Recognising Teachers in the Life Sciences
Teaching is the most well-known of all the functions universities undertake and the one that directly affects the most people. But, too often, it has been taken for granted. The career progression of academics has relied upon world-class research above all. Incentives imposed from outside, including league tables, have given similarly little attention to good teaching.

Yet students hope for a challenging intellectual experience that helps them secure a fulfilling career. Our annual HEPI-HEA Academic Experience Survey shows they want their lecturers to have relevant experience, including teaching qualifications and industry expertise.

Things are changing for the better. The Vice Chancellor of UCL has said his top priority ‘is to close the divide between teaching and research’. The University of Huddersfield has strived to ensure all its teaching staff are Fellows of the Higher Education Academy (HEA). A recent HEPI book, ‘What Do I Get?’: Ten essays on student fees, student engagement and student choice, shows how very different higher education institutions are responding to funding changes by improving what they offer to students.

Now, the Government has committed itself to a new Teaching Excellence Framework. That is a smart idea in principle, although no one should pretend it will be easy to design.

I welcome this new publication wholeheartedly because it provides inspiring evidence of excellent teaching in bioscience and medicine. But, as a former teacher, I welcome the 32 case studies above all for demonstrating there is no feeling in life as rewarding as successfully imparting knowledge to others.

Nick Hillman
Director of the Higher Education Policy Institute (HEPI)
August 2015
This booklet is one strand of a collaboration between The Physiological Society, the Academy of Medical Sciences (AMS), the Royal Society of Biology (RSB) and the Heads of University Biosciences (HUBS) that aims to raise the status and valuation of teaching in careers in Higher Education. It features 32 bioscientists and medical scientists whose promotion at one or more stages of their academic career has been achieved largely, sometimes exclusively, through recognition of their achievements in teaching / educational leadership. All the contributors share a passion for teaching, for supporting students and for developing educational initiatives – as their biographies clearly demonstrate.

Each has followed a unique route in reaching their current academic position but for ease of reading they have been grouped into three broad categories: those whose first permanent appointment was strongly focused on education, those whose career focus switched to education from either a clinical role or a mixed academic portfolio of teaching combined with discipline-based research, and those who have combined clinical responsibilities or discipline-based research with significant educational activity throughout their career to date. Inevitably, though, the distinctions between these categories can sometimes be slightly porous.

In discussing reward and recognition for teaching with colleagues throughout the HE sector, two recurring themes are that aspiring teachers often lack role models in educational leadership and that they are unsure how to build a successful academic career that includes a strong focus on education. This uncertainty can also extend to university promotion panels and assessors, who have access to fewer accepted benchmarks for evaluating achievements in teaching compared with those in discipline-based research.

As a consequence, the criteria for promotion along a teaching and scholarship pathway can vary between different HEIs.

Each contributor was therefore asked to provide some ‘top tips’ and advice for those wishing to build an academic career around teaching; these have been collated and summarised on pages 70 and 71. I hope you will agree that the combined wisdom and experience provides helpful pointers for aspiring teachers, their mentors, managers and those responsible for implementing academic progression and promotion procedures.

Editing this booklet has been immensely rewarding but it would not have been possible without expert guidance and support from Christy Stokes, Head of Education and Outreach at The Physiological Society; valuable suggestions from our collaborators at AMS, RSB and HUBS as well as the larger bioscience community; and funding from the Education and Outreach Committee of The Physiological Society chaired by Professor Blar Grubb. I thank all of them plus, of course, the inspirational teachers featured in the following pages.

Judy Harris
Deputy Chair, Education & Outreach Committee and member of Council of The Physiological Society

August 2015

1 “Good research-informed teaching inspires students and changes lives; it also drives the UK’s research base leading to a virtuous circle between education and research that generates new knowledge and brings health, societal and economic benefits.” From: Improving the status and valuation of teaching in the careers of UK academics: summary of a joint project undertaken by the Academy of Medical Sciences, The Physiological Society, Heads of University Biosciences and the Royal Society of Biology, June 2014


---

**Contents**

**Group 1: Contributors whose first permanent appointment was focused on education**

- Dr Charlotte Haigh ................................................. 6
- Dr Gwen Hughes .................................................. 8
- Prof Maxine Lintern .............................................. 10
- Prof Neil Morris ..................................................... 12
- Dr Elizabeth Sheder .............................................. 14
- Dr Tracey Speake ................................................. 16
- Dr Carol Wakeford .............................................. 18
- Prof Olwyn Westwood ......................................... 20

**Group 2: Contributors whose career focus switched from discipline-based research or a clinical role to education**

- Prof Sarah Bailie .................................................. 22
- Dr Nick Freestone ................................................ 24
- Prof Stephen Gomez .......................................... 26
- Prof Ingrid (Niggy) Gouldsborough ..................... 28
- Prof Jon Green ..................................................... 30
- Dr Sarah Hall ....................................................... 32
- Prof Judy Harris ................................................... 34
- Prof Jon Kibble ..................................................... 36

---

**Group 3: Contributors who combine discipline-based research or a clinical role with significant educational activity**

- Prof Blar Grubb ................................................... 56
- Prof Mark Huxham ............................................... 58
- Dr Rita Jabr ............................................................ 60
- Prof Prem Kumar ................................................ 62
- Dr Eugene Lloyd .................................................. 64
- Prof Hilary MacQueen ........................................ 66
- Prof Julian Park ..................................................... 68

**PAGES 70 – 71**

The final section of this booklet provides advice for those wishing to build an academic career around teaching.
Charlotte Haigh | University of Leeds

Professional Memberships/Fellowships
2004 Member of The Physiological Society
2008 Member of the British Science Association
2014 Fellow of the Higher Education Academy

Awards/prizes/distinctions
2004 Postgraduate Certificate in Learning and Teaching in Higher Education

Career
Plan after graduating?
I was the first in my family to attend University and after graduation I embarked on the research route by studying for a PhD.

Did that change? If so, how?
My passion for teaching was ignited in 2002 during my postdoctoral position, when I taught some undergraduate tutorials and also took physiology out into schools. I could see that inspiring children from a young age to take an interest in science was something I really wanted to continue. This was my career ‘light bulb moment’.

What are your special interests/achievements in education?
When I secured my Teaching Fellow position at Leeds, I was encouraged to continue outreach activities (no-one else was doing this at the time). Since then I have enjoyed developing and leading many such activities, supported by grants from the University of Leeds, The Physiological Society (e.g. Science Slam: Battle of the Bodies) and the Wellcome Trust (to develop physiology-based activities associated with the 2012 Olympics). My roles as Chair of the West Yorkshire branch of the British Science Association, public engagement theme leader on the University of Leeds Wellcome Trust ISSF grant and Chair of the Public Engagement Network (Pepnet) at the University are also very rewarding.

Teaching in higher education is challenging and enjoyable (in equal amounts) and thoroughly rewarding.
**Gwen Hughes** | University of Nottingham

### Professional Memberships/Fellowships
- 2002: Member of The Physiological Society
- 2002: Fellow of the Higher Education Academy
- 2013: Fellow of the Institute of Biomedical Science
- 2013: Member of the Institute of Leadership and Management

### Awards/prizes/distinctions
- 2004: Awarded title of Senior Teaching Fellow at Abertay Dundee in recognition of inspiring teaching and educational leadership
- 2014: University of Nottingham “Student Oscars” nominee for ‘Best All-round Academic’

### Career

**Plan after graduating?**
After my degree I ‘fell’ into a PhD and post-doc studies.

**Did that change? If so, how?**
I loved teaching in my post-doc years despite having a deep aversion to talking in front of my research peers! Gaining the skills to secure my first ‘real’ job as a Teaching Fellow was both exciting and terrifying: I was the only female and youngest physiology academic in the Medical School at the University of Dundee when I started. In this post I found that teaching was as challenging as research. This, and my next post at UoA, showed me so much about student and academic needs, and made me realise that teaching was what I really wanted to do.

**What are your special interests/achievements in education?**
I particularly like helping students understand physiology in the context of their discipline. Integrating physiology with different subjects always presents new challenges, and I design and use different learning resources and models to give physiology meaning and ‘life’. Working with colleagues, I created problem-based medical case studies plus basic and clinical sciences workshop material for graduate entry medics. I also use active teaching modes such as ‘pub-style’ quizzes and ‘lectorials’ to facilitate group learning for BSc undergraduates.

Besides teaching, I enjoy creating new courses and am proud to have developed and led new programmes. Educational development, curriculum design and teaching is rewarding in so many unexpected and humbling ways that research never was. Never discount it!

