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WHAT ARE TRANSFERABLE SKILLS AND WHY THEY ARE NEEDED?

Chapter overview



This chapter reviews the:

- Skills that people bring to doctoral study
- Further skill requirements with a working definition of transferable skills
- Context: the history of change in doctoral education
- Particular developments in relation to training during and beyond the doctorate
- Consequences for careers beyond the doctorate
- Impact on the people involved: researchers, supervisors, trainers and other support staff

Skills at the commencement of the doctorate

Since the doctorate is the pinnacle of award-bearing courses in Higher Education, all those starting a doctorate will already have many relevant skills to bring to bear on the task – indeed, they will have been selected by the university because they have demonstrated some of those skills and have shown potential for developing others. Some will be very confident that they already have most of the required skills, while others may face with repudiation the requirement to conduct research that will ‘make an original contribution to knowledge’. This demonstrates the wide variation in those who embark on doctoral studies, which is reflected also in the range and diversity of skills that each individual brings to the task, although it is not always the most confident who are the most skilled.

2 DEVELOPING TRANSFERABLE SKILLS

Over the last two decades the variety in student background has increased, as has the range of doctoral degrees to which they can address themselves. Not only is the gender ratio more balanced (although there continues to be some disciplinary differences), but those seeking qualification through Professional Doctorates have added to the number of more mature, and hence more experienced, doctoral researchers, studying full- or part-time. They often bring more employment-related skills to the task but do not always recognise their value, whereas those with more recent experience in Higher Education tend to have what we might call 'knowledge of the system' and more practised academic skills.

You, the reader, may be just embarking on a doctorate, or on your way to completing it and wondering about your career beyond the conferment of your degree, or be involved with postdoctoral research and looking to move on with your career. At this point you might like to begin to consider the skills you already have that you think you might need for the next stage or those that will enhance your career prospects overall. As you work your way through this book, you will find we suggest that you engage in some activities that will help you to clarify just what skills you do have and how you might strengthen, expand and harness them in pursuing your career. We suspect that you will have more appropriate and useful attitudes, abilities and aptitudes than you may think at this moment, but it might give you confidence to begin to identify some of your potential right away by trying Activity 1.1, which explores your skills beyond those learned in school and academia.

ACTIVITY 1.1 A FIRST LIST OF POTENTIALLY TRANSFERABLE SKILLS



Think back over any full- or part-time jobs that you have had, including vacation jobs or those to earn pocket money while you were still at school. List the skills that you brought to bear in them.

Then think of the hobbies you have or have had. Did they develop any skills that you could add to your list?

When we discussed our own experiences related to this, we recognised the cultivation of general attributes, such as time keeping and being organised, and some specific skills, for instance, that vacation jobs like waiting tables or bartending developed our skills of handling difficult people and multi-tasking, while hobbies such as gardening developed project planning, experimentation and many others that may not have seemed obvious at the time. Thus we feel sure that everyone reading this already has many skills, some in embryonic form and others that need re-orientating to fit different circumstances, but a range of useful skills nevertheless.

A first look at skills required during the doctorate

You may be wondering why we did not start by emphasising obvious academic skills since these will clearly be key ones for doctoral study, or perhaps you suspect that academic and ‘generic/transferable skills’ are beasts of different kinds. Let us allay that suspicion and agree that academic skills are part of the transferable skills family, as you will see in much more detail in Chapter 4, but we would like to emphasise that they are only part of that family (see Chapters 5, 6 and 7). Further, we want to highlight that those academic skills that served well at first degree level, and even at master’s level, require considerable development to enable candidates to complete a doctoral study. Let us illustrate our point with a metaphor.

In the case of swimming, our early experiences and efforts in swimming baths may well have made us strong competitors in local and even national races and, indeed, we may have won so many that we had been chosen to represent our country’s team at the Olympics. We would then have had to adapt our skills to a much bigger pool and develop our techniques, strength and stamina further to cope with the much stronger competition, albeit with a coach at the ready with instructions and a warm towel while our friends and supporters cheered us on. This is the equivalent of developing our academic prowess through school, first degree and then perhaps a master’s degree. If we begin our doctoral studies expecting that the task will



FIGURE 1.1 Swimming in swimming pool



FIGURE 1.2 Swimming in the sea

involve an even bigger pool with increasingly stronger competition, then we will be surprised by the complete change in environment and skills requirements that it presents. In terms of difficulties and challenges, it is more equivalent to attempting to swim the English Channel while the sense of accomplishment at the end is more about pride in your own development than in beating off competitors.

