



Doctoral Education at the University of Sheffield

Prof Martina Daly

**Faculty Lead for Postgraduate Research Programmes
Faculty of Medicine, Dentistry & Health
University of Sheffield**



Outline

Background

Responsibilities of Faculties versus Graduate Schools

Structure of doctoral study programmes

Incentives for doctoral research

Thesis requirements

Staff candidature and post graduation pathways



About me

1979-1988 : BSc, PhD,
Postdoctoral research,
Dublin

1988-1991: Postdoctoral
research, Cambridge

1991-1992: Postdoctoral
research, Sheffield

1992 to now: Academic
career posts, Sheffield

My prior knowledge of Sheffield





Sheffield: the hidden gem





The
University
Of
Sheffield.

The University of Sheffield



THE
AWARDS
WINNING

Investigating the pathogenesis of inherited disorders of haemostasis

1992, Lecturer

2001, Senior Lecturer

2016, Professor

Framework to
monitor PGR
progress &
supervision
1997

Section
PGR Lead
2000

Department
PGR Lead
2003

School
PGR Lead
2008

Faculty PGR
Lead
2014

Head of the
Graduate School
2016

Research Training Programme
(Credit based)

Doctoral Development Programme
(Training needs based)

Faculty Researcher Development
Manager, Think Ahead Programme

'Roberts' funding
2003-2011

'Roberts' review and 'Roberts' funding

SET for success

The supply of people with science,
technology, engineering and
mathematics skills

The report of Sir Gareth Roberts' Review

April 2002

2003-2011 – development of career and transferable skills of researchers through ring-fenced payments to research organisations (~£20 m per annum) via the Research councils

Funding was for researchers across all disciplines

Led to move to embed researcher skills development as core part of the UK PhD

Post 'Roberts' funding

2010 – Independent review for RCUK recommended research organisations continue to embed skills and career development for researchers post 'Roberts' funding period

2011 – RCUK institutions asked to outline the extent to which funding for researcher development would be embedded within budgets



Analysis of institutional responses on funding arrangements for researcher development

November 2013

Responses showed majority of institutions planned to maintain levels of provision established during the Roberts-funding years

www.vitae.ac.uk

Vitae is led and managed by CRAC: The Career Development Organisation and delivered in partnership with regional Hub host universities
Vitae is supported by Research Councils UK (RCUK) and UK HE funding bodies
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ScHARR



School of Nursing and Midwifery



School of Clinical Dentistry



Department of Infection, Immunity and Cardiovascular Disease (IICD)
Department of Neuroscience (SITraN)
Department of Oncology and Metabolism
Academic Unit of Medical Education

The Medical School



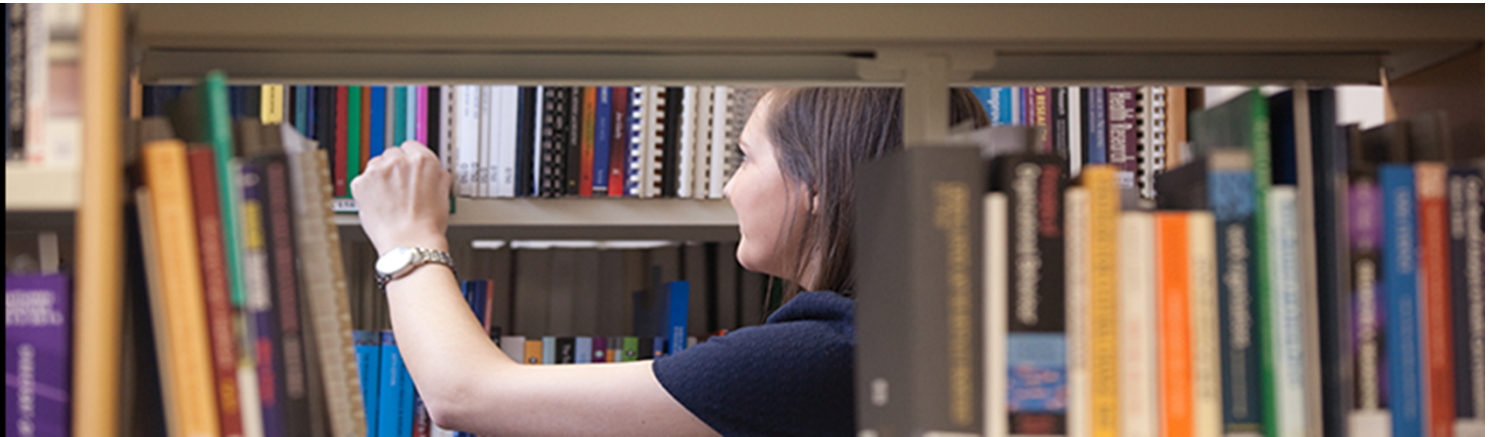
Faculty of Medicine Dentistry & Health

Human
Communications
Sciences



Graduate
School.

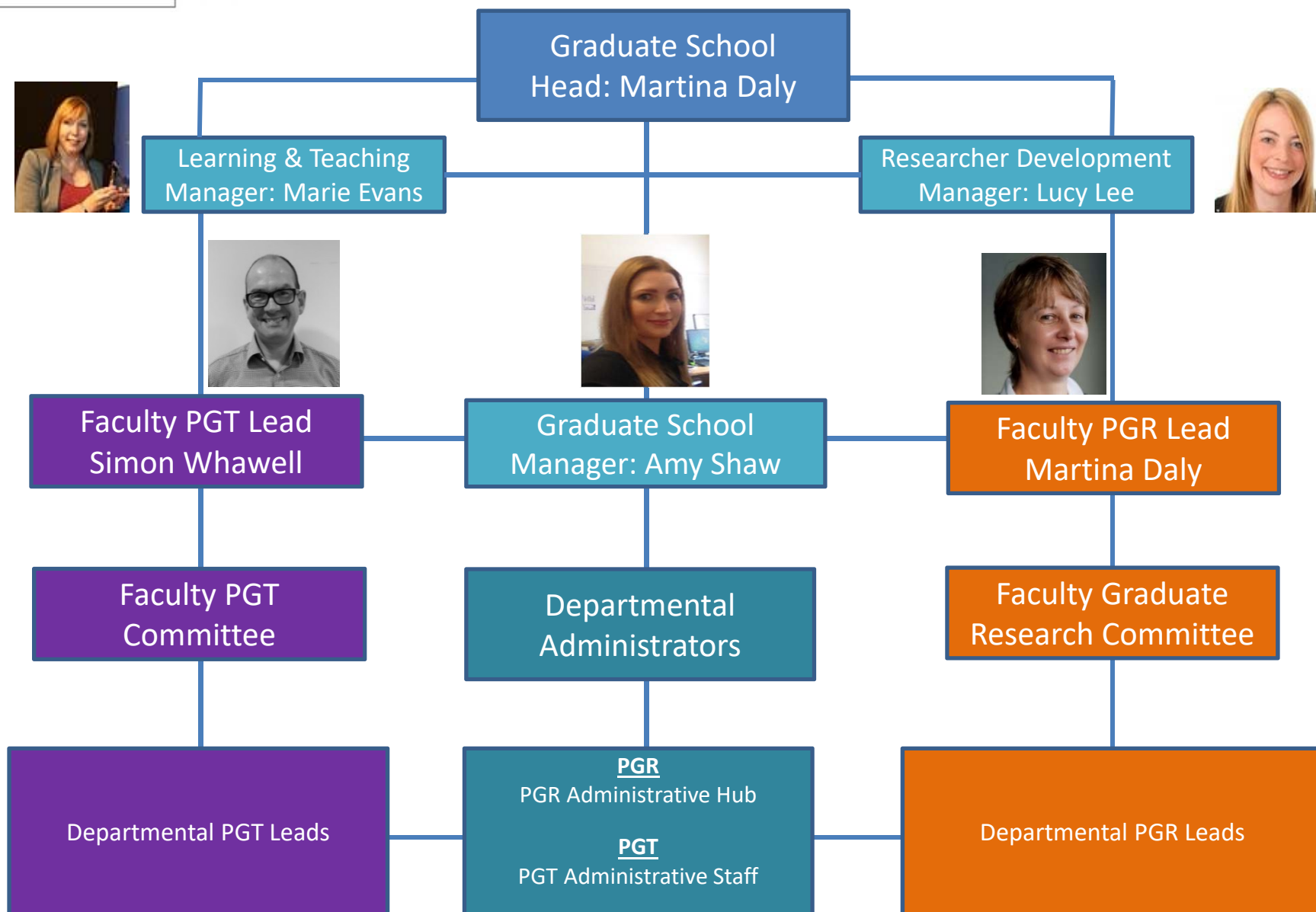
About
Us.