**2012**
Reviewer for the journal Advances in Physiology Education

**2014**
Promoted to Associate Professor on the basis of teaching, learning and administration

Appointed Secretary of the Association of Clinical Physiology Education group

**2004**
Promoted to Senior Lecturer at UoA

Appointed as University Teacher in Physiology & Pathology for Graduate Entry Medicine (GEM), University of Nottingham

**2007**
Took on role of Quality Assurance Lead for GEM

**2002**
Developed, and became Programme Lead for, BSc Health Sciences at UoA

**1999**
Part-time Lecturer (Health Sciences) Queen Margaret University, Edinburgh

**1994**
Teaching Fellow in Physiology, University of Dundee and secured a second postdoc research position

**1993**
PhD in Physiology, University of Ulster followed by a postdoc research position

**1993**
BSc Physiology, Queen’s University of Belfast

**1988**
BSc Physiology, Queen’s University of Belfast

**2013**
Appointed as Course Lead for BSc Medical Physiology and Therapeutics

**2011**
Appointed as Quality Assurance Lead for GEM

**1988**
Appointed as University Teacher in Physiology, University of Abertay (UoA)

**1999**
Lecturer in Human Physiology, University of Abertay (UoA)

**2004**
Awarded title of Senior Teaching Fellow at Abertay Dundee in recognition of inspiring teaching and educational leadership

**2014**
University of Nottingham “Student Oscars” nominee for ‘Best All-round Academic’
Career

Plan after graduating?
After completing my PhD, I was bitten by the academic bug and went straight into a post-doc position. My supervisor encouraged me to help out with the teaching, and I realised how much I enjoyed it.

Did that change? If so, how?
Following four years lecturing I was invited to apply to become lead for the PGCert course, taking it through accreditation for the new (at that time) HEA Professional Standards. This led to me becoming the Director of Learning and Teaching for the University of Birmingham, giving me the opportunity to work with staff from all disciplines in a cross institutional strategic role, supporting teaching development.

What are your special interests/achievements in education?
My move out of the lab initially was to focus on teaching but it also enabled me to move into senior management roles that have focused on learning, teaching, research and scholarship: for me, a perfect combination! Through these roles I have, for example, been able to support staff with fantastic ideas for teaching to view this as serious, publishable pedagogic research and I have published textbooks in this area. This has led to so many more opportunities to make a difference than if I’d stayed in a traditional mixed academic role.
Neil Morris | University of Leeds

Professional Memberships/Fellowships
- 2000: Member of The Physiological Society
- 2005: Fellow of the Higher Education Academy
- 2012: Fellow of the Royal Society of Biology

Awards/prizes/distinctions
- 2010: The Physiological Society Otto Hutter Teaching Prize
- 2012: HE Bioscience Teacher of the Year Award
- 2012: National Teaching Fellowship

Career

Plan after graduating?
After I graduated I went straight into a PhD position in Physiology, without much thought. After that I took up a post-doc at Imperial College envisaging a traditional academic career that combined teaching with subject-based (neuroscience) research.

Did that change? If so, how?
After three years my supervisor moved and I took up a teaching fellow role at Leeds, hoping to continue my research alongside developing as a teacher. It proved impossible to continue with funded neuroscience research, and I started to focus on teaching innovation and scholarship in about 2005, with a particular interest in technology-based education.

What are your special interests/achievements in education?
My main interest and expertise is in blended learning and the use of innovative technologies. Having led a series of large technology enhanced learning projects, I currently have responsibility for blended and digital learning projects across the University of Leeds. My academic home is now in Education, where I do research into digital and blended learning.

I also have an interest and involvement in educational publishing having been the Editor-in-Chief of Bioscience Horizons, the international student research journal published by Oxford University Press, from 2010 until 2014, and I co-authored a successful student study skills book on technology enhanced learning with Stella Cottrell in 2012.
Elizabeth Sheader | University of Manchester

Professional Memberships/Fellowships
1997 Member of The Physiological Society
2006 Fellow of the Higher Education Academy

Awards/Prizes/Distinctions
2005 University of Manchester Teacher of the Year
2008 University of Manchester Teaching Excellence Distinguished Achievement Award
2008 Invited to join University Teaching Excellence Network
2013 Shortlisted for Manchester Teaching Awards (University and Students’ Union student-led teaching awards): Best Support Staff Member Award and Best Lecturer

Career

Plan after graduating?
I always thought I would be a teacher, but work experience at the age of 16 in a physiology research lab gave me an insight into a potential career in research. After graduating, like most graduates, I didn’t know what to do next. I really enjoyed my final year research project but a career in teaching was still a strong contender. I continued working in the lab that summer and got my name on my first paper.

Did that change? If so, how?
My PhD years and later postdoctoral research projects are full of fond memories and I did as much teaching as possible – because I enjoyed it. In 2001, I decided to focus on education and took up one of the newly-created positions of Teaching Fellow at the University of Manchester.

What are your special interests/achievements in education?
Every semester I teach in the range of 1000 students, in both small group and large class situations. I aim to cultivate students’ enthusiasm for the subject using innovative teaching methods (interactive learning) in particular improving the engagement of students in large classes and providing a personalized learning environment in a research-intensive institution.

After 14 years as a Teaching Fellow, then Teaching Focused Lecturer, and now Senior Lecturer, I still find teaching in higher education to be a very enjoyable and rewarding career.
### Professional Memberships/Fellowships
- **2008**: Member of The Physiological Society
- **2011**: Member of the British Pharmacological Society

### Awards/prizes/distinctions
- **2010**: University of Manchester Distinguished Achievement Award for Teaching

### Career

**Plan after graduating?**
As an undergraduate, I always knew I wanted to be a lecturer but wasn’t clear about the steps required to achieve that. Fortunately my final year project sparked an interest in calcium signalling and led me to Manchester to complete my PhD – the first step taken.

**Did that change? If so, how?**
As a postgraduate demonstrator, I realised that I really enjoyed teaching and, as a post-doc, I combined my research with a teacher training course. Luckily for me, Manchester began employing teaching-focused staff at the same time I completed my course and I was employed as a teaching-focused lecturer that year.

**What are your special interests/achievements in education?**
In 2003 I was awarded university funding for a project that introduced team-working activities into our curricula and in 2006 I was part of a multi-disciplinary team that generated a new dental curriculum – we had great fun designing, evaluating and then publishing new assessment activities. In 2010, two colleagues (Liz Sheader and Caroline Griffiths) and I published the UK edition of Karch’s “Focus on Nursing Pharmacology” textbook and I have recently been awarded funding for a project supporting students returning to their studies.

Manchester has been at the forefront in recognising and rewarding achievements in teaching. In my role I am privileged to observe the progression of students through their studies and to work within a fantastic team of like-minded individuals.
Carol Wakeford  

**University of Manchester**

**Professional Memberships/Fellowships**
- **1979** Member of the Institute of Biology
- **1992** Member of the Royal Society of Chemistry, Chartered Chemist
- **2006** Fellow of the Higher Education Academy
- **2009** Member of the Royal Society of Biology, Chartered Biologist
- **2009** Member of the Biochemical Society

**Awards/Prizes/Distinctions**
- **1978** Distinction in Postgraduate Certificate of Education
- **2011** Highly Commended finalist in the Centre for Biosciences Ed Wood Teaching Award (fore-runner to HE Bioscience Teacher of the Year Award)
- **2015** Faculty of Life Sciences Teaching and Scholarship Award

**Career**

**Plan after graduating?**
After leaving school at 16, I did A Levels at evening classes and subsequently graduated in Biochemistry. I then spent a year in industry whilst deciding what to do when I grew up!

**Did that change? If so, how?**
I began a PhD at Imperial College but, when my project folded due to circumstances beyond my control, I decided to take up teaching because “the best way to learn is to teach” and I loved learning. After a PGCE and a school teaching job, I missed the academic rigour of university life, so I completed my PhD and taught in several FE and HE institutions on temporary contracts, until I obtained a permanent part-time post at Manchester.

**What are your special interests/achievements in education?**
I am interested in developing innovative and evidence-based approaches to teaching and in helping students develop their transferable (alongside discipline-based) skills such as numeracy, critical and creative thinking, and employability. Recent conference presentations have focused on critical thinking in student projects and enhancing employability in interdisciplinary projects. I have particular interests in active learning, which I use in interactive workshops, and eLearning. I co-ordinate all final year undergraduate projects for ~ 650 students across our Faculty, these include eLearning projects in which students design and create bite-sized eLearning resources, largely to support research and teaching in the Faculty. My latest interest is the Arts/Science interface and I recently acted as a steward at The Dress of Glass and Flame exhibit at Manchester Art Gallery.