The lanes have disappeared, only the general direction of travel is indicated; the end point is well out of sight; there are unpredictable waves and currents; the deeper water contains many terrors both below the surface and on it; and the coach can only supply general guidance and encouragement over your long, drawn-out personal battle with the elements. S/he will help by alerting you to possible dangers and may guide you through the shipping lanes. Your friends and supporters wave you off from the shore and a few might make the journey to the other side to congratulate you when you reach the other shore. Otherwise you will be alone, ploughing on regardless of being weary and cold, as you learn to tolerate the mental uncertainty ... and the jellyfish and other unexpected floating and swimming objects. However, there will be patches of calm water in which to recoup some energy and reflect on how far you have come; you will feel a rush of serotonin-powered elation when you realise that a sleepless night has resulted in a major move forward; your strokes will be more powerful as you progress and you will experience joy when you reach what previously appeared to be an unobtainable goal.

This is a different task with new rules, not all of which will have been clear when you volunteered for it. Although your swimming skills, competitive spirit, strong body and so on, which have served you well so far, will stand you in good stead during the rest of the journey, there will be other skills to be learnt and practised along the way. Further, not every gold medal winner from the swimming pool will excel at this new task, while some who did not make the national team will bring other skills to bear which will see them safely to the opposite shore.

We guess that you will see how this analogy applies to the process of doctoral study, with other comparisons emerging with greater experience of it. For instance, the ability to learn new things is of course important in both the swimming baths and sea, at undergraduate and postgraduate level, but the skills of discriminating, evaluating and challenging received wisdom become predominant at the doctoral level and not everyone has practised this before. What is more, those skills, while important in the academic context, may need some adaptation when encountering other work environments, as you will see in Chapters 8 and 9. Further, if the 2012 London Para-Olympics taught us nothing else, it did demonstrate that having a perfect body is not essential for swimming excellence, which resonates with our own experience that a traditional background of school and university success is not an essential precursor for the development of a good researcher. Those with a more varied background have often developed other pertinent skills along the way.

Beyond the doctorate – why learning generic, transferable skills is important

To prolong the metaphor a bit longer: armed with the experience of the English Channel, you will be better prepared to swim in other seas, some of which, some of the time, will be less demanding or will require only minor adaptations to your skill inventory. Then you will become adept at spotting the need for a new skill and acquiring it in time for ocean crossings.

In the Prologue we referred to the notion that the development of skills has always been a facet of doctoral education, but only an implicit part in the past when the prime objective was to reach the goal of producing a thesis that demonstrated the work towards, and the achievement of, an original contribution to knowledge. Of course skills were learnt in the process but, first, they tended to be mainly those developed in relation to a specific research project and, secondly, there was little encouragement

to articulate them explicitly. In the past, when few people attained a doctorate and the likely career pursued thereafter was one in Higher Education, academic employers understood the requirements and outcomes of academic study and took for granted that they had been achieved by people with a doctorate seeking a research-related role in the academy. (Of course then, and occasionally now, people undertook doctoral study not for any future employment but simply as an intellectual challenge. If you are such a person, we suspect that you will find it satisfying to monitor what other skills are acquired along the way to the academic achievement, especially as many of these will be survival skills in the general game of life!)

In terms of pursuing a career beyond the doctorate, times have changed. In the next section we will review how things changed, and why, but now a larger number of people with high academic qualifications are seeking employment in a very wide range of work situations, while employers require clear articulation of how the attributes acquired during doctoral study and research work meet their needs. They prefer these attributes to be readily transferable from the doctorate/research to the work situation, whatever it is. This has led to the use of specific terms for such attributes: **generic and transferable skills**. They are defined as *generic* in that they are not restricted to a particular task or work environment and *transferable* in that, having been learnt/practised in one situation, they are flexible and can be applied to another task in another situation, albeit with some modification.

Using our example in Activity 1.1, the skill of handling difficult people, learned through vacation work or other jobs, can be transferred during doctoral study to managing supervisors or research participants and then transferred again to dealing with seniors and clients as a professional beyond the doctorate. Before we discuss the process of development of the 'skills agenda' in doctoral education, Activity 1.2 will provide you with a clearer picture of what is meant by transferable skills and may provide you with more ideas about, and examples of, some that you already have and could use to enhance your employment prospects.

