



Date: \_\_\_\_\_

Year of Study: \_\_\_\_\_

Name: \_\_\_\_\_

# PGR Development Needs Analysis

Planning for your personal development is an integral part of your journey as a researcher, and like any journey, you need to know where you are now, and where you want to go, in order to plan an efficient route to get there. This analysis has been designed to help you through that process by helping you to review or 'audit' your current skills and plan for your future skills requirements.

There are three stages to the analysis, as follows: –

## Stage One

### Identify Personal Strengths/Weaknesses

The first stage will help you to identify your personal strengths and weaknesses in the skill areas identified as necessary for researchers by the UK Research Councils; the statements on the following pages will help to provide a picture of areas in which you are particularly confident and competent and those which require some work. Enter a score in the column for stage one to show your current level of competence as you see it.

## Stage Two

### Discussion with Supervisor

The second stage involves seeking clarification from your supervisor about what individual elements of this review mean within your discipline, and to add those skills which are specific to your research project. It is also a useful tool to structure discussions about your training and development and progress. Your supervisor should be able to confirm your assessment of yourself (if you choose to share it) and more importantly to tell you at what level of competence you should be in relation to your current stage of research. They should also be able to offer suggestions as to how you might achieve it. Enter a score in the column for stage one to show your current level of competence as you see it.

## Stage Three

### Prioritisation/Setting Targets

The third stage involves prioritising those areas you need to develop, and then setting yourself targets which should be specific, measurable, achievable, realistic and time bound. This forms the basis of your Development Plan.

As everyone has different amounts of experience, preferences and needs, this form is completely flexible and you can choose to skip stages if you feel more comfortable working this way. However, you will get most benefit if you work through all three stages as an integrated process. It is recommended that you analyse your own personal training and development needs at least once every six months, to coincide with your progress monitoring. Put a date for reaching the target in the third column and a tick in the fourth column for priority development needs. Record the date of the review so you can chart how you have developed whilst a research student.

Further copies of this form can be downloaded from the website at [www.cardiff.ac.uk/gradc](http://www.cardiff.ac.uk/gradc)

It is important that you audit yourself with complete honesty. To help you, we suggest the following broad levels of competency and awareness:

#### Competency Levels:

- 1 = No experience in the skill
- 2 = A little experience or competence in the skill
- 3 = Some competence but below level required
- 4 = Competent and confident, at level required
- 5 = Expert – able to teach, train or coach research colleagues in this area.

And finally, before you enter a score for any statement, think to yourself – how can I provide evidence for this? A space has been left at the bottom of each section for you to record this. This will help you in your review discussions with your supervisor, and later, at CV building and job interviews.

*Tables overleaf adapted with thanks from work by the Universities of Manchester and Leeds.*

# A. Research Skills and Techniques

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>A1.</b> The ability to recognise and validate problems	Able to define original research problems from a coherent analysis of gaps in existing knowledge base				
	Able to identify areas where investigation might produce new knowledge				
	Able to write a research proposal, to the level required of applications for postdoctoral work				
<b>A2.</b> Original, independent and critical thinking, and the ability to develop theoretical concepts	Able to formulate hypotheses and/or research questions for the purposes of designing a doctoral research project				
	Able to provide new and innovative research ideas and strategies				
<b>A3.</b> A knowledge of recent advances within one's field and in related areas	Have in place a strategy for keeping up to date with the latest publications from own and closely-related research areas				
	Confident in searching for information in a variety of bibliographic and virtual sources				
	Can communicate knowledgeably and debate concepts about the wider research area with academic colleagues				
	Confidently able to manage collected information so it can be retrieved and cited appropriately				
<b>A4.</b> An understanding of relevant research methodologies and techniques and their appropriate application within one's research field	An understanding of what constitutes "high quality" academic research within one's field				
	Have in depth knowledge and understanding of appropriate research techniques and their application				
	Able to discuss and prioritise a range of methodologies to address a research question				
<b>A5.</b> The ability to critically analyse and evaluate one's findings and those of others	Able to objectively acknowledge weaknesses and assumptions in one's findings.				
	Able to apply the same objectivity to the work of others				
	Can write a literature review of publishable standard on the topic				
	Good understanding of appropriate methods for testing conjectures or tentative conclusions				
	Where appropriate, an excellent IT ability in data collection, analysis and presentation in an appropriate graphical form				
<b>A6.</b> An ability to summarise, document, report and reflect on progress	Able to objectively criticise own research and define future work				
	Able to maintain and use a research log or record of research activity commensurate with best practice from your discipline				
	Able to produce written summaries and progress reports of a variety of lengths to suit the purpose, and to an appropriate professional standard				
	Able to take regular reviews of own work to determine that it is of sufficient originality, quality and quantity to merit the award of a doctorate				
<b>A7.</b> Project Specific Skill					
<b>A8.</b> Project Specific Skill					
<b>Evidence</b>					