**1976** BSc in Biochemistry from University College London

**1978** PGCE in Applied Science at the University of Liverpool, followed by a secondary school teaching job (Biology and Physics) in Birkenhead, Merseyside

**1985** MSc then PhD in Chemistry, University of Salford, followed by teaching jobs at Macclesfield FE College, University of Salford and the Open University

**2001** Appointed as a Teaching Fellow, Faculty of Life Sciences, University of Manchester

**2006** Appointed as Project Lead for Faculty CEEBL (Centre for Excellence in Enquiry-Based Learning) Project – one of the original CETLs

**2007** Promoted to teaching-focused Senior Lecturer

**2009** Invited to join the Editorial Board for the eJournal, Bioscience Education

**2011** External discipline consultant for JISC-funded OERBITAL (Open Educational Resources for Biosciences Teaching and Learning) project, University of Leeds

**2013** Elected to the Faculty Education Leadership Team (one of first two elected members)

**2014** Faculty representative on the newly-established Centre for Higher Education Research, Innovation and Learning (CHERIL) Board at Manchester

**18** Recognising Teachers in the Life Sciences

<p>| 19 | Recognising Teachers in the Life Sciences | Recognising Teachers in the Life Sciences |</p>
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>BSc in Nutrition at the University of Surrey</td>
</tr>
<tr>
<td>1989</td>
<td>PhD in Biochemistry at Kings College London, followed by a postdoctoral fellowship at St. George’s Hospital Medical School</td>
</tr>
<tr>
<td>1992</td>
<td>Lectureship in Immunology at University of Surrey, Roehampton</td>
</tr>
<tr>
<td>2001</td>
<td>Sabbatical Fellowship to Australia, to evaluate the Curriculum for Diabetes Educators</td>
</tr>
<tr>
<td>2003</td>
<td>Appointed as Director of Curriculum Development for the new Medical School at Swansea</td>
</tr>
<tr>
<td>2005</td>
<td>Reader in Medical Education, University of Surrey</td>
</tr>
<tr>
<td>2006</td>
<td>Became a General Medical Council visitor (biomedical scientist) for Quality Assurance in Basic Medical Education</td>
</tr>
<tr>
<td>2008</td>
<td>Chair in Medical Education, Queen Mary University of London’s Bar’s and The London School of Medicine and Dentistry</td>
</tr>
<tr>
<td>2009</td>
<td>Appointed as Director of Curriculum Development for the new Medical School at Swansea in collaboration with the Wales College of Medicine in Cardiff, then promotion to Reader at Surrey, prior to taking up my current professorial chair.</td>
</tr>
<tr>
<td>2011</td>
<td>Assessment advisor for Royal College membership examinations</td>
</tr>
<tr>
<td>2014</td>
<td>Education advisor for Modernising Scientific Careers, Health Education England</td>
</tr>
</tbody>
</table>

**Career**

**Plan after graduating?**

After graduating, I became a medical laboratory scientific officer, then registered for my PhD (part-time) whilst working as a biochemist at Kings College London. After my PhD, my career plan was for an academic career in biomedical sciences and education.

**Did that change? If so, how?**

It was my lectureship and working with inspirational colleagues at the University of Surrey, Roehampton that stimulated my interest in programme design and development. Accordingly, I went on to coordinate the set-up of the curriculum for the Graduate Entry Programme in Medicine at the University of Swansea in collaboration with the Wales College of Medicine in Cardiff, then promotion to Reader at Surrey, prior to taking up my current professorial chair.

**What are your special interests/achievements in education?**

I have a keen interest in making biomedical sciences accessible and relevant. My role at Swansea led to recognition of my skills in integrated curriculum design and its quality assurance. Subsequently, invitations to be an international education advisor (in China, South Africa, Australia and Mexico), and working as a GMC visitor for undergraduate education, have allowed me to meet and collaborate with some amazing colleagues. I also act as a reviewer for several medical and healthcare education journals and have written, or co-authored, a number of textbooks including “Practical Immunology” (4th edition, 2002) and “How to assess students and trainees in medicine and health” (2013).
Sarah Baillie | University of Bristol

1984 Intercalated BSc in Anatomical Science, University of Bristol

1986 BVSc (Veterinary Science), University of Bristol

1986 – 1993 Veterinary Surgeon, Mixed Practice, Wiltshire

1992 Royal College of Veterinary Surgeons Certificate of Cattle Health and Production – the first year that a woman gained the CertCHP

1994 – 2006 Veterinary Surgeon, Central Scotland

2001 – 2003 Masters in Information Technology (Software & Systems Strand), University of Glasgow

2003 – 2006 PhD in Computer Science, University of Glasgow

2006 – 2011 Researcher and Senior Lecturer at LIVE (Lifelong and Independent Veterinary Education) Centre for Excellence in Teaching and Learning, Royal Veterinary College

2012 Appointed as Chair in Veterinary Education at the University of Bristol

2009 Times Higher Education’s inaugural ‘Most Innovative Teacher of the Year’ Award

2010 ‘Woman of Outstanding Achievement in Science Technology and Engineering’ Award

2010 National Teaching Fellowship

2014 Vice-Chancellor’s Prize for Educational Excellence at the University of Bristol

Professional Memberships/Fellowships

1986 Member of the Royal College of Veterinary Surgeons

2011 Fellow of the Academy of Medical Educators [first vet to be awarded this]

2014 Principal Fellow of the Higher Education Academy

Awards/prizes/distinctions

Career

Plan after graduating?
When I graduated with a veterinary degree in 1986 I envisaged working in veterinary practice for the rest of my career.

Did that change? If so, how?
I worked in veterinary practice for 20 years which I thoroughly enjoyed. However, after an injury I decided it was prudent to retrain and chose Computer Science. It was during this training that I encountered haptic technology and created the Haptic Cow, a virtual reality simulator for teaching vet students to palpate inside a cow to diagnose pregnancy.

What are your special interests/achievements in education?
Since entering academia I have been fortunate to be involved in many educational projects and collaborate with colleagues in the UK and internationally. When I returned to Bristol in 2012 I led a major veterinary curriculum review and in 2014 I passed the ‘50 papers’ mark for educational publications in peer reviewed journals. I have also led a range of veterinary outreach activities, leading the ‘Do you feel like a vet?’ stand at the Royal Society Summer Science Exhibition in 2009 and exhibiting haptic simulators at the Science Museum in London in 2005 and 2012. In 2014 the Haptic Cow featured in the Royal Institution’s Christmas Lectures.

Recognising Teachers in the Life Sciences Recognising Teachers in the Life Sciences | 23
Nick Freestone  |  Kingston University, London

### Professional Memberships/Fellowships
- **1987**  |  Member of The Physiological Society
- **2014**  |  Senior Fellow of the Higher Education Academy
- **2014**  |  Fellow of the Royal Society of Biology

### Awards/prizes/distinctions
- **2011**  |  Faculty of Science Lecturer of the Year Prize
- **2012**  |  Voted “Most Helpful Pharmacy Lecturer” by Kingston MPharm students
- **2013**  |  Kingston University prizes for: ‘Most Engaging Lecturer’ and ‘Excellence in PhD Supervision’
- **2014**  |  HE Bioscience Teacher of the Year Award

### Career

**Plan after graduating?**

While working as a Research Assistant in Liverpool John Moores University I was bitten by the research bug.

**Did that change? If so, how?**

I had my first experiences of teaching through demonstrating in practical classes during my MPhil, teaching master’s degree students at UCLAN and then lecturing on a residential EMBO course whilst I was a post-doc at the Babraham Institute. During my early years at Kingston University I tried to balance teaching with developing my research but it was helping to set up a new School of Pharmacy at the University, and developing a new course, that piqued my interest in learning & teaching and led me to develop a new career as a teacher and pedagogical researcher.

**What are your special interests/achievements in education?**

The award of a University Teaching Fellowship enabled me to carry out my first pedagogical research project on the effects of collaborative teaching across the ‘1992 divide’ on the student learning experience, this was a study of collaboration between a pre-1992 and a post-1992 higher education institution in the UK. Through a Physiological Society Teaching Grant I have further researched the potential for collaborations between universities and I am also interested in training the next generation of university teachers, having recently run two “New to Teaching” workshops for the HEA and the Royal Society of Biology.

### Professional Memberships/Fellowships

<table>
<thead>
<tr>
<th>Year</th>
<th>Membership/Fellowship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>Member of The Physiological Society</td>
</tr>
<tr>
<td>2014</td>
<td>Senior Fellow of the Higher Education Academy</td>
</tr>
<tr>
<td>2014</td>
<td>Fellow of the Royal Society of Biology</td>
</tr>
</tbody>
</table>

### Awards/prizes/distinctions

<table>
<thead>
<tr>
<th>Year</th>
<th>Prize/Distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Faculty of Science Lecturer of the Year Prize</td>
</tr>
<tr>
<td>2012</td>
<td>Voted “Most Helpful Pharmacy Lecturer” by Kingston MPharm students</td>
</tr>
<tr>
<td>2013</td>
<td>Kingston University prizes for: ‘Most Engaging Lecturer’ and ‘Excellence in PhD Supervision’</td>
</tr>
<tr>
<td>2014</td>
<td>HE Bioscience Teacher of the Year Award</td>
</tr>
</tbody>
</table>
Career

Plan after graduating?
After graduating with my PhD my ambition was neuroscience research.