ACTIVITY 1.2 UNDERSTANDING TRANSFERABILITY



Go back to your own example, or use ours of a waiter or bartender, from Activity 1.1 and list the attributes, that is qualities and skills, which make for an excellent holder of that job. Now cross out that first job title and substitute the job 'manager'. Cross out any attributes that no longer apply.

How many of them remain roughly the same across both jobs? These are transferable skills since they are useful, with a bit of adaptation, across several jobs. Since academics and researchers often have to manage people as part of their roles, they are transferable both within and outside of the academy.

This exercise is based on one by Linda Herold, Sir Sandford Fleming College, Cobourg, Ontario, www.stepsstonesforvets.org/Skills/Identifying_Our_Transferable_Skills_In_Career_Planning.pdf (retrieved 23/4/2013).

The development of skills training in the doctorate – a potted history providing the rationale

Earlier we recognised that there have recently been significant changes in doctoral education, mentioning the growth in numbers and diversity of participants, and the purpose of the doctorate. The doctorate continues to be a main entry qualification for work in the academy itself but is increasingly being used, if not always as a specified qualification, for obtaining work at a senior level across the range of sectors, public, private and voluntary, in a wide range of professions. Not only are professional people seeking to obtain a doctorate to improve their promotion chances within a specific career pathway, but also, because of qualification inflation and increasing unemployment, the doctorate is sought to indicate exceptional skill within an increasingly competitive environment. It is worth noting that, although we will illustrate here these transformations with examples from the UK context, they are happening globally.

The nature of doctoral training had changed little before 1987, being largely viewed as an apprenticeship in research, with students learning by working with an expert researcher, their supervisor, to develop a research project and a thesis in the supervisor's field (or subject area) of expertise. Such apprenticeships were often spread over many years, a source of worry to funders of research, resulting in the 1987 Winfield Report, which expressed concerns about over-long completion rates and the consequent cost of studentships. This was the first real interaction between government and universities about doctoral education and led to some disciplines in some universities developing training provision for doctoral students, mainly confined to lessons about research methods, although some provided advice on how to write a thesis and survive the doctoral journey. This is where our more detailed history begins.

Research methods programmes became more widespread across universities and disciplines within them, as many research councils (RCs) began to

institute 'recognition exercises', limiting research student funding to institutions that provided such students with a good research training programme. By the 1990s, especially following the 1996 Harris Report reviewing post-graduate education, universities began to extend this training provision to all registered doctoral researchers in recognition of economies of scale, the benefits of peer group learning, quality considerations and, quite probably, publicity and recruitment advantages. Thus by the time the Bologna Declaration 1999 was published, the UK had already established methods training in its Higher Education Institutions (HEIs), and a few institutions also provided broader skills training, mainly related to research communication and dissemination. The Bologna Declaration sought to reform European Higher Education systems and produce some convergence across Europe in order to improve graduate employability, mobility and global competitiveness.

By 2010, following an onslaught of policy initiatives, as exemplified in Box 1.1, the UK HEIs had all made provision of some kind in relation to transferable skills training, many establishing Graduate Schools of some form or another or creating similar professional teams charged with post-graduate (PGR) and early career researcher (ECR) development. In more recent times, coalitions within and between universities (Doctoral Training Centres/Centres for Doctoral Training or Partnerships: DTCs, CDTs, DTPs) have been formed under research council initiatives which aim to provide excellence in research by drawing on a wider range of expertise within a context of a critical mass of researchers.

As can be seen in Box 1.1, the development of policy and intervention by government in the education and training of newer researchers increased considerably from 2000 with at least one (and frequently more) review, report or recommendation emerging per annum. You need not study these in detail now but we alert you to their significance in promoting and embedding the need for PGRs/ECRs to gain an appropriate selection of transferable skills to aid their future careers, and hence contribute to the national and continental economy.

