



The
University
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The
Careers
Service.

Skills Of Researchers.

Introduction

When it comes to looking for work, researchers tend to see their time at university in terms of the **body of knowledge** covered rather than in terms of skills. However, all employers look for **skills** when selecting graduate researchers. This is true, even when the research is directly relevant to the area of work.

Although most researchers tend to be fully aware of the research-specific skills that they have, eg the ability to use particular laboratory techniques or statistical packages, surveys of major graduate recruiters have revealed that people with research degrees are not always aware of the wider 'generic' or 'transferable' skills that they have acquired in the course of their research. This information sheet is designed to help you to identify the full range of skills that you have acquired.

Communication and interpersonal skills

In a recent survey, where employers were asked which of seven groups of skills they regarded as most important when recruiting candidates with a research degree, interpersonal/communication skills were ranked first by over 40% of those surveyed. These skills can be considered under the following broad headings

Verbal communication

Presenting your findings at conferences and seminars, together with any teaching that you undertake in your department provides an opportunity to develop oral communication and presentation skills. Moreover, presenting to other researchers provides valuable experience of responding to constructive criticism and teaching students demonstrates a capacity to communicate with people who don't have the same level of specialist knowledge.

Written communication

As a research student, you have to complete a major piece of written work – your thesis. This is often preceded or succeeded by a number of written documents, some of which will be published. As a contract researcher you may be involved in writing applications for funding.

Team working ability

Although working on a thesis can be a fairly solitary activity it may involve collaboration with other researchers on publications and there may be opportunities to become involved with departmental colleagues in organising seminars or in planning programmes of undergraduate teaching. As a post-doc you are likely to work as part of a research team and to be involved at a more formal level with others in the administration of your department or research centre.

Negotiation

At the most basic level carrying out research can involve negotiating with your supervisor about deadlines or with colleagues about access to departmental equipment or resources. If you are a contract researcher you may be involved in higher level negotiations with funding bodies, the University administration, external collaborators and regulatory bodies.

The publications in this series are: Support for Postgraduate Researchers; Support for Research Staff; Your PhD - What Next?; Skills of Researchers; CVs and Covering Letters for Researchers; Interview Tips for Researchers

Networking

Through attending conferences and working collaboratively with people outside your own research group, department or institution you will have acquired a number of key contacts. Maintaining links with people who can help you – and to whom you can offer help – is a way of demonstrating your networking skills.

Leadership and management skills

Most jobs at graduate level, even those directly related to research, eventually require the exercise of some kind of management or supervisory skills. In some cases, the management responsibility may be a formal, permanent element of the job involving the direct supervision of other people's work. In other cases, you might be expected to assume a management role temporarily as leader of a team working on a specific project. In either case, experience gained in the course of your research will prove very useful.

Leadership

As a research student the most likely way in which you will develop leadership skills is through teaching undergraduate or master's students. This requires the ability to motivate and support people, to monitor and assess their progress and, if necessary, challenge their behaviour and attitudes. If you are working as a contract researcher you may already have direct supervisory responsibility for technical staff, more junior research staff or students.

Project management

Again, surveys have revealed that this is one of the skills most sought after by employers. The process of research requires the ability to plan, prioritise, set goals and review progress systematically.

Commercial awareness

Prospective employers will expect you to demonstrate that you understand the processes, relationships, risks and costs involved in their business. As a researcher you will have had to think about these things in relation to your own research group and to the wider University.

Personal effectiveness

Capacity for self direction

Although you will always have a supervisor/manager to whom you are accountable, you will still enjoy a high degree of autonomy in pursuing your research and successful completion of a research project requires great deal of self-discipline, motivation and thoroughness.

Time management

Carrying out research inevitably involves having to meet deadlines. While working on your thesis you will have a date for the final submission in view and in the interim you will agree deadlines with your supervisor for completion of particular portions of the thesis. At a later stage in your career you are likely to face deadlines set by funding bodies, external collaborators, journal publishers and organisers of conferences. In order to meet these deadlines it is necessary to have good organisation and planning skills, self-discipline, and sound judgment.

Analytical and problem solving ability

All researchers in the sciences and social sciences, and many in the humanities, are likely to have quantitative analytical skills. You may use statistics to analyse data, or computer modelling techniques. Good numerical skills are often essential. Similarly, all research students will have qualitative analytical skills. You will know how to break problems down into manageable units and identify patterns, trends, causes and connections. Problem solving skills are essential to the work of an effective researcher and highly prized in all areas of management.

Flexibility and adaptability

Research rarely goes exactly according to plan and it is likely that there will be a number of occasions on which you have to go back to the beginning and think of ways of overcoming obstacles. You will also receive a great deal of critical feedback on your findings from supervisors, colleagues and others working in the same field and you will need to modify your own thinking in the light of this criticism.

Cross-cultural awareness

You may have come to the UK from abroad in order to carry out research, or if you are a UK resident, you may have learned a foreign language and lived in other countries during your studies. The ability to adapt yourself to living and working in another culture demonstrates a capacity for adjusting to new situations as well as the self-discipline to overcome feelings of alienation. A knowledge of, and enthusiasm for, a particular culture can be an invaluable asset to an employer if it is in their business interests.

Identifying and evidencing your skills

The national *Researcher Development Statement Framework* (see VITAE's website at www.vitae.ac.uk) provides a useful checklist of the skills that you will have developed through your research. For links to other tools which can help you to identify and assess your skills go to: www.sheffield.ac.uk/careers/postgraduates/research/analyse/

For information and advice on how to provide employers with evidence of the skills that you have, see the 'Careers' section of VITAE's set and our publications *CVs and Covering Letters for Researchers* and *interview Tips for Researchers* (available to download from www.sheffield.ac.uk/careers/postgraduates).