Did that change? If so, how?
In the 1980s it was difficult to obtain research grants so I reluctantly went into teaching as a ‘proper’ (i.e. paid and secure) job. I lectured in neurophysiology at UWE for what I intended to be for one year, which turned into 24 years. I found I could use my research skills and apply them to teaching and learning, and I discovered that teaching neurophysiology can be fun and that the students enjoyed my lectures and new approaches.

What are your special interests/achievements in education?
I was an early exponent of internet-based approaches to teaching and learning. In 1994, I taught myself html and produced animated gifs to illustrate ions passing through channels in excitable membranes – thought this was the future! However, in 1995 I was presented a student petition stating that ‘the internet has no place in education’ and was asked by my managers to stop using the internet in my teaching or I’d be removed from a particular module. I refused to stop, so was removed from that module team, but carried on using it in my teaching.

I have continued to work in the area of technology-enhanced learning, and am currently with Pearson, the education publisher. I’ve found teaching highly valuable in inspiring future generations of students in neuroscience.
Ingrid Gouldsborough | University of Manchester

Professional Memberships/Fellowships
2002 Member of British Association of Clinical Anatomists
2002 Member of the Anatomical Society
2006 Fellow of the Higher Education Academy

Career

Plan after graduating?
I worked in nursing for 10 years before entering Higher Education as a mature student in 1990.

Did that change? If so, how?
Teaching formed a central part of my roles as nurse, PhD student and Research Fellow and I realised that my future was in education. I completed the City & Guilds 7307 Teachers and Trainers Certificate, Stage 1 during my post-doc appointment and my subsequent appointment as an anatomy demonstrator confirmed my desire to teach and re-sparked my passion for anatomy.

What are your special interests/achievements in education?
The decision to transfer into a teaching career is one that I have not regretted. I have always had a passion for anatomy and my teaching role has allowed me to develop my expertise in this field. I teach anatomy to undergraduate students on a variety of vocational courses: medicine, dentistry, nursing, midwifery, speech therapy and also to those studying anatomy and other life science courses. I strongly believe that anatomy education is fundamental to medicine and that it should continue beyond graduation. I therefore became a cofounder of the Manchester Surgical Skills and Stimulation Centre which was established in 2012 to provide a learning opportunity for Health Care Professionals at all levels. I now hold the position of Director of Anatomy for the Centre. In 2014 I was honoured to become the first female Professor of Anatomy at the University of Manchester.

1980
Qualified as a State Registered Nurse – Harrogate District Hospital

1983
Qualified as a registered midwife – Royal Devon and Exeter Hospital

1984
Relocated to Lausanne, Switzerland, where I worked as a Staff Nurse

1986
Relocated to Melbourne, Australia, working as an Associate Charge Nurse

1984
Relocated to Lausanne, Switzerland, where I worked as a Staff Nurse

1990
Entered higher education to read for a BSc (Hons) in Human Biology at Curtin University, Perth, Western Australia

1998
Awarded PhD from the University of Sunderland

1999–2000
Postdoctoral Research Fellow in renal physiology and voluntary tutor in the Faculty of Life Sciences, University of Manchester

2001
Short-term contract as an Anatomy Demonstrator, University of Manchester

2002
Member of British Association of Clinical Anatomists

2002
Member of the Anatomical Society

2006
Fellow of the Higher Education Academy

2009
Promoted to Senior Lecturer

2014
Promoted to Professor of Anatomy

2009
Promoted to Senior Lecturer

2014
Promoted to Professor of Anatomy

Recognising Teachers in the Life Sciences

Recognising Teachers in the Life Sciences
Career

Plan after graduating?
I always wanted to be an academic, inspired by my father who was a lecturer in Engineering.

Did that change? If so, how?
Thirty years after my appointment as a lecturer, I’m still at the University of Birmingham but I feel that I’ve had two careers. The first was focused on research and teaching but about ten years ago I changed direction and took a route into teaching leadership first at School, then at College and now at University level.

What are your special interests/achievements in education?
My major aim has been to facilitate sharing of good practice in teaching and learning around the University and nationally. Four years ago I began a project trialling the flipped teaching approach to lectures in biology and I have continued to research in this area. In 2012, I undertook a collaborative project with colleagues at OCR and the Universities of Leicester, Cardiff, Bristol & UEA on knowledge retention on transition from ‘A’ levels to University. I also mentor staff aiming for promotion on the teaching-focused route and in 2014 I set up (with Michael Grove) an in-house University of Birmingham journal ‘Education in Practice’ to encourage staff to publish educational research.
Sarah Hall | Cardiff University

**Professional Memberships/Fellowships**

1997  Member of The Physiological Society

---

**Career**

**Plan after graduating?**

I didn’t really have a plan – just an interest in electrophysiology and naïve optimism that opportunities would arise!

**Did that change? If so, how?**

During my research career, I spent many happy years studying excitable cells. Over time, though, I developed a stronger interest in teaching-focused activities, and I have found this aspect of academic life most rewarding.

**What are your special interests/achievements in education?**

I now spend much of my time designing and delivering teaching and learning activities for science, medical and dental students. I am also researching the impact of authentic learning opportunities in undergraduate science curricula. In addition, I participate in engagement with schools and the general public and I have been a STEM Ambassador since 2005. I was the scientific advisor for ‘All about UK’ (a permanent physiology exhibition in Bristol) and ‘In the Zone’ (a Wellcome-funded interactive exhibition on the physiology of sport, which toured the UK during the year of the London Olympics). I also compiled the latest editions of The Physiological Society’s outreach and careers booklets ‘Understanding Life’ and ‘The Science of Life’. I have particularly enjoyed the opportunities from outreach work to meet people from different walks and stages of life. I don’t regret my decision to move away from the ‘cutting-edge’ of research, and am excited now to make my contribution by fostering the physiologists of the future.

---

1985  Graduated from UCL with a BSc in Pharmacology and started my first ‘real’ job as a research technician in the Welcome Research Laboratories in Beckenham, Kent.

1986  Began my PhD in the Physiology Department at St Thomas’ Hospital (UMDS).

1991–1996  Post-doctoral positions at Duke University, North Carolina and then at a division of NIH.

1996  Lectureship at Cardiff University (two 12-month periods of maternity leave in 2001 and 2004).

2003  Elected to The Physiological Society Council.

2009  Invited to join The Physiological Society’s Education Committee.

2012  Enrolled to study part-time for an MA in Education.

2013  Switched my contract to the Teaching and Scholarship pathway.

2014  Promoted to Senior Lecturer.

2015  Join the editorial board for ‘Advances in Physiology Education’.
Judy Harris | University of Bristol

Professional Memberships/Fellowships
1976 Member of The Physiological Society
2011 Fellow of the Higher Education Academy
2015 Fellow of the Royal Society of Biology
2015 Honorary Member of The Physiological Society

Awards/prizes/distinctions
2010 University of Bristol Teaching Fellowship
2012 University of Bristol Award for Influence in Higher Education
2013 University of Bristol Students’ Award for Outstanding Teaching
2014 Recognised as a Teacher Scientist in the Science Council List of 100 Leading Practising Scientists
2014 The Physiological Society Otto Hutter Teaching Prize

Career

Plan after graduating?
After graduating it was a close call between applying for a PGCE and training to be a schoolteacher or signing up for a PhD as the first step on the academic career ladder. The PhD won out and at that stage I envisaged a traditional academic career combining bench research, teaching and administration.

Did that change? If so, how?
I enjoyed around 25 years as a ‘traditional’ academic but in the late 1990s I found that the educational side of my role was giving me more satisfaction, and a greater sense of purpose, than bench research. My Head of Department was open to me changing career track and I have focused on undergraduate teaching and educational development since around 2000 - a decision I’ve never regretted.

What are your special interests/achievements in education?
I’ve always enjoyed interacting with students and also more strategic aspects of education, including developing and evaluating new approaches in teaching and learning. Through the AIMS CETL, I’ve contributed to developing novel simulation-based physiology scenarios, a virtual microscope for histology teaching and learning, and an on-line system that supports ‘wet’ lab-based practicals. It’s also very rewarding to contribute to educational activities through The Physiological Society, particularly organising teaching workshops to share good educational practice and our current national work on raising the profile of teaching in career progression in higher education.

