Chapter 10

The Use of ICT in Researcher Development

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ABSTRACT

This chapter provides a case study highlighting the importance of ICT use in researcher development, exploring both training pedagogy and ICT skill development, utilizing the authors’ experience of managing and delivering ICT-based researcher development across a wide range of disciplines for researchers, including part-time and distance researchers who conduct their research away from campus. Participant feedback and examples of best practice will be highlighted alongside potential challenges to encourage readers to confidently utilize a wide variety of ICT in order to create innovative researcher development material to best support the next generation of researchers.

INTRODUCTION

Over the past two decades, there has been a global drive to increase numbers and widen the diversity of doctoral candidates as governments recognise the value to their respective national economies of highly educated doctoral graduates (Denicolo, Duke, & Reeves, 2016). There has also been an increased focus on international and
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inter-sectorial mobility for doctoral researchers (European Ministry of Education, 1999; Lisbon Summit, 2000), and recognition that doctoral researchers should develop a wider range of transferable skills, including ICT skills, during their doctoral studies (Kemp & Kemp, 1999; Roberts, 2002). This focus has led to a rapid increase in support for transferable skills within doctoral programmes, and the birth of researcher development consisting primarily of structured training and support for a wide range of transferable and employability skills for researchers, primarily at doctoral level (Denicolo et al., 2016). Over the years, governments and universities have invested sustainably in this infrastructure to help their doctoral researchers develop a broader range of skills, which have been identified in the Researcher Development Framework (RDF) (Figure 1), commissioned by Vitae (2010).

Skills that are crucial for researcher development are those in ICT. In the RDF, ICT skills are situated within Domain A: Know and Intellectual Abilities; however, strong ICT skills are also critical for successfully developing and effectively demonstrating skills across the entire RDF. This is particularly the case with the ever-increasing pressures on researchers to communicate their research openly and broadly, to engage with the public, and to ensure their research has societal impact. Moreover, with rapid developments in ICT that enable people to promote their professional profiles and their work internationally, the new generation of researchers who are not ICT savvy may well get left behind. It is likely, therefore, that the development of complex and agile ICT skills will be one of the most critical skill areas that researchers should develop for future career success not only in academia, but in a wide range of sectors.

Effective transferrable skills development for researchers requires supervisors, researcher developers, and other professionals supporting researchers to continually develop their own skills and understanding of how ICT is being used within the research context. Continual ICT skills development is important not simply to deliver appropriate training content in traditional face-to-face courses and workshops, but also to reach out to researchers who are often off campus, perhaps in different time zones, and so unable to attend this traditional mode of training delivery. Providing effective skills development for researchers, then, means radically changing the ways in which it is normally facilitated. Using ICT to deliver effective skills development for researchers is a resource-heavy activity. However, when it is done well, the reward is great as doctoral researchers thrive by developing the necessary transferable skill base and can become members of virtual researcher communities, creating distance learning cohorts and combating isolation.

This chapter explores issues of ICT skills development within the researcher development context in two ways. First it identifies the ICT skills that researchers need to develop and shares best practice in training techniques. Second it considers how those involved in delivering researcher development training can best utilise
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