**Central point of support for all postgraduate
students and staff across the Faculty**

<https://www.sheffield.ac.uk/faculty/medicine-dentistry-health/graduateschool/index>

Organisation of Graduate School



What the graduate school does

Recruitment of doctoral students to Faculty/other scholarships

Peer mentoring scheme for all new students

Deliver biannual Postgraduate Induction Course (PIC)

5-7 days of generic and transferable skills training (includes some compulsory sessions)

Year 1

Research Ethics and Integrity training

Biannual PIC follow up sessions on research design, data management, open access for first year students, confirmation review

Year 2

Career planning, fellowships, thesis plan, networking

Supervisor development

PGR Central

Strategic leadership and visibility for PGR matters within/outside the University

Develop strategies consistent with wider University research strategy for recruitment, funding and programme development

Responsible for consistently high quality doctoral experience with excellent academic standards

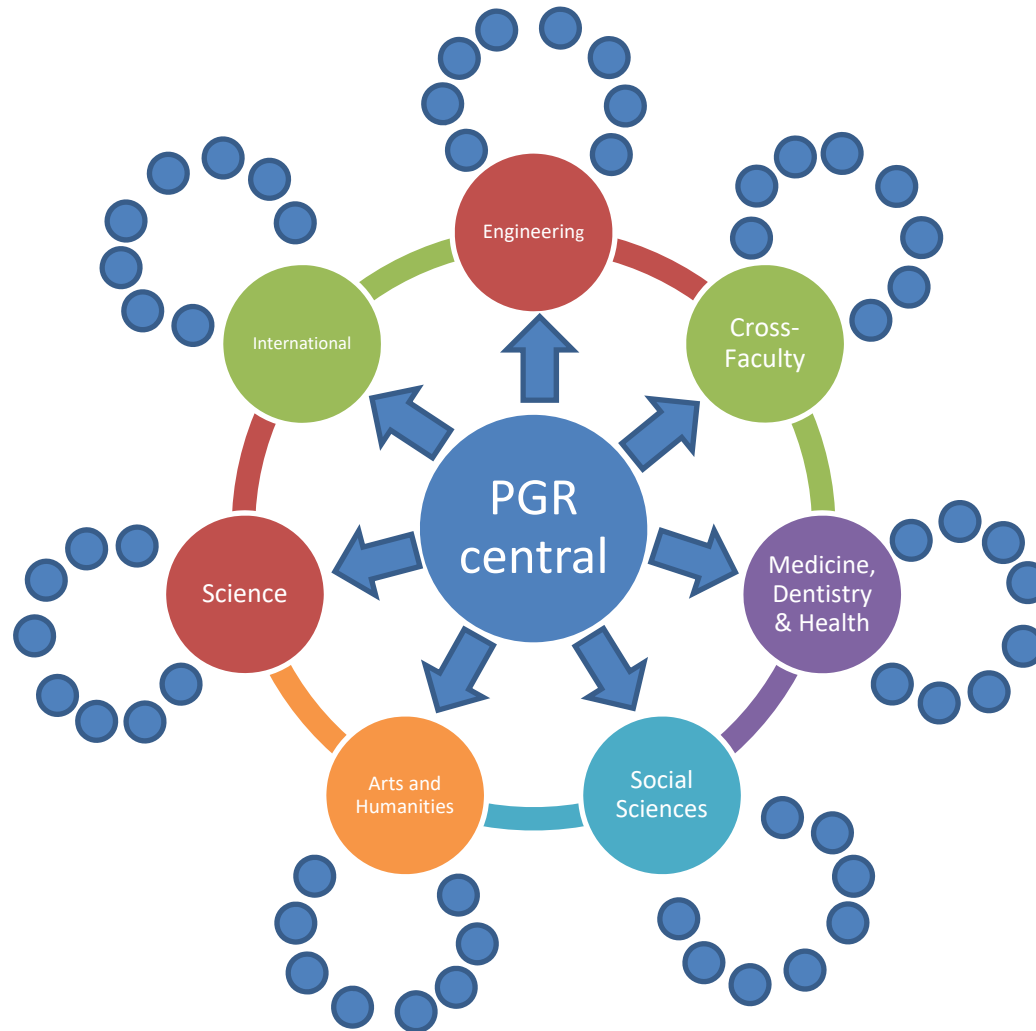
Agree institutional policy relating to PGRs

Faculty Graduate Schools

Provide student-facing support (supervisory and pastoral) appropriate for discipline

Monitor and support recruitment, progression and submission within the context of institutional policy

Ensure student experience is high quality with appropriate practice, training and standards