1971 BSc in Physiology at University College London
1974 Awarded PhD in Physiology, followed by 3-year postdoctoral position at UCL
1977 Lectureship in Physiology, University of Bristol
1990 Promoted to Senior Lecturer on basis of research, teaching and administration
2000 Transferred to a teaching-focused career track
2001 Appointed as Physiology Department Head of Teaching, then Deputy Head of Department two years later
2005 Co-director of the University’s Centre for Excellence in Teaching and Learning in medical sciences (AIMS CETL)
2007 Promoted to Professor on the basis of teaching and educational leadership
Co-convenor for The Physiological Society Teaching Special Interest Group (now the Education and Teaching Theme)
2012 Elected to The Physiological Society Council and Deputy Chair of Education and Outreach Committee
2013 Member of national steering group considering the status of teaching in academic career development in Higher education
2012 University of Bristol Award for Influence in Higher Education
2013 University of Bristol Students’ Award for Outstanding Teaching
2014 Recognised as a Teacher Scientist in the Science Council List of 100 Leading Practising Scientists
2014 The Physiological Society Otto Hutter Teaching Prize

Professional Memberships/Fellowships
1976 Member of The Physiological Society
2011 Fellow of the Higher Education Academy
2015 Fellow of the Royal Society of Biology
2015 Honorary Member of The Physiological Society

Awards/prizes/distinctions
2010 University of Bristol Teaching Fellowship
2012 University of Bristol Award for Influence in Higher Education
2013 University of Bristol Students’ Award for Outstanding Teaching
2014 Recognised as a Teacher Scientist in the Science Council List of 100 Leading Practising Scientists
2014 The Physiological Society Otto Hutter Teaching Prize

Career

Plan after graduating?
After graduating it was a close call between applying for a PGCE and training to be a schoolteacher or signing up for a PhD as the first step on the academic career ladder. The PhD won out and at that stage I envisaged a traditional academic career combining bench research, teaching and administration.

Did that change? If so, how?
I enjoyed around 25 years as a ‘traditional’ academic but in the late 1990s I found that the educational side of my role was giving me more satisfaction, and a greater sense of purpose, than bench research. My Head of Department was open to me changing career track and I have focused on undergraduate teaching and educational development since around 2000 - a decision I’ve never regretted.

What are your special interests/achievements in education?
I’ve always enjoyed interacting with students and also more strategic aspects of education, including developing and evaluating new approaches in teaching and learning. Through the AIMS CETL, I’ve contributed to developing novel simulation-based physiology scenarios, a virtual microscope for histology teaching and learning, and an on-line system that supports ‘wet’ lab-based practicals. It’s also very rewarding to contribute to educational activities through The Physiological Society, particularly organising teaching workshops to share good educational practice and our current national work on raising the profile of teaching in career progression in higher education.

1971 BSc in Physiology at University College London
1974 Awarded PhD in Physiology, followed by 3-year postdoctoral position at UCL
1977 Lectureship in Physiology, University of Bristol
1990 Promoted to Senior Lecturer on basis of research, teaching and administration
2000 Transferred to a teaching-focused career track
2001 Appointed as Physiology Department Head of Teaching, then Deputy Head of Department two years later
2005 Co-director of the University’s Centre for Excellence in Teaching and Learning in medical sciences (AIMS CETL)
2007 Promoted to Professor on the basis of teaching and educational leadership
Co-convenor for The Physiological Society Teaching Special Interest Group (now the Education and Teaching Theme)
2012 Elected to The Physiological Society Council and Deputy Chair of Education and Outreach Committee
2013 Member of national steering group considering the status of teaching in academic career development in Higher education
2012 University of Bristol Award for Influence in Higher Education
2013 University of Bristol Students’ Award for Outstanding Teaching
2014 Recognised as a Teacher Scientist in the Science Council List of 100 Leading Practising Scientists
2014 The Physiological Society Otto Hutter Teaching Prize

Career

Plan after graduating?
After graduating it was a close call between applying for a PGCE and training to be a schoolteacher or signing up for a PhD as the first step on the academic career ladder. The PhD won out and at that stage I envisaged a traditional academic career combining bench research, teaching and administration.

Did that change? If so, how?
I enjoyed around 25 years as a ‘traditional’ academic but in the late 1990s I found that the educational side of my role was giving me more satisfaction, and a greater sense of purpose, than bench research. My Head of Department was open to me changing career track and I have focused on undergraduate teaching and educational development since around 2000 - a decision I’ve never regretted.

What are your special interests/achievements in education?
I’ve always enjoyed interacting with students and also more strategic aspects of education, including developing and evaluating new approaches in teaching and learning. Through the AIMS CETL, I’ve contributed to developing novel simulation-based physiology scenarios, a virtual microscope for histology teaching and learning, and an on-line system that supports ‘wet’ lab-based practicals. It’s also very rewarding to contribute to educational activities through The Physiological Society, particularly organising teaching workshops to share good educational practice and our current national work on raising the profile of teaching in career progression in higher education.
Jonathan Kibble  University of Central Florida

Professional Memberships/Fellowships
1996  Member of The Physiological Society
2002  Member of the American Physiological Society
2007  Fellow of the Higher Education Academy

Awards/prizes/distinctions
2003  College Excellence in Teaching Award, St Georges University, Grenada
2008  College Excellence in Teaching Award, Memorial University Newfoundland
2011  College Excellence in Teaching Award, University of Central Florida
2012  College Excellence in Teaching Award, University of Central Florida
2015  Nominated for the Alpha Omega Alpha Robert Glaser Distinguished Teacher Award

Career

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Professional Memberships/Fellowships
1996  Member of The Physiological Society
2002  Member of the American Physiological Society
2007  Fellow of the Higher Education Academy

Awards/prizes/distinctions
2003  College Excellence in Teaching Award, St Georges University, Grenada
2008  College Excellence in Teaching Award, Memorial University Newfoundland
2011  College Excellence in Teaching Award, University of Central Florida
2012  College Excellence in Teaching Award, University of Central Florida
2015  Nominated for the Alpha Omega Alpha Robert Glaser Distinguished Teacher Award

Career

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.

Plan after graduating?
My early years as a lecturer taught me how to write grants to support a modest renal research lab and I was fortunate to have opportunities to learn different teaching modalities, develop my own courses and be involved in accreditation processes.

Did that change? If so, how?
I quickly realised that teaching (not telling) is a highly social and rewarding activity. So much so that I left mainstream academia to teach in a Caribbean medical school, where I experienced a different educational culture in terms of real-time accountability to students as customers. I also learned how to organise and provide active learning for large classes (> 400) and began scholarship of teaching and learning projects.

What are your special interests/achievements in education?
I have met some wonderful mentors who taught me that the classroom can be a laboratory and that good teaching and scholarship are synergistic. My main interests are in educational leadership, administration, curriculum design and medical student assessment. During my career I have been able to develop expertise in the latter area and recently worked with the American Association of Medical Colleges to evaluate parts of the new US national Medical College Admissions Test D (MCAT2015). My activities within the American Physiological Society are also very rewarding in terms of my current chairmanship of the Teaching Section and my editorial roles for Advances in Physiology Education.
Mark Langan  Manchester Metropolitan University

Professional Memberships/Fellowships
- 1993  Member of the British Ecological Society
- 1993  Member of the Association for the Study of Animal Behaviour
- 2003  Member of the Institute of Ecology and Environmental Management
- 2003  Member of the Institute of Biology
- 2003  Fellow of the Higher Education Academy
- 2009  Member of the Royal Society of Biology
- 2013  Senior Fellow of the Higher Education Academy
- 2014  Principal Fellow of the Higher Education Academy

Awards/prizes/distinctions
- 2007  First National ‘Green Apple’ Award in Environmental Education and Training (led to ‘Green Heroes’ status in 2009)
- 2013  National Teaching Fellow

Career
Plan after graduating?
I always wanted to be a ‘biology teacher’ and gained teaching experience wherever I could. I voluntarily taught in my old middle school during my A levels, taught English as a Foreign Language in my undergraduate vacations and, during my degree, persuaded my tutors to let me teach other undergraduates on field courses.

Did that change?  If so, how?
After my PhD, I combined my educational and ecological research interests for several years, publishing in both areas. In 2006, I published my final ‘first author’ ecological research paper, committed to educational research and began to accrue small grants to carry out educational research projects.

What are your special interests/achievements in education?
I constantly explore my teaching practices and wider educational issues, publish from these experiences and disseminate my findings through talks and workshops. I have researched in areas such as: assessment, learning gains, educational metrics (e.g. the National Student Survey) and enjoy networking/workng nationally through the Higher Education Academy and with bioscientists who are interested in education. I enjoy invitations to present my work and have provided keynotes (e.g. the HEA Surveys for Enhancement Conference) and run many workshops (e.g. fieldwork, student surveys). Currently I conduct research into educational metrics (e.g. benchmarking courses) and I explore approaches for including ‘playful learning’ in adult education curricula.