BOX 1.1 IMPORTANT POLICY DOCUMENTS IMPACTING ON POSTGRADUATE RESEARCH EDUCATION AND EARLY CAREER RESEARCHERS

- 1987 Winfield Report, Completion rates and studentships
- 1996 Harris Report, Review of PG Education
- 1999 QAA Code of Practice, Section 1; reviewed in 2004
- 1999* Bologna Declaration plus annual revisions and additions
- 2001 and 2008 QAA Framework for HE Qualifications revised

- 2001 RCUK, Joint Statement of the Skills Training Requirements for Research Students (JSS)
- 2002 Roberts Report, *Set for Success*
- 2003 HEFCE Improving Standards in Postgraduate Research Degree Programmes
- 2003 DES Investing in Innovation
- 2004* Dublin Descriptors
- 2005* Salzburg I Principles
- 2005* European Charter for Researchers and Code of Conduct for the Recruitment of Researchers
- 2006 Leitch Review, Prosperity for all in the global economy – world-class skills
- 2006 Warry Report, *Increasing the Economic Impact of the Research Councils*
- 2008 UUK International Unit The UK's Competitive Advantage
- 2008 The Concordat to Support the Career Development of Researchers (UK)
- 2009 Thrift Review, Research Careers in the UK
- 2009 Wellings Report, universities' management of IP
- 2009 DBIS Higher Ambitions
- 2010 DBIS Review of Postgraduate education
- 2011* Salzburg II
- 2011 QAA Doctoral Degree Characteristics
- 2012 QAA Review of Section 1 Code of Practice for Research Degrees

* European

As we are writing this book yet another document was launched at Westminster: the 2012 report of an independent inquiry on postgraduate education by the Higher Education Commission: www.policyconnect.org.uk/hef/research/postgraduate-education. Although the main substance of the review focused on the funding of and access to postgraduate studies, the Commission agreed with the findings of the 2006 Leitch Review that postgraduate skills are major drivers of innovation and growth. Further, it suggested it was critical to the future of the UK that a strategic approach was taken to maintain the current competitive advantage of high-quality PGR skills' training by strengthening the support of PGRs and increasing the UK's share of leading researchers.

The pervasiveness of professional skill development

Lest you think that this concentration on skill development is the unique province of researchers, we should note that all professions have, over the

same time period, reviewed and enhanced their requirements for Continuing Professional Development. It is no coincidence that the skills highlighted for professional researchers have much in common with those expected of other professional people, underlining their transferability. To give an example, Berliner (2001: 469–70), when addressing teachers about what can be learnt from expert teachers, described what he called the prototypical features of expertise to be found in a range of professional fields. These are summarised in Box 1.2.

BOX 1.2 PROTOTYPICAL FEATURES OF EXPERTISE, SUMMARISED FROM BERLINER, D.C. (2001) LEARNING ABOUT AND LEARNING FROM EXPERT TEACHERS, *INTERNATIONAL JOURNAL OF EDUCATIONAL RESEARCH* 35 (5): 463–482

- Extensive discipline content knowledge and deep understanding
- Improved use of knowledge
- Better problem-solving strategies
- Superior skills for adaptation and improvisation
- More challenging objectives devised
- Enhanced decision making skills
- Improved ability to read cues
- Greater sensitivity to context
- Advanced monitoring and feedback skills
- More frequent hypothesis testing
- Greater respect for colleagues

Particular recent developments in skills training

From the foregoing, we can see that the apprenticeship model of research training was increasingly challenged over the last 25 years. Further, the limitations of research methods training alone became apparent during the last 15 years. In response, at least in part, to employers' requirements for their doctoral recruits to be highly skilled as well as having a high intellectual capacity, in 2001 the research councils (RCs) produced a statement on skills training requirements, or the Joint Statement Skills (JSS – see Appendix 1) as it became known, which essentially was a summary of the skills required of successful doctoral candidates by the time they submitted their theses. The JSS acted as the basis for generic research skills training programmes, tailored to the needs of individual students through Learning

Needs Analysis (sometimes called Training or Development Needs Analysis) procedures, something we will explore further in the next chapter. This development recognised that the specialist skills derived from a particular research project were no longer sufficient to meet contemporary requirements and that PGRs needed to improve their ability to recognise and articulate their skills to a wider audience other than their doctoral examiners. This generated an ongoing debate about the nature of the doctorate and the postdoctoral career.

It is common sense that no prospective employer, even one in Higher Education, is going to read a candidate's thesis to discern what skills and attributes they might bring to the world of work; instead the candidate must be able to identify and communicate their increased prowess and knowledge in a way that makes sense to employers. Further, the communication of acquired skills to gain employment must be followed by a demonstration of those skills in the new context while performing the job.