Other examples



Warwick Graduate School



Liverpool Doctoral College

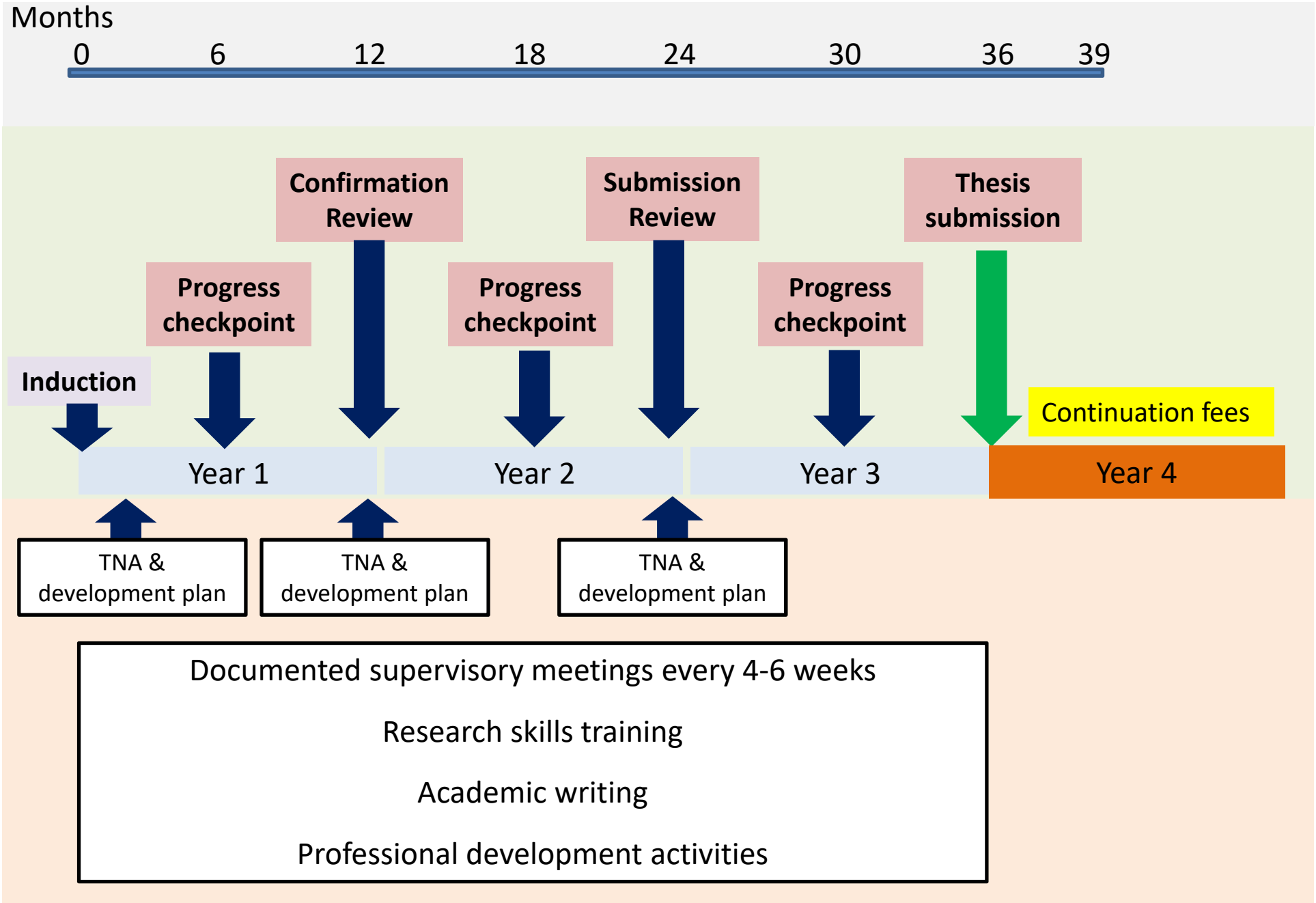


Each Faculty has a Graduate School

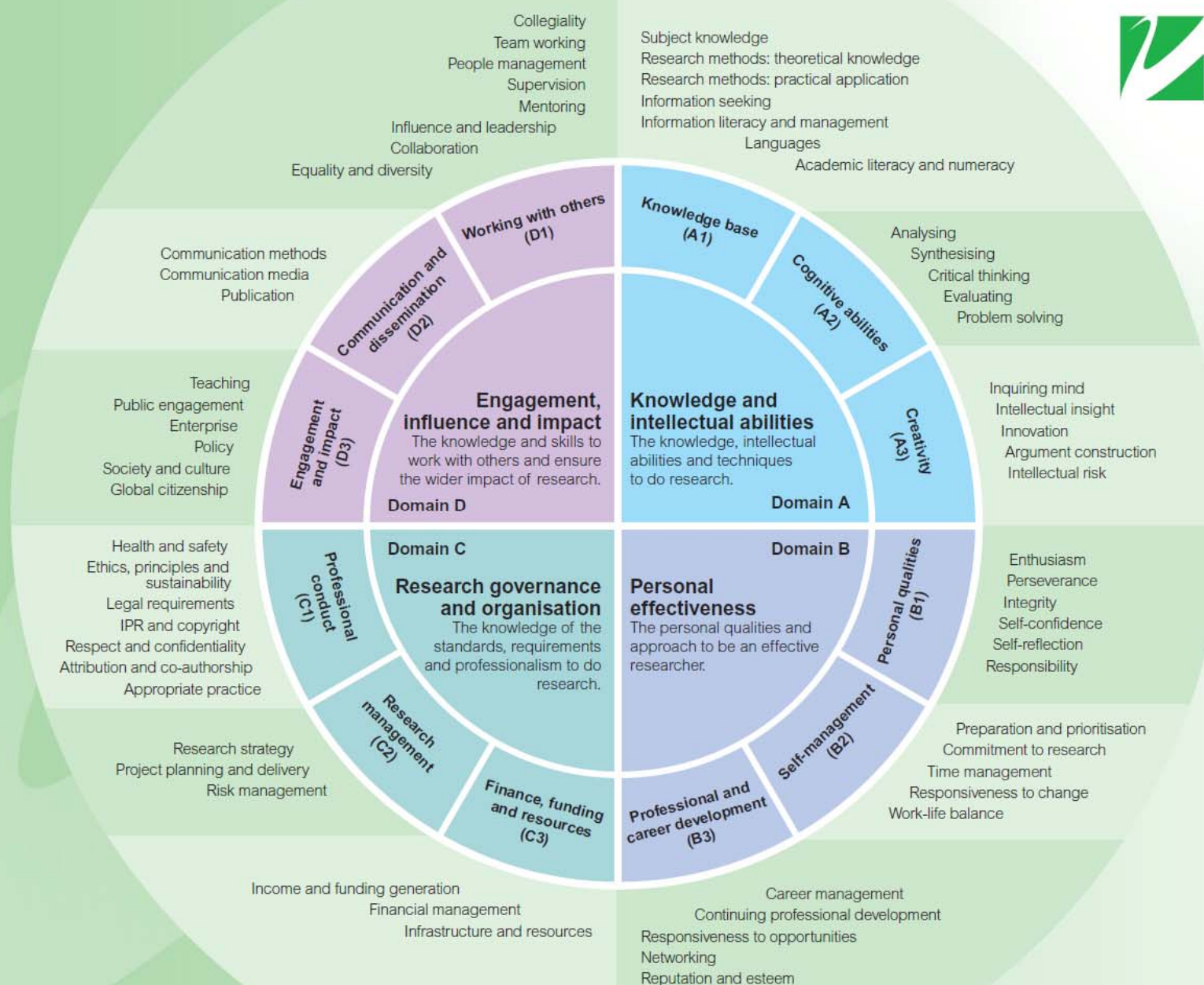


Leeds Doctoral College
&
Faculty Graduate Schools

Structure of the standard PhD programme



Researcher Development Framework

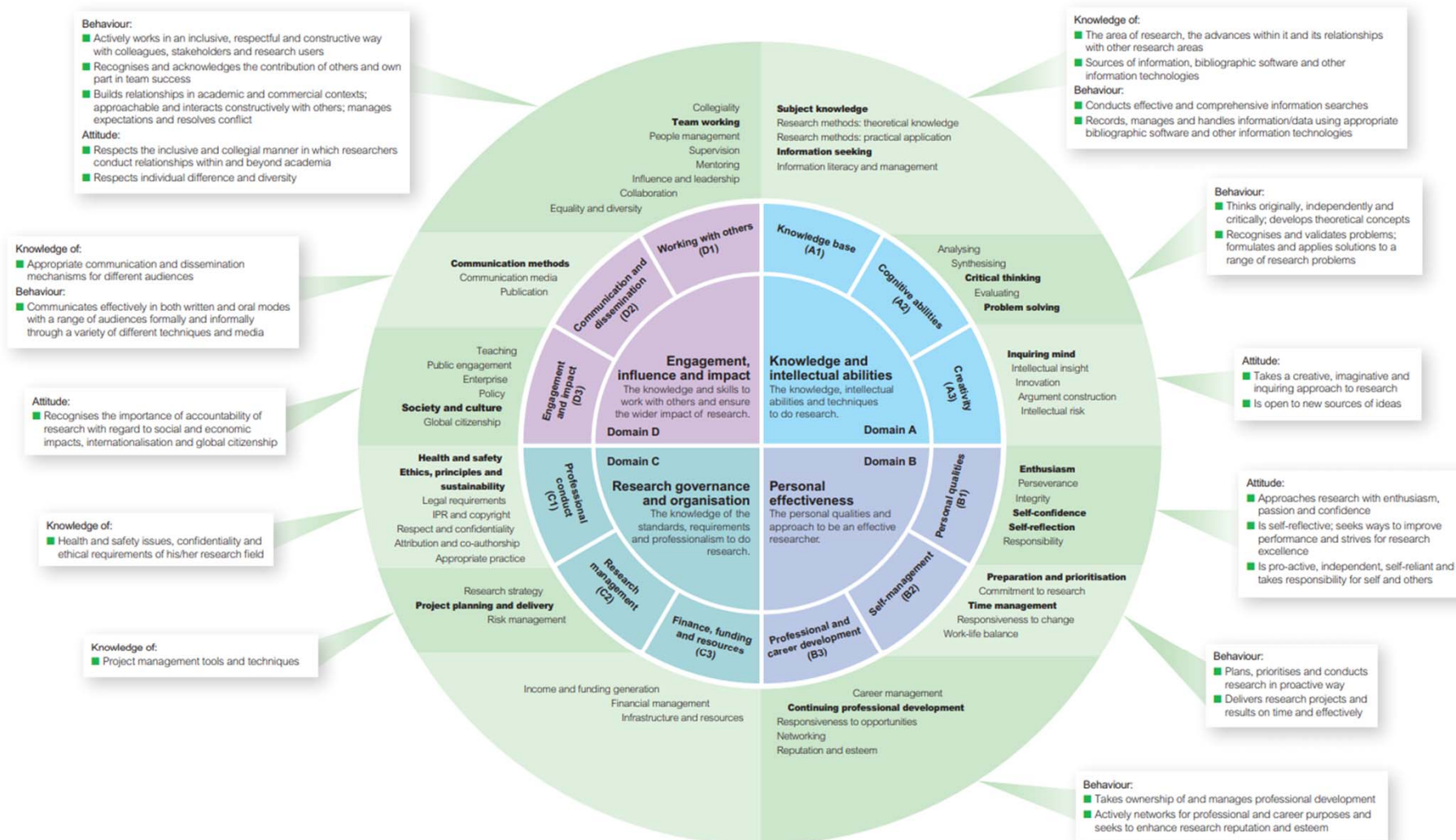


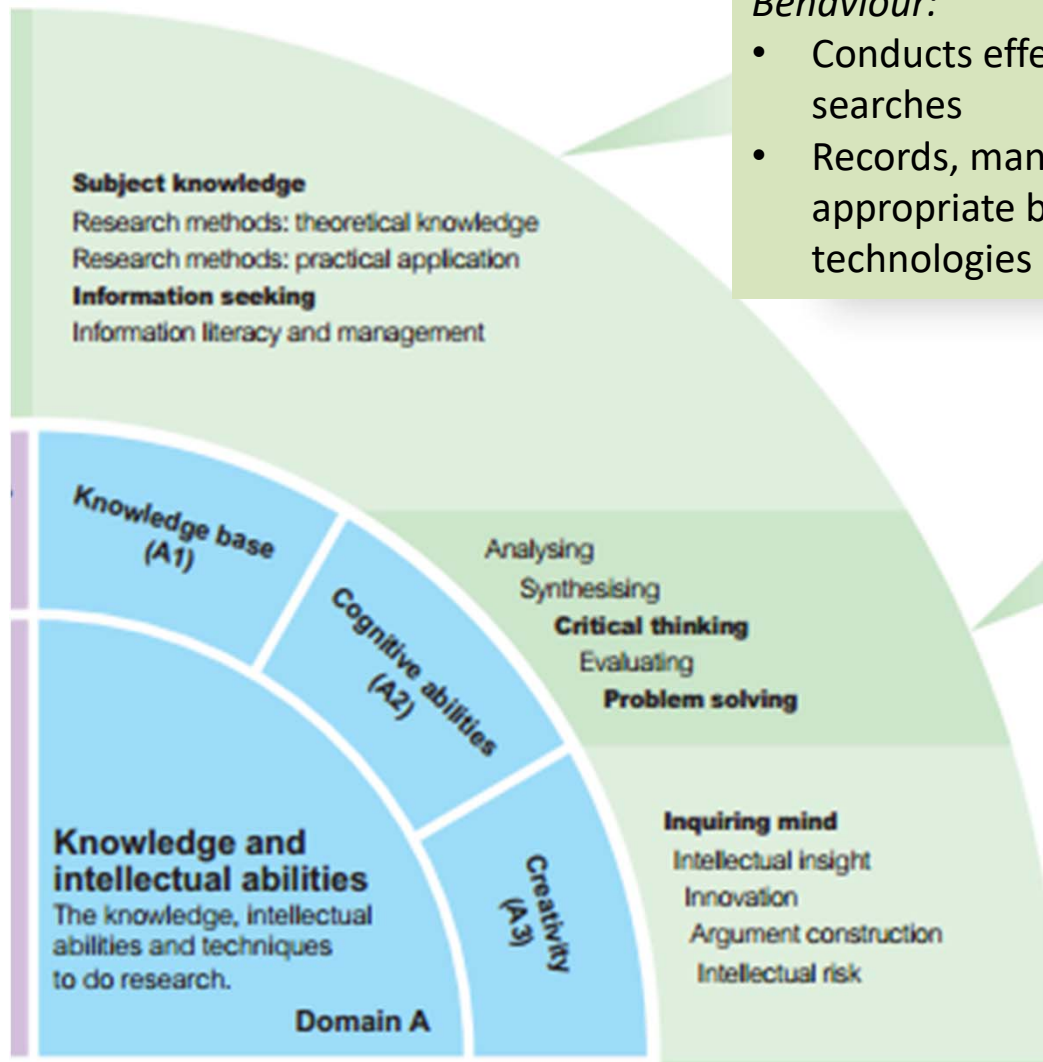
Getting started in research

A lens on the Vitae Researcher Development Framework



Researcher Development Framework





Knowledge of:

- The area of research, the advances within it and its relationship with other research areas
- Sources of information, bibliographic software and other information technologies

Behaviour:

- Conducts effective and comprehensive information searches
- Records, manages and handles information/data using appropriate bibliographic software and other information technologies

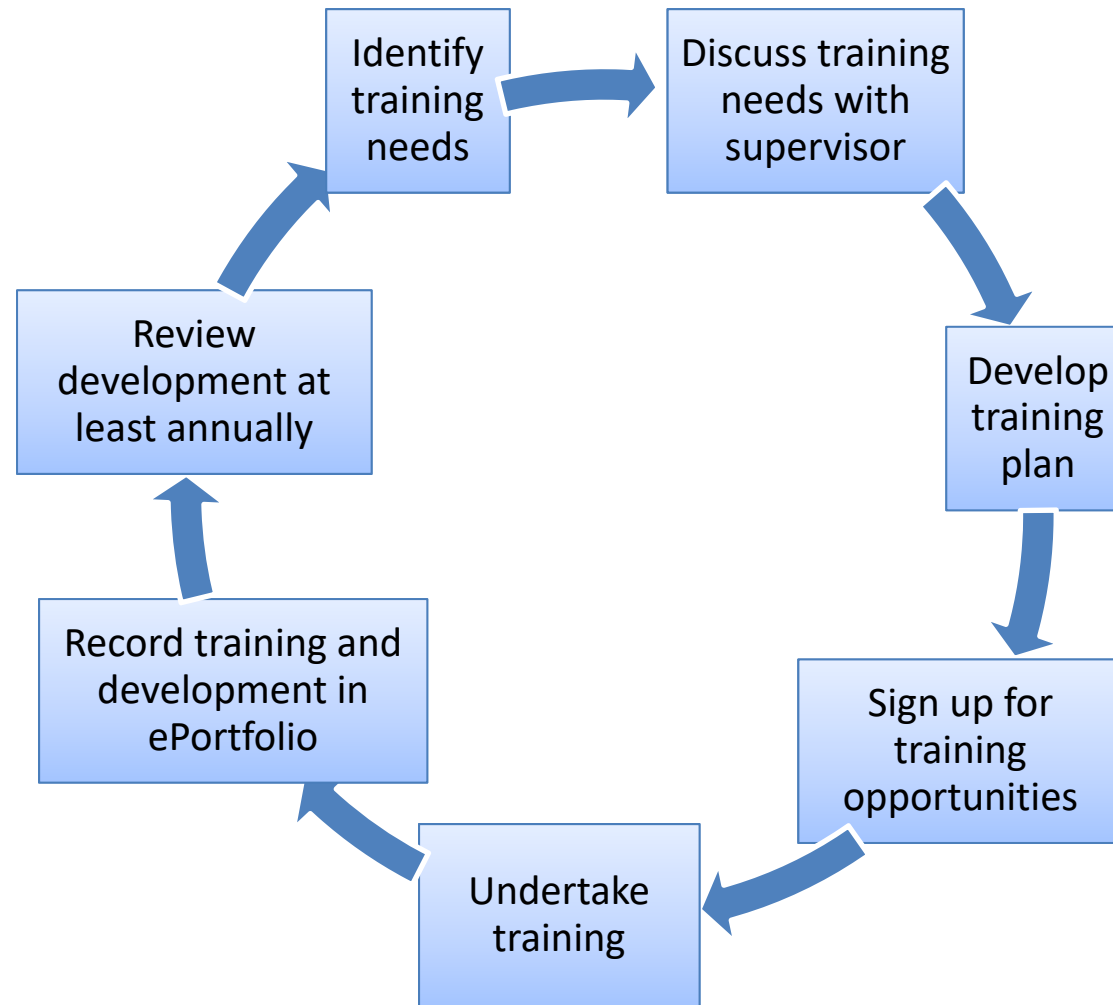
Behaviour:

- Thinks originally, independently and critically; develops theoretical concepts
- Recognises and validates problems; formulates and applies solutions to a range of research problems

Attitude:

- Takes a creative, imaginative and inquiring approach to research
- Is open to new sources of ideas

Researcher development cycle



Register on Modules and Training Courses

The University offers a range of training and development opportunities which are detailed below. However the choice of modules for the training need not be restricted to those provided by the University. You and the supervisory team may also recommend other means of achieving the relevant training elsewhere by, for example, externally provided courses, self-study or through work experience.

New doctoral researchers are automatically registered on Departmental and or Faculty-wide **compulsory modules**. These modules will appear automatically in your student calendar once you have **set it up**. It is essential that you attend the Faculty-wide **Research Ethics & Integrity** training as failure to do so may result in your award being withheld.



Register on Modules



Research Skills Seminars



Think Ahead



Sheffield Teaching Assistant



Language Training



Researcher Challenge 2018



Statistical Training



Public Engagement



Social Sciences Doctoral
Training Programme

English language support

ELT6050 Thesis Writing Principles and Practice

- 12 weeks x 2 hr taught sessions
- Structure of a thesis
- Requires submission of written work

ELT6060 Speaking Skills for Research Purposes

- 12 weeks x 2 hr taught sessions
- Covers the skills involved in the design, preparation and execution of oral presentations

ELT6051 Academic Writing for PhD students

- 12 weeks (9 x 2 hr taught sessions and 3 x 2 hr 1-2-1 tutorials)
- Provides overview of grammar and basic language skills
- Requires submission of written work

ELT6052 – Online Thesis Writing Course

- For UoS distance learning doctoral students
- Covers the thesis from the Introduction to the Conclusion
- Strategies for reading, planning, focusing, drafting and revising
- Broad principles of critical thinking, summarising and organising an argument

Think Ahead

Home > Faculties > Faculty of Medicine, Dentistry and Health > Think Ahead Programme

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Representation: Academic
and peer-led →

The Early Career Group →

Induction →

Training Catalogue →

Think Ahead Events
Calendar →

Mentoring →

Fellowship Support →

Think Ahead:SURE →

Teaching →

Your Next Move →

Dr Lucy Lee →

Early Career Group

The [Early Career Group](#) champions the **researcher career development** agenda and steers the work of the **Think Ahead programme** which is managed by [Dr Lucy Lee](#). This group aims to ensure that all researchers in the Faculty have access to advice and training to develop their career trajectory.



OUTSTANDING SUPPORT FOR
EARLY CAREER RESEARCHERS

Find out about latest Researcher
Development news here:



Or via [email](#)

Think Ahead Programme

The Think Ahead programme is a **comprehensive blend** of training workshops, career mentoring, and carefully selected work-based opportunities. We aim to ensure that every researcher has a career trajectory and access to tailored development activities including the flagship SURE scheme for ECR primary supervision of summer student projects. Our **research-led approach** ensures the programme is continually updated to reflect the current needs of researchers and employers

Think
Ahead

Unique

A research-led programme developed in consultation with all stakeholders

Think Ahead Downloads

Brochure	↓
Lee et al 2010	↓
Early Career Group	↓
Non-academic Network Form	↓
MDH CROS report 2011	↓

ThinkAhead Links

Homepage	→
ThinkAhead on Facebook	→
Current Programme	→
Contact the Programme Manager	→

facebook

THINKAHEAD ON
FACEBOOK

Careers advice and training

Career success requires you to Think Ahead; to understand the value of the skills you have and of those you need to develop. We can help you to **think strategically about your next career move** and the skills you will need. There are tools and

Partner groups

Think Ahead works in conjunction with many other partners within the staff development community. This includes other departments within the University of Sheffield, as well as national and international councils, organisations and

Find out more about components of the
programme

- [Induction training](#)
- [Workshop programme](#)
- [Mentoring: Career Development](#)
- [Fellowship Support](#)
- [Support: Parents@TUOS Network](#)
- [Training: supervision, lecturing, STA course](#)
- [TA:SURE summer studentship scheme grants](#)

[View full catalogue](#)

Main menu



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Your development →

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Mentoring for Research Staff →

Developing Mentoring Skills →

Thesis mentoring



Are you writing your thesis? Are you struggling with writing, or understanding what a great thesis looks like? Not sure how to approach the mountainous task? Under pressure with conflicting deadlines? Finding it hard to motivate yourself? Worried, or anxious about your deadline*? [Your participation in the scheme will be kept completely confidential. Limited to 45 places only!](#)



The Thesis Mentoring programme can help. It pairs you for 4 months with an experienced post-doctoral researcher who is trained in the skills of mentoring. [Click here to see some feedback from PhD students who have completed the programme.](#)

Participation in the mentoring programme could help you:

- ++ Understand how you work best, and how to work better with others;
- ++ Understand what is expected of you and what a great thesis looks like;
- ++ Break down the task and set milestones for your writing;
- ++ Keep up momentum, get started and stay started;
- ++ Be more effective and productive as part of a writing community.

The programme launches again in July 2016 with a 2h induction session for mentees. Mentoring comprises 8 x 1h sessions over 16 weeks ending on in November with a formal evaluation.

Places are allocated by submission deadline -- most urgent need first. The content of the sessions will be tailored to your objectives, and will develop as your writing develops towards thesis submission.

Please note: mentoring sessions will not cover English language skills ([see ELTC for this](#)), proof reading of the thesis, or research topic-specific discussion. The mentor will be purposefully outside your subject area in order to focus on your writing behaviours and blocks, not your research - thereby complementing the role of your supervisor.