1992  BSc in Biology at Manchester Metropolitan University (MMU) and then a graduate researcher on a tropical conservation expedition (returning to complete a Research Assistant post)
1993  Appointed as youngest lecturer in MMU (0.5FTE post, becoming full-time after 3 years)
1999  Awarded a PhD in Ecology/Animal Behaviour
2002  Awarded PGCE(HE)
2003  Began to engage with the LTSN Learning and Teaching Support Network, became HEA in 2003, attended workshops as a participant and presenter
2005  Appointed as Senior Learning and Teaching Fellow
2008  Became a member of the HEA’s Bioscience Committee
2009  Awarded Masters in Academic Practice
2014  Awarded a Chair in Learning and Teaching

1993  Awarded a PhD in Ecology/Animal Behaviour
2002  Awarded PGCE(HE)
2005  Appointed as Senior Learning and Teaching Fellow
2008  Became a member of the HEA’s Bioscience Committee
2009  Awarded Masters in Academic Practice
2014  Awarded a Chair in Learning and Teaching

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy

1993  Member of the British Ecological Society
1993  Member of the Association for the Study of Animal Behaviour
2003  Member of the Institute of Ecology and Environmental Management
2003  Member of the Institute of Biology
2003  Fellow of the Higher Education Academy
2009  Member of the Royal Society of Biology
2013  Senior Fellow of the Higher Education Academy
2014  Principal Fellow of the Higher Education Academy
### Professional Memberships/Fellowships

<table>
<thead>
<tr>
<th>Year</th>
<th>Membership/Fellowship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>Member of The Physiological Society</td>
</tr>
<tr>
<td>2003</td>
<td>Member of the Society for Neuroscience</td>
</tr>
<tr>
<td>2008</td>
<td>Member of the Laboratory Animal Science Association</td>
</tr>
<tr>
<td>2009</td>
<td>Member of the British Pharmacological Society</td>
</tr>
<tr>
<td>2012</td>
<td>Fellow of the Royal Society of Biology</td>
</tr>
</tbody>
</table>

### Awards/prizes/distinctions

<table>
<thead>
<tr>
<th>Year</th>
<th>Award/Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>University of Leeds Developmental Student Education Fellowship, with a Full Fellowship in 2010</td>
</tr>
<tr>
<td>2012</td>
<td>The British Pharmacological Society’s Rang (Teaching) Prize in Basic Pharmacology</td>
</tr>
<tr>
<td>2013</td>
<td>The Physiological Society Otto Hutter Teaching Prize</td>
</tr>
<tr>
<td>2015</td>
<td>Finalist, HE Bioscience Teacher of the Year Award</td>
</tr>
<tr>
<td>2015</td>
<td>National Teaching Fellowship</td>
</tr>
</tbody>
</table>

### Career

**Plan after graduating?**

No real plan or goal. Having really enjoyed my final year BSc Pharmacology research project, I decided to apply for PhD studentships, the start of a very happy journey in scientific research.

**Did that change? If so, how?**

As I progressed up the academic ladder, I spent more time on student education, developing innovative teaching in areas that particularly interested me - animal experimentation and bioethics. Giving up my research lab enabled me to focus full time in areas that I really enjoyed: student education and training, educational research and public engagement activities – a decision I’ve never regretted, rather, I should have done it much earlier.

**What are your special interests/achievements in education?**

My interest in curriculum development began in 2002, particularly in relation to in vivo and “non-traditional” final year research projects. I’ve pursued the former interest with the British Pharmacological Society and the International Union of Basic & Clinical Pharmacology (the latter provides training in in vivo pharmacology in the developing world). Through my interest in ethics education, I became Faculty Ethics Champion in 2006, developing and delivering ethics education and training across all undergraduate and postgraduate programmes. This led to public engagement activities, initially discussing ethical issues in science with school pupils, which rapidly expanded into large public engagement projects involving my students.

All these activities have been thoroughly rewarding and have enabled me to go around the world sharing my experiences and practices with like-minded colleagues.

---

**Recognising Teachers in the Life Sciences**

---

**Recognising Teachers in the Life Sciences**

---

---

---

---
Stephen McCullough | Queen’s University Belfast

Professional Memberships/Fellowships
1983 Member of British Society for Parasitology
1990 Member of Association for Radiation Research
2001 Fellow of the Higher Education Academy
2007 Member of Anatomical Society of Great Britain and Ireland

Awards/Prizes/Distinctions
2003 Teaching Award, Queen’s University Belfast

Career
Plan after graduating?
My early career started in zoology. Through my post doc positions it progressed to physiology, then radiation biology, and finally microscopic anatomy. Although such change proved detrimental to the formation of a research profile in developing a traditional academic career, it would foster my development as a teacher allowing me to apply many viewpoints to particular topics.

Did that change? If so, how?
The biggest influence on my career occurred shortly after getting a lecturership when my head of department sent me (kicking and screaming because I thought I had better things to do) on a week-long residential course related to student-teacher interactions, group skills and education psychology. Along with my equally sceptical course-mates it caused a colossal paradigm shift in our view of what education was really about. It was a career defining moment that ultimately led me to construct courses in novel ways that were recognised by teaching awards and the plaudits of students and colleagues. If I ruled the world, I’d send all academics on that course!

What are your special interests/achievements in education?
One achievement involved swapping microscopes and slides used in histology classes at Queen’s University Belfast with a web-based system of virtual slides. It has been gratifying to see the consistently higher levels of student satisfaction and performance in the 10 years since it was introduced.

1981 BSc Zoology, Queen’s University Belfast (QUB)
1984 PhD Zoology, QUB, followed by two post doc positions at QUB
1992 Appointed Lecturer in Anatomy, QUB
2001 Attended week-long residential course on education
2007 Promoted to Senior Lecturer (Education) mostly on basis of teaching and administration
2008 Appointed Deputy Director, Biomedical Science, QUB
2015 Appointed Acting Director, Biomedical Science, QUB
2003 Teaching Award, Queen’s University Belfast

1983 Member of British Society for Parasitology
1990 Member of Association for Radiation Research
2001 Fellow of the Higher Education Academy
2007 Member of Anatomical Society of Great Britain and Ireland

1983 Member of British Society for Parasitology
1990 Member of Association for Radiation Research
2001 Fellow of the Higher Education Academy
2007 Member of Anatomical Society of Great Britain and Ireland

2003 Teaching Award, Queen’s University Belfast
Career

Plan after graduating?
After graduating with a BSc, it was a natural progression to stay on for my PhD and post-doc positions focusing on gastrointestinal transport. Later, as a Lecturer in Physiology, I pursued a conventional pathway for my first ten years in Aberdeen with a fairly equal balance between my research, teaching and administration.

Did that change? If so, how?
In 2003, having realised that the most personally rewarding elements of my job were increasingly centred on my dealings with students, I decided to shift career balance in the direction of education and was appointed as the first Director of Teaching in the School of Medical Sciences.

What are your special interests/achievements in education?
My primary goal is to provide all our students with a happy, fulfilling educational experience. I use my role to enthuse and encourage my colleagues in their participation and engagement with undergraduate education. We are always looking for innovative ways to refresh up our teaching delivery. For example, we were an early adopter in the use of interactive voting in both lectures and practical classes, we are also developing innovative ways of delivering meaningful practical delivery to our increasingly large classes.
Ann Pullen | University of Bristol

1983
BSc in Biochemistry at the University of Bath

1987
PhD in Immunology at Cambridge, followed by post-doc in Denver, Colorado

1991
Assistant Professor, University of Washington, Seattle

1997
Senior Lecturer in Immunology at University of Bristol

2007
Transferred to Pathway 3 (teaching and teaching administration) as Senior Teaching Fellow

2008
Deputy Director of Teaching and Admissions Tutor for the School of Cellular and Molecular Medicine

2007
Promoted to Reader in Immunology and Education based on teaching, administration and leadership

2008
Appointed faculty Education Director and Undergraduate Dean

2014
Took on role of chair for the Scientific Basis of Medicine subpanel for the new MB ChB degree programme that will be introduced from 2017

2015
External examiner for Kings College London

2014
Promoted to Reader in Immunology and Education based on teaching, administration and leadership

2008
Appointed faculty Education Director and Undergraduate Dean

2014
Faculty Prize in Teaching and Learning in recognition of my contribution to improving teaching and learning, and the student experience

Professional Memberships/Fellowships
1997 Member of the British Society for Immunology

Awards/prizes/distinctions
2014 Faculty Prize in Teaching and Learning in recognition of my contribution to improving teaching and learning, and the student experience

Career

Plan after graduating?
After I graduated I went straight on to a PhD in Immunology at Cambridge and envisaged a traditional, mixed academic career path.

Did that change? If so, how?
At the University of Washington my main focus was research, but I also served as tutor for postgraduate students in Seattle and then held a similar role when I came to the University of Bristol. I thoroughly enjoyed supporting students and monitoring their progress and decided to transfer to a teaching focused career pathway in 2007. Since then I haven’t looked back.