## B. Research Environment

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>B1.</b> Show a broad understanding of the context, at the national and international level, in which research takes place	Able to explain how research in own particular field is organised nationally in terms of (where appropriate) institutions and centres, congresses, societies, publications and some understanding of these internationally.				
<b>B2.</b> Demonstrate awareness of issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research, e.g. confidentiality, ethical issues, attribution, copyright, malpractice, ownership of data and the requirements of the Data Protection Act	Be aware of the guidance offered to researchers at a national level (appropriate to your discipline) i.e. through RCUK, the OST, the NHS and relevant professional bodies etc. concerning ethical issues and ethical research practice within your discipline				
	Be fully aware of the Cardiff University rules and regulations relating to academic misconduct (and particularly plagiarism)				
	Be aware of University guidelines on intellectual property, copyright and ownership of research				
<b>B3.</b> Demonstrate appreciation of standards of good research practice in their institution and/or discipline	A complete understanding of any relevant University guidelines on research practice (e.g. ethical practice) and any statutory regulatory requirements in your subject area				
<b>B4.</b> Understand relevant health and safety issues and demonstrate responsible working practices	Be competent in working with any relevant health and safety regulations				
<b>B5.</b> Understand the processes for funding and evaluation of research	A broad understanding of how research is funded within one's own discipline and the mechanisms by which funding might be sought to continue one's current research				
	Knowledge of how large and small-scale research proposals within own discipline are evaluated				
<b>B6.</b> Justify the principles and experimental techniques used in one's own research	Have good knowledge of competing techniques and approaches in subject area and their relative strengths and weaknesses				
	Be able to justify and defend the decisions that underpin own research direction and methods				
<b>B7.</b> Understand the process of academic or commercial exploitation of research results	Understanding of both procedures for submission and evaluation of research by journals and publishers and be able to prepare research results for submission.				
	Understanding of the major conferences in the research area.				
	Awareness of the various University facilities and support for exploitation of research				
<b>B8.</b> Project Specific Skill					
<b>B9.</b> Project Specific Skill					
<b>Evidence</b>					

## C. Research Management

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>C1.</b> Apply effective project management through the setting of research goals, intermediate milestones and prioritisation of activities	Able to plan, organise and evaluate a research programme				
	Able to execute a research programme which follows a designated schedule to produce a finished thesis within the funded period				
	Able to set and prioritise a number of intermediate goals within an individual research project and to develop an effective strategy and timetable for meeting them				
	Able to make plans and balance competing demands on time effectively				
<b>C2.</b> Design and execute systems for the acquisition and collation of information through the effective use of appropriate resources and equipment	Able to collect and record information in an organised and professional way				
	Competence in relevant data-collection and analysis software				
	Able to conduct searches using appropriate online and offline resources				
<b>C3.</b> Identify and access appropriate bibliographical resources, archives, and other sources of relevant information	Able to demonstrate an excellent awareness of potential sources of relevant information for subject area				
	Fluent in referencing appropriate sources (books, articles, websites, interviews and quotations) and able to use a variety of referencing styles and systems				
<b>C4.</b> Use information technology appropriately for database management, recording and presenting information	Able to establish a bibliography at the level expected for scholarly publication and keep it up to date through searches and electronic services				
	Able to use appropriate software to prepare extensive documents with any relevant special features, such as use of master documents and templates or embedding of charts, figures and images				
<b>C5.</b> Project Specific Skill					
<b>C6.</b> Project Specific Skill					

### Evidence

## D. Personal Effectiveness

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>D1.</b> Demonstrate a willingness and ability to learn and acquire knowledge	Able to identify and exploit sources of information or instruction on a new area.				
	Fully committed to, and engaged in, undertaking a meaningful research-specific and transferable skills development programme				
	Excellent attendance at seminars, meetings, workshops and conferences (evidence based)				
<b>D2.</b> Be creative, innovative and original in one's approach to research	Able to generate new ideas and approaches				
	Able to develop new methodologies as required				
	Able to find and implement solutions to difficult problems				
<b>D3.</b> Demonstrate flexibility and open-mindedness	Able to analyse the strengths and weaknesses of one's own approach, and willing to complement it by an engagement with other approaches				
	Be fully aware of all of the means of exploiting intellectual property and have considered the scope of knowledge transfer and entrepreneurial activity in relation to your research work				
<b>D4.</b> Demonstrate self-awareness and the ability to identify own training needs	Able to evaluate a wide range of skills, evaluate training needs in the light of this and the requirements of the research project, develop a coherent plan for future training				
<b>D5.</b> Demonstrate self-discipline, motivation, and thoroughness	Able to work to a professional level without supervision				
	Able to demonstrate high levels of accuracy, organisation and attention to detail				
<b>D6.</b> Recognise boundaries and draw upon/use sources of support as appropriate	Be able to consider objectively gaps in knowledge, understanding or ability and be aware of possible sources of support such as the skills of colleagues				
<b>D7.</b> Show initiative, work independently and be self-reliant	Able to make and execute substantial research plans with guidance necessary only for specialist issues				
	Provide evidence of "academic independence" to colleagues and peers				
<b>D8.</b> Specific Personal Effectiveness Skill					
<b>Evidence</b>					