Commitment: Mentoring is a Making the commitment to set aside time to meet your mentor and work together is vital to making it a good use of everyone's time, only students who understand and agrees to this condition can be accepted.

This is a research led programme, evaluation data will be formally collected and analysed.

* If you are very worried, stressed, anxious or panicking a lot of the time, if it's really getting you down, or if you just don't feel like

**DEDICATED
OUTSTANDING
THESIS
MENTORS**

sign up

Next programme starts on the 24th Jan, and opens for applications in December, keep an eye on your email for the announcement!

PhD supervisor skills sessions

I run 3 sessions for PhD supervisors on mentoring skills and thesis coaching. [Click here to see what's on offer.](#)

Thesis Thinking

How to survive a PhD viva: 17 top tips →

Project Management Approaches to Tame Your Thesis →

How to get published: top tips from editors →

Habits of highly productive writers →

3 tips for writers block →

Write in your own voice →

Encouraging doctoral studies at undergraduate level



Financial support

Postgraduate Doctoral Loan

Find out if you're eligible for the new Postgraduate Doctoral Loan for courses starting on or after 1 August 2018. There's information on how much you can get to help towards your course and living costs and repaying your loan.

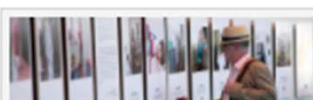


Non-means tested

Loan of up to £25,000 to be used for fees or living costs

Age 59 years or under, UK nationals or individuals with settled status in the UK

Support for doctoral education



Arts and Humanities Research Council (AHRC)

AHRC funds world-class, independent researchers in a wide range of subjects. Their research provides social and cultural benefits and contributes to the economic success of the UK but also to the culture and welfare of societies around the globe.



Arts & Humanities
Research Council



Biotechnology and Biological Sciences Research Council (BBSRC)

BBSRC invests in world-class bioscience research and training. Their research is helping society to meet major challenges, including food security, green energy and healthier, longer lives and underpinning important UK economic sectors, such as farming, food, industrial biotechnology and pharmaceuticals.



BBSRC
bioscience for the future



Economic and Social Research Council (ESRC)

ESRC is the UK's largest funder of research on the social and economic questions facing us today. Their research shapes public policy and contributes to making the economy more competitive, as well as giving people a better understanding of 21st century society.



E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL



Engineering and Physical Sciences Research Council (EPSRC)

EPSRC is the main funding agency for engineering and physical sciences research. Their portfolio covers a vast range of fields from healthcare technologies to structural engineering, manufacturing to mathematics, advanced materials to chemistry.

EPSRC

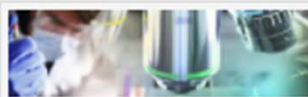
Engineering and Physical Sciences
Research Council



Innovate UK

Innovate UK works with people, companies and partner organisations to find and drive the science and technology innovations that will grow the UK economy. They drive growth by working with companies to de-risk, enable and support innovation.

Innovate UK



Medical Research Council (MRC)

MRC is at the forefront of scientific discovery to improve human health. Their scientists tackle some of the greatest health problems facing humanity in the 21st century, from the rising tide of chronic diseases associated with ageing to the threats posed by rapidly mutating micro-organisms.

MRC

Medical
Research
Council



Natural Environment Research Council (NERC)

NERC is the driving force of investment in environmental science. Their leading research, skills and infrastructure help solve major issues and bring benefits to the UK, such as affordable clean energy, air pollution, and resilience of our infrastructure.



NERC
SCIENCE OF THE
ENVIRONMENT



Research England

Research England is a new council within UK Research and Innovation. Taking forward the England-only responsibilities of HECF in relation to research and knowledge exchange, Research England will create and sustain the conditions for a healthy and dynamic research and knowledge exchange system in English universities.



**Research
England**



Science and Technology Facilities Council (STFC)

STFC is a world-leading multi-disciplinary science organisation. Their research seeks to understand the Universe from the largest astronomical scales to the tiniest constituents of matter, yet creates impact on a very tangible, human scale.



**Science & Technology
Facilities Council**



Funds 1900 studentships at any one time

15 Doctoral Training Partnerships (DTPs) provide funding for doctoral training across MRC's remit and strategic priority areas

Encourage conversion of studentships to industrial Collaborative Awards in Science and Engineering (iCASE)

Non academic partners support research through additional payment to the student and financial contribution to the research and offering placement opportunities

Identification of priority research skills

2014 - BBSRC and MRC Review of Vulnerable Skills and Capabilities

Identified 242 vulnerable areas forming 5 key groups:

Interdisciplinarity; Maths, statistics and computation; Physiology and pathology; Agriculture and food security; Core research and subject specific skills

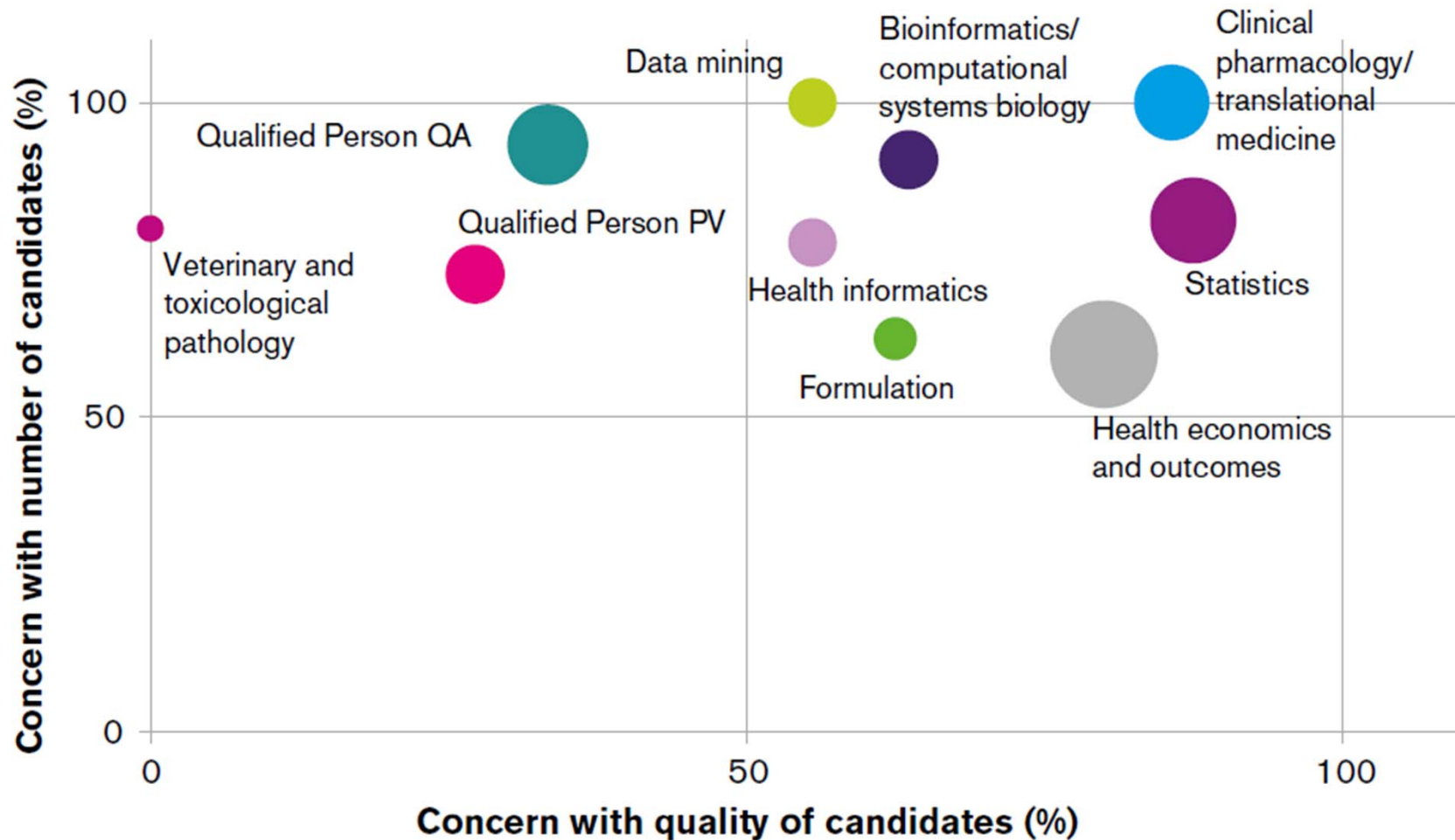
2015 - Review by Association of British Pharmaceutical Industries

Identified major skills gaps in:

Bioinformatics, statistics, data mining, health informatics, health economics and outcomes; understanding of translational medicine

Communication and teamworking skills a growing concern

Concerns with number vs quality of candidates by discipline



Leeds Liverpool Newcastle Sheffield

MRC DiMeN Doctoral Training Partnership

Discovery Medicine North

Provides doctoral training opportunities addressing MRC skill priority areas

Quantitative skills (mathematics, statistics, computation, developing digital excellence) as applied to variety of data sources (from 'omics' to health records)

Interdisciplinary skills (at all interfaces including chemical/physical/engineering, social/economical and clinical, including for example imaging, health economics, antimicrobial resistance and translational medicine).

