices, etiquettes of alternative epistemologies, paradigms and ways of researching, but also to recognise the prejudices and limitations of our own ways. As supervisors, guiding new researchers into this dynamic context, it is critical to make our doctoral researchers aware that there are alternatives and that it is important to learn about, appreciate and respect those differences, particularly of collaborating researchers, if we are to work together fruitfully.
- This is not just for the sake of a 'pretty, kinder, more inclusive' way of working; it is imperative for good research practice in the complex world of today.

Prof Chris France

Summary of point:

- This is a specific example of research taking place to tackle the challenges of this complex world. I am an engineer, and I have been running an interdisciplinary, inter-sectoral doctoral training programme in the broad area of sustainability for over 20 years.
- This programme brings together supervisors from a variety of disciplines, from engineering to social sciences, with collaborative supervisors from industry to produce research that addresses real issues that the company, a business sector or policy-maker is currently facing.
- This requires each member of the supervising team to appreciate the expertise and input of their fellow supervisors.
- It is critical to ensure each collaborator understands the expectations of each other member of the team, and the doctoral process itself. It is important that the needs of the sponsor drive the direction of the research whilst the academic supervisor takes the primary responsibility for ensuring that the overall breadth and depth of the research is suitable for doctoral research and the imperative of making a distinct contribution to knowledge.

- Supervisors, both academic and collaborative, received supervisor training. Doctoral researchers also received training on a variety of transferable skills, including managing supervisor relationships.
- The continuing success of our programme demonstrates that these types of collaborative doctorates work, but require careful consideration of the supervisory team, mutual respect and shared understanding of the needs and expectations of all members of the research team.

Dr Dawn Duke

- I head up the programme that delivers transferable skills training to doctoral researchers, early career researchers and am responsible for providing supervisor training for the University of Surrey. We have two full days of required supervisor training for new supervisors. We also provide short 'Masterclass' sessions for all supervisors on specific topics, such as Supervising International Researchers, Supporting Dyslexic Researchers and Managing Unsatisfactory Progress.
- Many of the supervisors and doctoral researches we support are boundary crossing, particularly as the University's research strategy emphasizes cross disciplinary themes. I also provide training for our special collaborative programmes such as the Professional Engineering Doctorates (EngDs) and Clinical Psychology Practitioner (PsychDs), supporting both academic and collaborative supervisors. We also provide special sessions for other collaborative supervisors, in various non-academic research institutes and companies. Based on this work with boundary-crossers, here are a few of the challenges our researchers report:
 - Boundary crossing doctoral researchers: can feel stuck in between worlds, negotiating different research cultures and sometimes not feeling fully a part of any...being 'other', pull between supervisors who have different visions for the research and different 'needs' from the collaboration.
 - Non-academic collaborative supervisors: often don't understand the 'bureaucratic' processes, focus on outcomes and results and may not understand the importance of the process and the development of the doctoral researcher towards independence.
 - Academic supervisors working across boundaries: may struggle to understand different ways of thinking and different drivers, feel their own pressure to meet specific targets, such as publications in high quality journals...and may have concerns about boundary crossing negatively effecting this; challenges with supervising at a distance.
 - Experience from working with programmes like Prof France's EngD in Sustainability shows that when boundary crossing supervisors and doctoral researchers are supported through an inclusive, collaborative researcher culture with tailored training to support relationship building skills as well as interdisciplinary research skills, members of the research team are less likely to face the above challenges.
- This feedback from different perspectives within boundary crossing research teams demonstrates the need to better support supervisors to cross these boundaries and guide doctoral researchers to do the same. Therefore, when institutions undertake these different collaborative ventures, they should think from the beginning about providing supervisors with adequate training and ongoing support.