What are your special interests/achievements in education?
In 2010, as Director of Teaching for the School, I introduced a raft of changes to improve feedback to students and was very proud when the School’s National Student Survey score for Assessment and Feedback increased from 66% to 87% in 2011. In 2010 I led the introduction into our School of a web-based tool (eBiolabs) that prepares undergraduates for practical classes. I have since presented this work at RSA and learned society workshops and conferences, and in the Bioscience Bulletin. It is also very rewarding that our School gained a score of 97% Overall Satisfaction in the NSS of both 2013 and 2014. I was touched when the students gave me a beautiful bouquet on Graduation Day in 2013!
Jon Scott | University of Leicester

Professional Memberships/Fellowships
- 1987 Member of The Physiological Society
- 1992 Member of the Institute of Learning & Teaching
- 2011 Fellow of the Royal Society of Biology
- 2013 Principal Fellow of the Higher Education Academy

Awards/prizes/distinctions
- 2006 University of Leicester Teaching Fellowship
- 2011 UK Bioscience Teacher of the Year Award (HEA joint with Oxford University Press)
- 2012 National Teaching Fellowship

Career

Plan after graduating?
After graduating, I stayed on to do my PhD with the Professor who had supervised my undergraduate project. I obtained grant funding to maintain a team working on proprioception and really enjoyed the mix of research, teaching and administration.

Did that change? If so, how?
Gradually I took on more roles in curriculum development, which I really enjoyed and after I was appointed Director of Studies in 1997, my neuroscience research declined being replaced with pedagogical research. Following a restructurin I became Academic Director for the newly formed College in 2009 and from then on focused entirely on supporting teaching and learning. Looking back, there was no specific decision to change track but I was very fortunate in being able to follow my interests.

What are your special interests/achievements in education?
I focus very much on the quality of the student experience particularly in relation to the processes of transition and improving retention. Other key areas of educational research and development have been academic integrity, reward & recognition, and assessment & feedback. I have also contributed to a number of national developments including the QAA Quality Code and the benchmark statements for Biosciences.

Professional Memberships/Fellowships
- 1987 Promoted to a Senior Lectureship on the basis of research, teaching and administration
- 1997 Appointed as Director of Studies, School of Biological Sciences, University of Leicester
- 1998 Became a reviewer for the QAA - a role I still fulfil as it gives detailed insights into practices in other universities
- 2009 Appointed Academic Director, College of Medicine, Biological Sciences & Psychology, University of Leicester
- 2012 Promoted to a Chair in Bioscience Education on the basis of leadership in learning and teaching and pedagogical research

Awards/prizes/distinctions
- 2006 University of Leicester Teaching Fellowship
- 2011 UK Bioscience Teacher of the Year Award (HEA joint with Oxford University Press)
- 2012 National Teaching Fellowship
Graham Scott  |  University of Hull

Professional Memberships/Fellowships
- 2013 Fellow of the Royal Society of Biology
- 2013 Principal Fellow of the Higher Education Academy
- 2014 Member of the Society for Experimental Biology
- 2015 Recognised as a Chartered Science Teacher by the Royal Society of Biology

Awards/Prizes/Distinctions
- 2006 University Teaching Fellowship
- 2009 National Teaching Fellowship
- 2010 Centre for Biosciences Ed Wood Teaching Award (fore-runner to HE Bioscience Teacher of the Year Award)

Plan after graduating?
I was torn between a career in teaching and my passion for birds. The latter won out and I embarked upon a PhD on bird behaviour. The PhD taught me two things: I wanted to stay in higher education and it wasn't always a good idea to make your hobby your work!

Did that change? If so, how?
After a research contract at the Dove Marine Laboratory I moved to a traditional lectureship at University College Scarborough, which became part of the University of Hull. Working with like-minded colleagues at Scarborough and Hull, and through the HEA with colleagues across the country, I came to realise that teaching biology better was more important to me than biological research.

What are your special interests/achievements in education?
I am particularly interested in teaching that focuses less on telling students what I think they need to know and more on providing opportunities for them to pursue their own interests. Through this engaged learning students acquire essential scientific knowledge and develop the skills for self-directed learning. I’m very keen to share this approach with colleagues and to help both students and their teachers to actively reflect upon both learning and teaching.

I also have an interest and involvement in educational publishing having published two textbooks: *Essential Animal Behaviour* (2005) and *Essential Ornithology* (2010), and carried out a range of editorial roles for journals and conference proceedings.
Sue Smith | Imperial College London

**Professional Memberships/Fellowships**
- 2002 Fellow of the Higher Education Academy
- 2004 Member of Association for the Study of Medical Education
- 2012 Fellow of the Royal Society of Biology
- 2012 Member of Association for Science Education
- 2015 Senior Fellow of the Higher Education Academy

**Awards/prizes/distinctions**
- 2005 Obtained Post Graduate Certificate in Leadership in Health and Social Care Education, University of Leicester
- 2007 Rector’s Award for Excellence in Teaching, Imperial College London

**Career**
- **Plan after graduating?**
  I was very fortunate to be able to study for my PhD part time at Charing Cross Hospital whilst working as a biochemistry technician at Chelsea College. I then moved to Charing Cross full time to become a typical academic with a mixed portfolio of research, teaching and “good citizenship”.

- **Did that change? If so, how?**
  When the medical school merged with Imperial College London, I took the opportunity to get involved in medical curriculum development and, because I was an experienced undergraduate teacher, a number of substantial education leadership roles followed. These increasing responsibilities reduced the time available for scientific research, but brought an opportunity to reinvent myself and start building academic expertise in education.

- **What are your special interests/achievements in education?**
  My leadership roles have encompassed course development in medicine and biomedical science degree programmes, medical admissions and examinations/assessments. I am currently Director of Admissions, Equality and Diversity for the School of Medicine and, excitingly, the founding Director of the School’s Medical Education Research Unit. One of our most intriguing research questions is “How should we teach computer coding to medical students?” since the UK needs many doctors with these skills to analyse the massive data sets generated by ventures such as the 100,000 Genome Project, which promise to enhance our understanding of human health and disease.

**Photo: Andy Pritchard**
Alistair Warren  
University of Sheffield

Professional Memberships/Fellowships
- 1981 Member of the Anatomical Society
- 1983 Member of the Royal Microscopical Society
- 1994 Member of the British Fertility Society
- 1995 Member of the Society for Reproduction and Fertility

Awards/prizes/distinctions
- 2009 Winner of ‘Rate my Personal Tutor’ in a university-wide competition
- 2010 Awarded ‘Student Voice Advocate’ in the Student Union Awards

Career

Plan after graduating?
After discovering Biology, it never occurred to me that my career would involve anything else. Biology, for me, meant finding out how things worked and why – sharing this knowledge was all part of the same activity. It seemed natural that I would research and teach because these are simply two sides of the same coin.

Did that change? If so, how?
Discovering that different approaches to learning/teaching could be used to encourage deeper understanding while increasing enjoyment was something of a revelation to me. Watching people who are ‘naturally’ good teachers made me appreciate that their apparent simplifications, use of models, metaphor and humour were based on an extensive knowledge, interest and understanding of their subject. Teaching helps the teacher to better understand their discipline and is a great way to promote your field!

What are your special interests/achievements in education?
I have been active in curriculum design: in the MBChB programme at Sheffield, in Biomedical Science and more recently in introducing a successful MSc in Science Communication across three faculties. I have significant experience of quality assurance in education (I was the Institutional Facilitator for our QAA Institutional Review in 2013). In 2001, I was invited to contribute to the development of a new Medical School in Portugal – an exciting project with which I am still involved through an External Advisory Board.

Professional Memberships/Fellowships
- 1981 Member of the Anatomical Society
- 1983 Member of the Royal Microscopical Society
- 1994 Member of the British Fertility Society
- 1995 Member of the Society for Reproduction and Fertility

Awards/prizes/distinctions
- 2009 Winner of ‘Rate my Personal Tutor’ in a university-wide competition
- 2010 Awarded ‘Student Voice Advocate’ in the Student Union Awards

Career

Plan after graduating?
After discovering Biology, it never occurred to me that my career would involve anything else. Biology, for me, meant finding out how things worked and why – sharing this knowledge was all part of the same activity. It seemed natural that I would research and teach because these are simply two sides of the same coin.

Did that change? If so, how?
Discovering that different approaches to learning/teaching could be used to encourage deeper understanding while increasing enjoyment was something of a revelation to me. Watching people who are ‘naturally’ good teachers made me appreciate that their apparent simplifications, use of models, metaphor and humour were based on an extensive knowledge, interest and understanding of their subject. Teaching helps the teacher to better understand their discipline and is a great way to promote your field!