Whole organism physiology (including in vivo training)

<http://www.dimen.org.uk/>

Key introductory events will build cohorts and demonstrate the range of training available

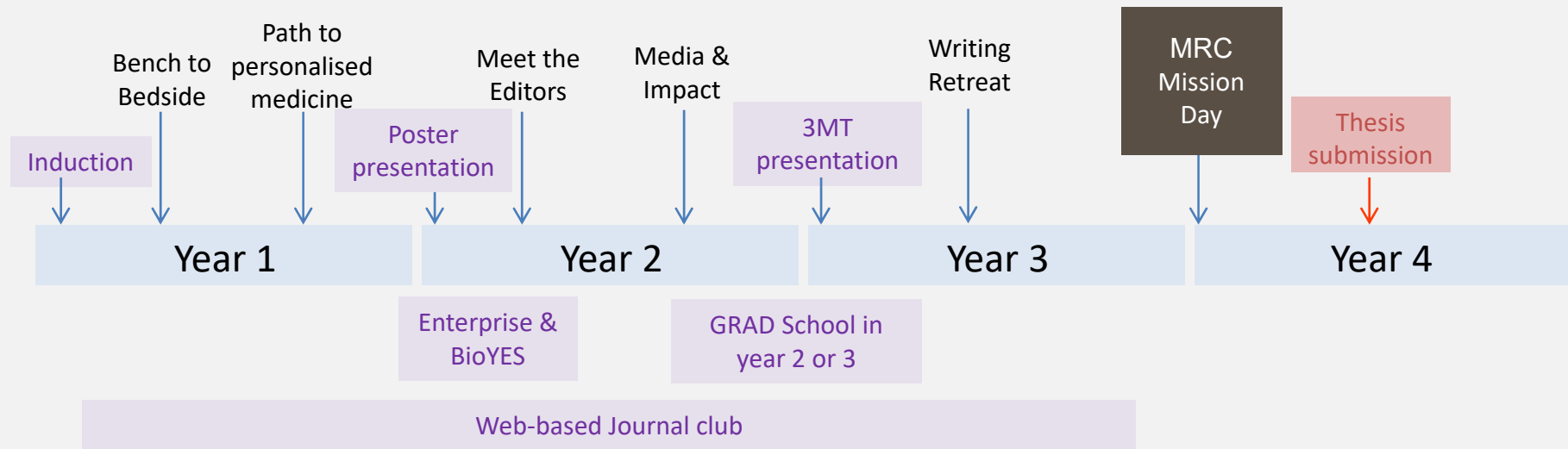
As project progresses bespoke training provides opportunities for research students to expand horizons

Individual Professional development becomes more precisely defined with guidance on maximising individual potential

Support to ensure success and outputs with impact

Additional funding to maximise outputs

Cohort training activities



Research skills training

Bioinformatics and computational biology

(e.g. Masters level modules in Bioinformatics and Genomic Medicine; Pharmacogenomics, SysMIC, MATLAB, 'R')

Imaging

(e.g. 3-day course in Bioimaging and Image Analysis that combines theory with practical experience ; *in vivo* imaging; host-pathogen interactions; image processing)

Whole organism physiology

(e.g. Applying the 3Rs to *in vivo* Experimental Techniques; Developmental genetics in zebrafish, chick and Drosophila; Neuroanatomy dissection; Integrative biology course that combines Home Office personal licence training in anaesthesia and experimental surgery; two week course in Human Embryonic Stem Cell Culture)

The Three Milestones of a Doctoral Degree

Thesis
Submission

Submission
Review

Confirmation
Review



Purpose of the Confirmation Review

The first year of a doctoral-level degree is considered a probationary year, pending successful completion of the Confirmation Review

Confirmation Review is to:

*Confirm whether or not the **student** and his/her **research project** have **the potential for successful research** at doctoral level **within the time limit** for their degree*

*Ensure that the **student** has made **satisfactory progress on the DDP**, in line with the student's needs identified via the Training Needs Analysis*

Requirements of Confirmation Review



Students submit a **significant piece of written work** and undergo an **oral examination**

Each Faculty has **agreed minimum requirements for the written work**; generally includes description and contextualisation of the research area; synopsis of the work undertaken so far; schedule of further work

Details and reflection of **training undertaken on the Doctoral Development Programme** and future training plans

How to assess the DDP?

Publications

Impact Other outcomes of research work

Recognition Prizes, presentations, peer review work

Communication and dissemination Conference attendance, presentations to other audiences

Funding applications Funding to support research or professional development

Professional development activities Competitions, Grad School attendance, Internships

Teaching and supervision experience

Engagement and influence both locally and with the wider community Participation in activities aimed at the development of a research culture at the University of Sheffield; Public engagement activities

Possible Outcomes of Confirmation Review

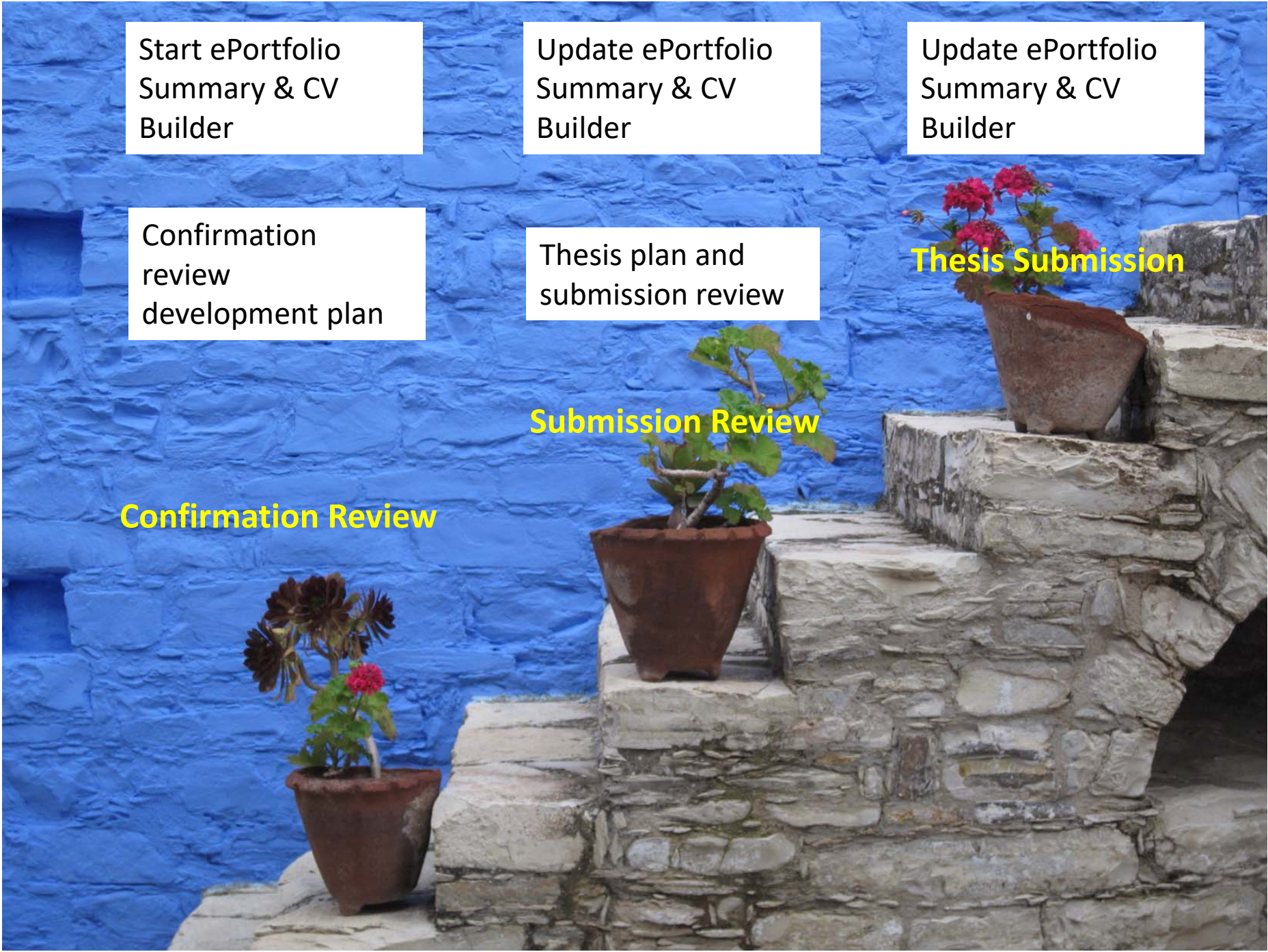
Pass - Confirmation of doctoral status

Deferral - Deferral of result pending a second attempt (within 6 months of first attempt)

Fail - Student transfers to MPhil and time limit reduced to 3 years (normally following a second attempt)

Recommend **withdrawal** if performance so poor that candidate is unlikely to successfully complete the MPhil



A photograph of a stone staircase with three potted plants. The plants are in terracotta pots and are placed on the steps of the staircase. The background is a blue textured wall. The text boxes are overlaid on the image.