Following the recommendations in the Sir Gareth Roberts 2002 UK report *Set for Success*, funding was made available for a limited period of ten years as an incentive to institutions to establish and embed training of transferable skills in doctoral study and postdoctoral support, including those engaged in a full- or part-time mode. At the same time, supervisors/training deliverers across the sector also required development support to meet these changing circumstances. Although institutions provided some internal staff development support, the efforts of external organisations such as UKGRAD, which later became Vitae, the UK Council for Graduate Education (UKCGE), and the Society for Research in Higher Education Postgraduate Interest Group (SRHE PIN) enabled the sharing of good practice and joint consideration of challenges and potential solutions across the sector.

As the 'Roberts' funding period came to an end, the RCs began, in response to diminishing resources, to develop their funding strategy to emphasise the use and sharing of excellence in training provision through centres of excellence variously named DTCs, CDTs or DTPs, etc. At the same time the limitations of the JSS became apparent because it was recognised that skills demand continuous development over a career lifetime.

Vitae (the UK organisation that champions researcher development) responded to this by producing the Researcher Development Framework (RDF) – a process in which your authors were heavily involved. We will look at this in more detail later, but here provide Vitae's introduction:

The Researcher Development Framework articulates the knowledge, behaviours and attributes of successful researchers and encourages them to aspire to excellence through achieving higher levels of development.

Similar initiatives have been pursued in other countries across Europe and worldwide. For instance, in Australia the second edition (2013) of the Australian Qualifications Framework (AQF) specifies, in addition to original research outcomes presented in a thesis or equivalent, that generic learning outcomes will fall into four broad categories: fundamental skills, people skills, thinking skills and personal skills or attributes (www.gradskills.anu.edu.au/). The impact that the transferable skills initiatives have had on the sector as a whole can be judged by reading the report by the Leading European Research Universities (LERU): *Doctoral degrees beyond 2010: Training talented researchers for society*. www.leru.org/files/publications/LERU_Doctoral_degrees_beyond_2010.pdf (accessed 22/2/2013).

A flavour of this report can be gleaned from the following excerpt:

The process of doctoral education develops in the candidate a range of skills to a very advanced level. These skills relate not only to the research process itself, but also to a broader personal and professional training and development. The latter skills are often labelled as ‘generic’ or ‘transferable’, because they are valuable not only for the successful completion of the doctorate, but also for career development after the doctorate in a wide range of professional sectors. (LERU 2010: 5)

Such radical change does not come without consequences for the people involved, a topic we turn to in the last section of this chapter.

Impact on the people involved in PGR/ECR education and training

It is not only the doctoral and postdoctoral researchers who are influenced by these far-reaching developments; their supervisors, principal investigators (PIs), Graduate School Directors, trainers, and other support staff have all had to develop their skills and change their traditional working practice in response. Indeed, it could be that the researchers themselves are the least aware of the changes since they may not realise that previously things were very different. However, they (you, perhaps) are the ones who have to make the most personal effort to engage with the changes; becoming self-aware, seeking opportunities for further development and ensuring the development of a competitive advantage when in search of further employment.

Academics may have been crusaders, champions, weary compliers or resistant to change in relation to the various policy edicts as they have constantly been asked to do more with less support (financial at least) in the last 15 years; yet the vast majority now recognise that skill development improves the quality of research produced while there is growing evidence

that it does not substantially increase the registration time for doctoral students. Vitae and other related organisations hope that the RDF will help academics to identify their own training needs as well as those of their postgraduate and staff researchers.

A key point is that, no matter how personally stimulating the process of obtaining a doctorate can be, doctorates are no longer the exceptional qualifications they once were. In today's competitive job market, in addition to demonstrating autonomous learning in relation to a specific research project, holders of a doctoral qualification must convince future employers that they have become proficient researchers with broad skills which are transferable to other occupational situations. Since standing still is not an option, it is with this task that this book seeks to provide you with support to identify what further skills you might need.

Ideas for further reading

- Denicolo, P.M., Park, C., Clarke, G. and Bohrer, J. *Doctorateness – An Elusive Concept?* Available online at: www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/Doctorateness---an-elusive-concept.aspx (retrieved 23/4/2013).
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- HEFCE (1996) *Review of Postgraduate Education (Harris Report)*. Bristol: HEFCE. Available online at: www.hefce.ac.uk/pubs/hefce/1996/m14_96.htm (retrieved 23/4/2013).
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- Roberts, G. (2002) *SET for Success: The Supply of People with Science, Technology, Engineering and Mathematic Skills*. London: HMSO.
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