## E. Communication Skills

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>E1.</b> Write clearly and in a style appropriate to purpose, e.g. progress reports, published documents, thesis	Able to produce a well-structured and well written report of substantial length				
	Able to write concise, academic prose and express ideas with suitable clarity				
	Full mastery and control when writing a variety of types of research document and in a variety of written styles				
<b>E2.</b> Construct coherent arguments and articulate ideas clearly to a range of audiences, formally and informally through a variety of techniques	Able to communicate own research orally, with proficiency and confidence				
	Able to explain own research at a range of levels				
	Able to produce well constructed clear presentations and use audiovisual aids where appropriate (slides, OHPs , PowerPoint)				
	Able to provide feedback around own research subject of the kind expected in referee's reports for journals and publishers and to respond to such feedback				
<b>E3.</b> Constructively defend research outcomes at seminars and viva examination	Able to present academic work at seminars and conferences fluently and confidently, and able to respond clearly and persuasively to questions and comments at such occasions				
	Confidently able to defend own work in meetings, at transfer, during academic interviews and during the viva				
<b>E4.</b> Contribute to promoting the public understanding of one's research field	Able to write and present research in an appropriate manner for specialist or lay audiences, and be understood				
<b>E5.</b> Effectively support the learning of others when involved in teaching, mentoring or demonstrating activities	Demonstrate an ability to effectively facilitate the learning of others and an ability to impart information effectively				
	Have an understanding of a range of appropriate techniques for supporting the learning of others				
<b>E6.</b> Specific Communication Skill					

### Evidence

## F. Networking and Teamworking

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>F1.</b> Develop and maintain co-operative networks and working relationships with supervisors, colleagues and peers, within the institution and the wider research community	Regular attendance at conferences and meetings, awareness of other researchers in own and related fields				
	Build and maintain co-operative networks and working relationships with supervisor(s), colleagues and peers within the University and the wider research community				
	Be aware of and subscribe to appropriate virtual networks and sources of support (such as Vitae and virtual subject specific networks)				
<b>F2.</b> Understand one's behaviours and impact on others when working in and contributing to the success of formal and informal teams	Be aware of the impact that own behaviours and actions have when building a healthy working relationship with supervisor(s)				
	Understand own behaviour and impact on others when working in and contributing to the success of formal and informal teams				
	Can work in teams (both inside and outside of academia) on complex projects and can both reflect on quality of teamwork and solve team-working problems as they arise				
	Be aware of all the stakeholders of one's work, and have considered and acted-upon the best ways of interacting with them				
<b>F3.</b> Listen, give and receive feedback and respond perceptively to others	Be aware of techniques of giving and receiving feedback effectively				
	Able to listen, give and receive feedback and respond perceptively to others				
<b>F4.</b> Specific Networking and Teamworking Skill					
<b>Evidence</b>					

## G. Career Management

Be able to demonstrate:	More specifically:	Stage 1	Stage 2	Stage 3	
		Competence		Planning	
		Current <sup>a</sup>	Target <sup>b</sup>	Date <sup>c</sup>	Priority <sup>d</sup>
<b>G1.</b> Appreciate the need for and show commitment to continued professional development	Be an active member of an appropriate professional institution or body				
	Regularly attend any appropriate departmental, school, faculty or University seminars and research meetings				
	Take some role in facilitating or organising seminars and research meetings, or some other form of administrative responsibility				
	Have ownership of, update and regularly review a skills development plan				
<b>G2.</b> Take ownership for and manage one's career progression, set realistic and achievable career goals, and identify and develop ways to improve employability	Be aware of potential employers, general recruitment practices and effective job hunting techniques				
	Have considered own career direction post-PhD and set realistic and achievable career goals				
	Have identified ways to improve employability and acted upon them				
<b>G3.</b> Demonstrate an insight into the transferable nature of research skills to other work environments and the range of career opportunities within and outside academia	Be aware of the range of career opportunities within and outside academia				
	Be fully able to demonstrate the transferable nature of research skills to other work environments				
	Be aware of potential career paths stemming from the generic aspects of a PhD, including research techniques, project planning and communication skills				
<b>G4.</b> Present one's skills, personal attributes and experiences through effective CVs, applications and interviews	A broad knowledge of types of CVs, interview techniques and standard questions and recruitment techniques such as psychometric testing.				
	Able to create a targeted CV which effectively presents own skills, attributes and experiences				
	Able to present own skills, attributes and experiences effectively in a job interview situation				
<b>G5.</b> Specific Career Management Skill					
<b>Evidence</b>					