Start ePortfolio
Summary & CV
Builder

Update ePortfolio
Summary & CV
Builder

Update ePortfolio
Summary & CV
Builder

Confirmation
review
development plan

Thesis plan and
submission review

Thesis Submission

Submission Review

Confirmation Review

Requirements for research degree

Complete a prescribed period of **training** and **research**

Present a thesis containing the results of research and showing the sources from which the information it contains is derived and the extent to which use has been made of the work of others

Pass an oral examination in matters relevant to the subject of the thesis

Satisfactorily complete any **taught elements or coursework** - **this is the Doctoral Development Programme (DDP)**

Criteria for the award of the Degree of PhD

A candidate for the degree of PhD is required to satisfy the examiners that his or her thesis

- Is original work which forms an addition to knowledge
- Shows evidence of systematic study and of the ability to relate the results of such study to the general body of knowledge in the subject
- Is worthy of publication either in full or in an abridged form

In addition, the form of the thesis should be such that it is demonstrably a **coherent body of work**, i.e. includes a summary, an introduction, a description of the aims of the research, an analytical discussion of the related findings to date, the main results and conclusions, and sets the total work in context

Alternative format thesis

Contains sections formatted for submission for publication in a peer-reviewed journal, alongside traditional thesis chapters

Papers/chapters may be published, in press, or planned for submission for publication, or there may be no intention of submitting them for publication

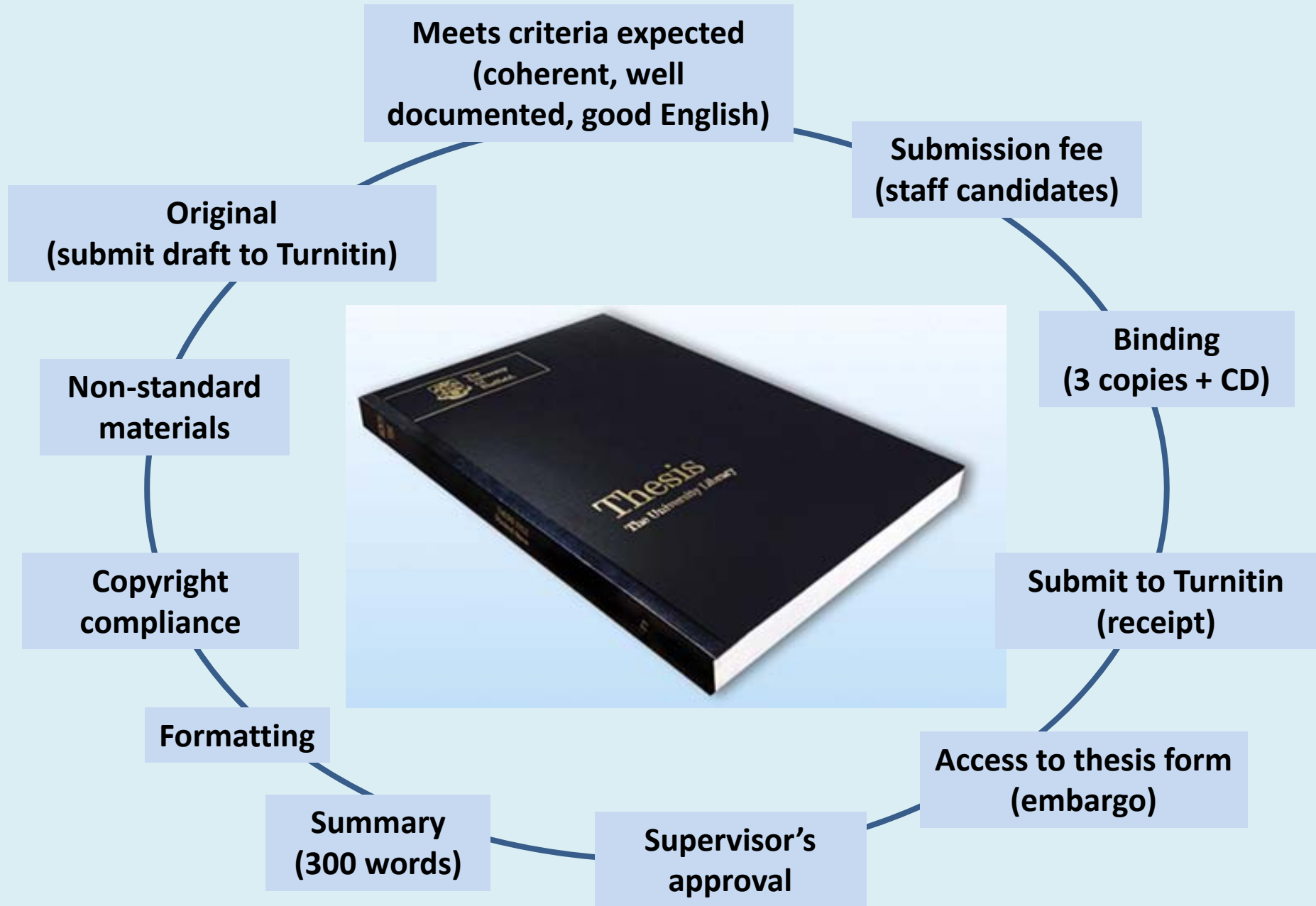
Aims to:

- reduce the time spent rewriting publications into thesis chapters

- enhance the writing for publication skills of early career researchers

- encourage students aiming for an academic research career to consider their publication aims early

PhD by Publication is alternative route open only to staff candidates



Award	Requirements
PhD with Integrated Studies	combines specific research project with integrated programme of coursework
EngD	incorporates a taught programme involving management, technical and personal development modules
DClinDent	Restorative Dentistry
DMedSci	incorporates a programme of coursework
DDSc	similar criteria to standard PhD, research thesis and oral exam
MD	similar criteria to standard PhD, research thesis and oral exam
DSpecMed	similar criteria to standard PhD, research thesis and oral exam
DClinPsy	combines coursework, clinical placements and research
EdD	taught and elective modules; research project with thesis
DEdCPsy	coursework, practice placement and submission of a thesis
DEdPsy	taught and elective modules; research project with thesis
Joint degrees	students spend minimum of 12 months at partner institute

Staff candidature

The Faculty of Medicine, Dentistry and Health is unusual in having a large number of staff candidates (24% vs 1-4% in other faculties)

Majority are clinical staff with honorary University contracts

Some hold fixed term contracts with the University (e.g. Marie-Curie Fellows)

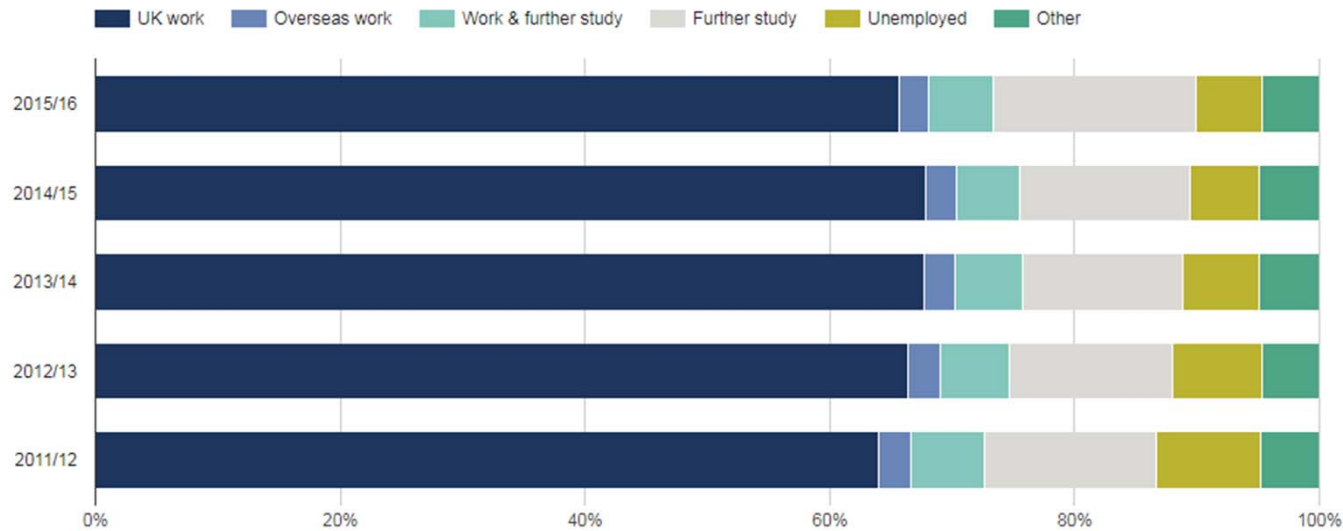
Staff candidates are exempt from tuition fees but liable for a thesis submission fee

Staff candidates may contribute to teaching

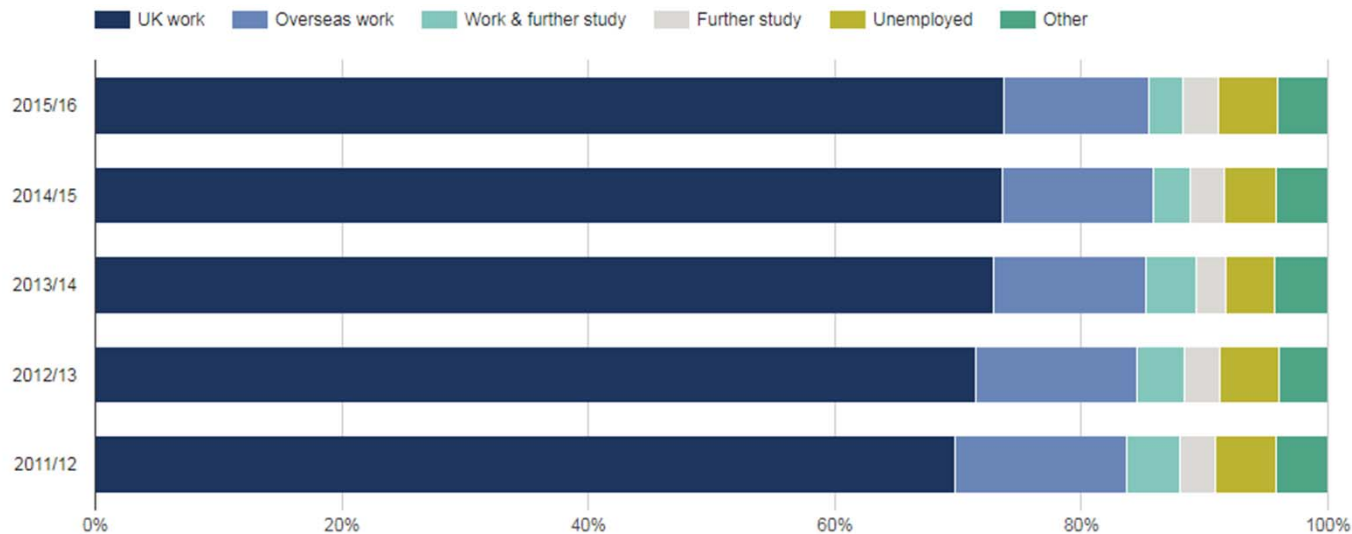
Regulations otherwise the same as for standard route candidates

Destinations of UG and doctorate leavers

Destinations of UK and other EU domiciled first degree leavers 2011/12 to 2015/16

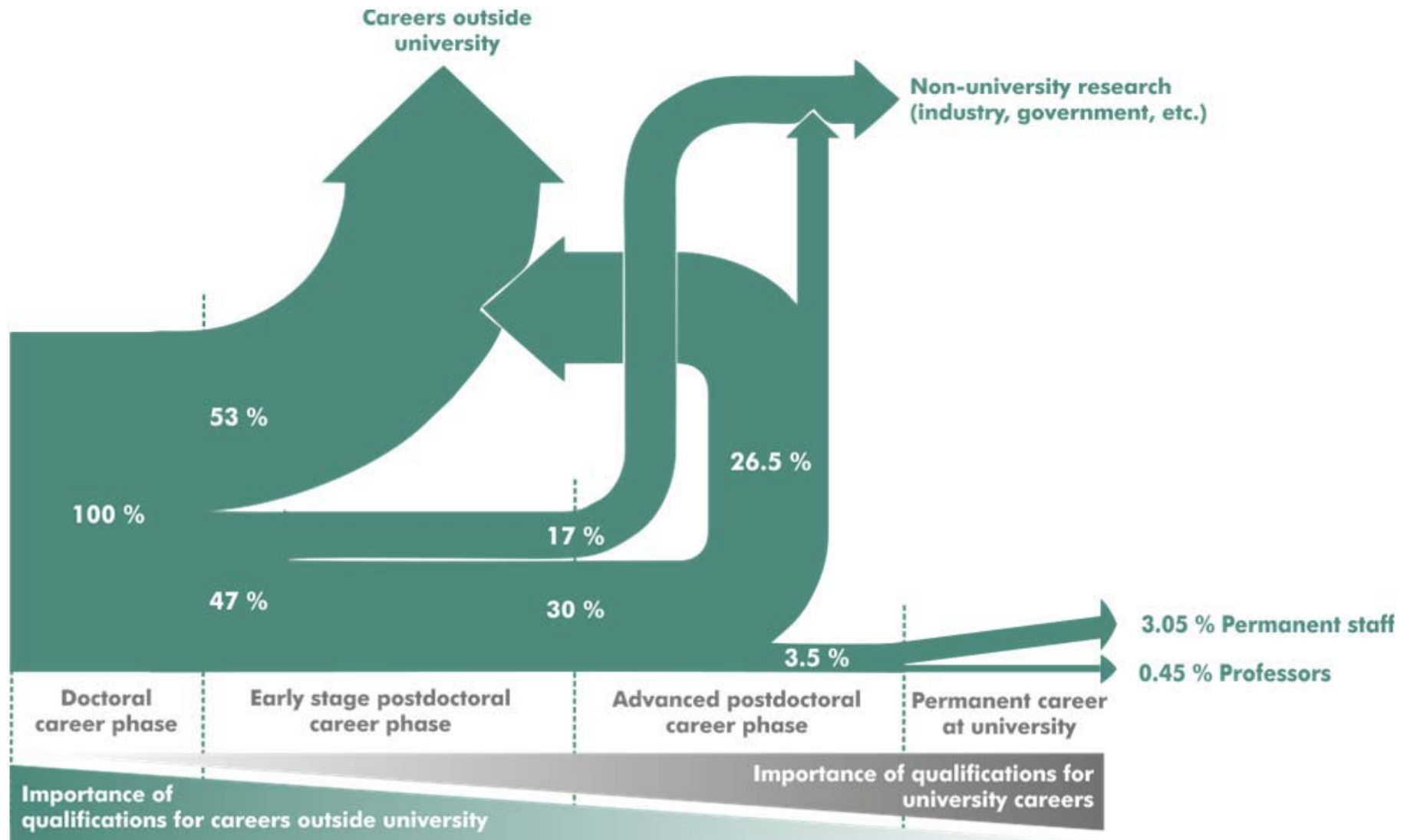


Destinations of UK and other EU domiciled doctorate leavers 2011/12 to 2015/16



HESA data

Academic Career Pathways (UK)

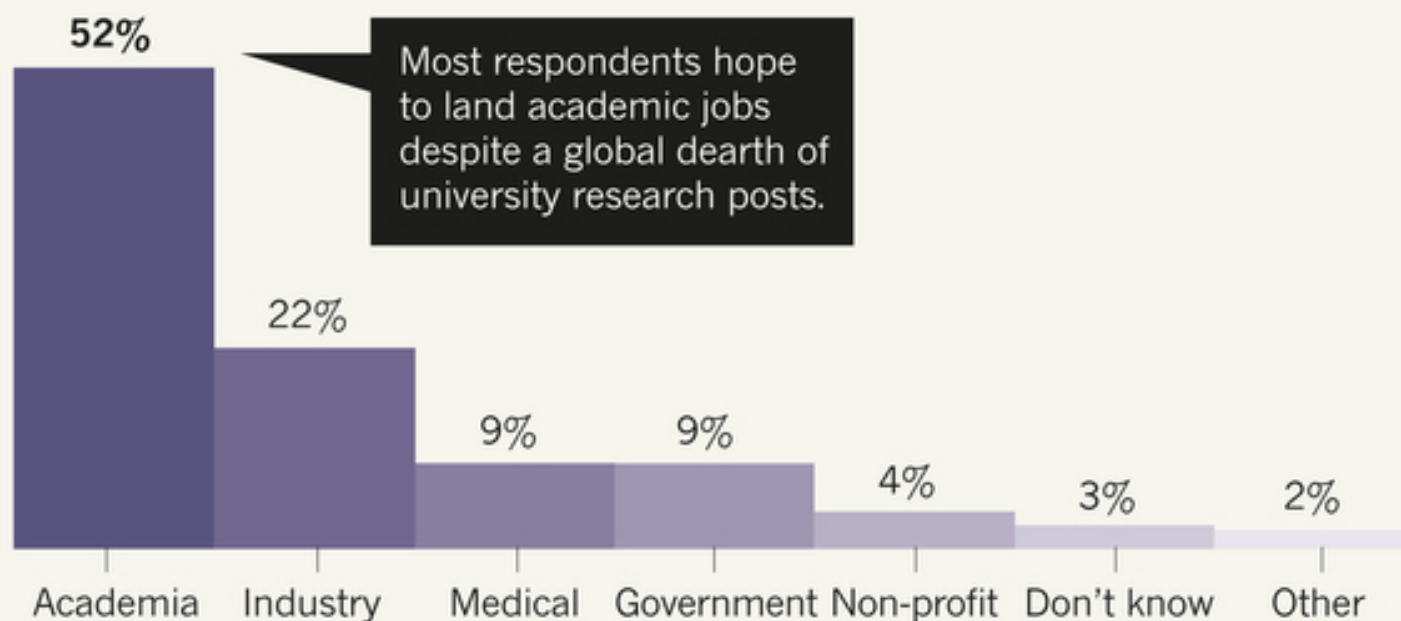


Modified from 'The Scientific Century Report', The Royal Society, 2010

A challenging road

Nature's 2017 graduate-student survey drew responses from more than 5,700 students — enough to capture both the challenges and rewards of PhD life around the world. Most are glad that they decided to pursue a PhD, even if many have second thoughts about their supervisors. But the journey is far from easy. Respondents worried about their responsibilities and the uncertain futures that await.

Q Which of these sectors would you most like to work in?



Some data have been rounded to the nearest per cent. Data-analysis services were provided by educational-research agency Shift Learning.

©nature



Many junior scientists need to take a hard look at their job prospects

Permanent jobs in academia are scarce, and someone needs to let PhD students know.

25 October 2017



PDF



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David Williams/Corbis/Getty

Most PhD students will have to look beyond academia for a career.

For his 2012 PhD thesis, the sociologist Chris Platts surveyed and interviewed more than 300 young footballers — aged 17 and 18 — at UK club academies who were hoping to pursue a career in the game. He told the newspaper *The Guardian* this month that just four of them currently have gained a professional contract. That's a drop-out rate of 99%.

3 to 4% of PhD students in the UK will land a permanent staff position at a University

About 95% of PhD students in the UK should be looking beyond academia for a career

Summary

Doctoral education has changed dramatically in the last twenty years

Organisation of doctoral studies poses challenges if we are to meet the needs of doctoral students

Support for doctoral studies to ensure progress and timely completion is essential

Strong mentorship of Doctoral students is important to ensure they reap the benefits of their endeavours following graduation



“The product that the PhD researcher creates is not the thesis – vital though that is to their subject area through the creation of original knowledge – no, the product of their study is the development of themselves”

Sir Gareth Roberts