What are your special interests/achievements in education?
I have been active in curriculum design: in the MBChB programme at Sheffield, in Biomedical Science and more recently in introducing a successful MSc in Science Communication across three faculties. I have significant experience of quality assurance in education (I was the Institutional Facilitator for our QAA Institutional Review in 2013). In 2001, I was invited to contribute to the development of a new Medical School in Portugal – an exciting project with which I am still involved through an External Advisory Board.
Blair Grubb
University of Liverpool

Professional Memberships/Fellowships
1994 Member of The Physiological Society
2014 Senior Fellow of the Higher Education Academy

Awards/prizes/distinctions
2013 University of Leicester Teaching Fellowship in recognition of excellence in physiology education and leadership

Career
Plan after graduating?
During my undergraduate degree I was taught by some fantastic academics whose passion for their subject instilled in me the importance of high quality teaching – they inspired me to enter academia.

Did that change? If so, how?
For about 15 years at Leicester, I did the normal teaching and research roles expected of any academic. However, from early on I was heavily involved in teaching, curriculum development, chaired the Departmental Teaching Committee and was involved with School, Faculty and University teaching committees - this gave my role an increasing teaching focus.

What are your special interests/achievements in education?
I am really proud that the BSc Physiology with Pharmacology and BSc Medical Physiology programmes that I developed at Leicester are both so successful. Many students have graduated from these programmes and I am always delighted when they realise their full potential, move on to postgraduate study and find good jobs. I am also really privileged to have worked so closely with many fantastic people in The Physiological Society during my tenure as Chair of the Education & Outreach Committee. Finally, after many years in education I was particularly honoured to be appointed as Chair and Head of Life Sciences within the Institute of Learning & Teaching at Liverpool.

1983 BSc Biological Sciences (Physiology) at the University of Edinburgh
1987 PhD in Physiology/Neuroscience at the University of Newcastle followed by three postdoctoral positions in the UK and Germany
1993 Lectureship in Physiology, University of Leicester
1994 Chair of Departmental Teaching Team
2000 Promoted to Senior Lecturer in Physiology, University of Leicester on the basis of my contribution to teaching and research
2005 Designed and implemented the BSc Medical Physiology programme at the University of Leicester
2006 Appointed as Head of the Department of Cell Physiology & Pharmacology, University of Leicester
2012 Elected as Chair of The Physiological Society’s Education & Outreach Committee
2014 Designed and implemented the BSc Biological Sciences (Neuroscience) programme at University of Leicester
2015 Appointed as Professor and Head of Life Sciences in the Institute of Teaching and Learning at the University of Liverpool

Professional Memberships/Fellowships
1994 Member of The Physiological Society
2014 Senior Fellow of the Higher Education Academy

Awards/prizes/distinctions
2013 University of Leicester Teaching Fellowship in recognition of excellence in physiology education and leadership

Career
Plan after graduating?
During my undergraduate degree I was taught by some fantastic academics whose passion for their subject instilled in me the importance of high quality teaching – they inspired me to enter academia.

Did that change? If so, how?
For about 15 years at Leicester, I did the normal teaching and research roles expected of any academic. However, from early on I was heavily involved in teaching, curriculum development, chaired the Departmental Teaching Committee and was involved with School, Faculty and University teaching committees - this gave my role an increasing teaching focus.

What are your special interests/achievements in education?
I am really proud that the BSc Physiology with Pharmacology and BSc Medical Physiology programmes that I developed at Leicester are both so successful. Many students have graduated from these programmes and I am always delighted when they realise their full potential, move on to postgraduate study and find good jobs. I am also really privileged to have worked so closely with many fantastic people in The Physiological Society during my tenure as Chair of the Education & Outreach Committee. Finally, after many years in education I was particularly honoured to be appointed as Chair and Head of Life Sciences within the Institute of Learning & Teaching at Liverpool.

Professional Memberships/Fellowships
1994 Member of The Physiological Society
2014 Senior Fellow of the Higher Education Academy

Awards/prizes/distinctions
2013 University of Leicester Teaching Fellowship in recognition of excellence in physiology education and leadership

Career
Plan after graduating?
During my undergraduate degree I was taught by some fantastic academics whose passion for their subject instilled in me the importance of high quality teaching – they inspired me to enter academia.

Did that change? If so, how?
For about 15 years at Leicester, I did the normal teaching and research roles expected of any academic. However, from early on I was heavily involved in teaching, curriculum development, chaired the Departmental Teaching Committee and was involved with School, Faculty and University teaching committees - this gave my role an increasing teaching focus.

What are your special interests/achievements in education?
I am really proud that the BSc Physiology with Pharmacology and BSc Medical Physiology programmes that I developed at Leicester are both so successful. Many students have graduated from these programmes and I am always delighted when they realise their full potential, move on to postgraduate study and find good jobs. I am also really privileged to have worked so closely with many fantastic people in The Physiological Society during my tenure as Chair of the Education & Outreach Committee. Finally, after many years in education I was particularly honoured to be appointed as Chair and Head of Life Sciences within the Institute of Learning & Teaching at Liverpool.
Plan after graduating?  
I hoped that my PhD in estuarine ecology would equip me to do one of two things: change the world through environmental campaigning or conduct ground-breaking scientific research. I had no interest in, or aptitude for, teaching.

Did that change? If so, how?  
When I found myself appointed to a lecturing post at Edinburgh Napier University, it felt like an accident and my first students probably felt like its victims. To my surprise I discovered that teaching was amongst the most challenging and rewarding of professions and completing the Postgraduate Certificate in Tertiary Teaching Methods at the University in 1997 introduced me to pedagogical scholarship.

What are your special interests/achievements in education?  
When I began researching my own teaching, I discovered a pedagogical research community that is a welcoming mix of passionate people with diverse skills. I still investigate the ecology of marine ecosystems (particularly mangroves) and teach environmental biology, but have recently taken up a new role as Director of Academic Strategy and Practice, giving me the opportunity to support innovative and engaging approaches to teaching across the University.
**Professional Memberships/Fellowships**

- 1984 BSc in Biochemistry, Kuwait University
- 1986 MSc in Physiology, Kuwait University
- 1994 Awarded a PhD in Physiology from the University of Manitoba, Canada, followed by a 3-year postdoctoral fellowship at the University of Nevada, Reno, USA
- 1997 Assistant Professor in the Physiology Department at Kuwait University
- 2000 Member of The Physiological Society
- 2004 Member of the International Society for Heart Research
- 2006 Member of the British Cardiovascular Society
- 2008 Member of the Royal Society of Medicine
- 2014 Member of the International Consultation on Incontinence Research Society

**Awards/prizes/distinctions**

- 2013 Santander scholarship certificate for outstanding performance and dedication in physiology and biomedical sciences

**Career**

**Plan after graduating?**
After I graduated I was keen to pursue a career in academic physiology, particularly medical physiology.

**Did that change? If so, how?**
My interest in physiology teaching started when I was a tutor in medical physiology at Kuwait University. When I moved to the UK in 2000 as a cardiovascular researcher, I also took up honorary lectureships in a number of London universities where I taught medical students in sessions that included patients and healthcare professionals. I realised that undergraduate and postgraduate teaching, especially of medical students, was of considerable interest to me.

**What are your special interests/achievements in education?**
My main focus has been in curriculum development in medical physiology courses – initially at Kuwait University where I coordinated the delivery of physiology teaching to medical/pharmacy/allied health and nursing students. More latterly at the University of Surrey, as well as having a fulfilling research career, I have been able to completely reorganize the delivery of undergraduate physiology teaching on vocational and biomedical science courses, including implementing a new practical teaching strategy. I have also found it rewarding to act as a mentor for women in science, engineering and technology (SET).
Prem Kumar | University of Birmingham

1979-1982  
BSc in Physiology, University of Leeds

1982-1985  
DPhil Physiology, University of Oxford

1986-1988  
Postdoc, University of Reading

1989-1990  
Temporary Lectureship, University of Birmingham

1991-1995  
Lecturer, University of Birmingham

1995-2000  
Lister Institute Research Fellow, University of Birmingham. Developed my research but maintained my teaching load. On reflection, a pivotal decision in my career.

1997  
Promoted to Reader

2006-2010  
Meetings Secretary, The Physiological Society. Helped to establish a place for education research within the main conference programme.

1989  
Member of the International Society for Arterial Chemoreception

1991  
Member of The Physiological Society

2008  
Member of the American Physiological Society

1986-1988  
Postdoc, University of Reading

1989-1990  
Temporary Lectureship, University of Birmingham

1991-1995  
Lecturer, University of Birmingham

1995-2000  
Lister Institute Research Fellow, University of Birmingham. Developed my research but maintained my teaching load. On reflection, a pivotal decision in my career.

1997  
Promoted to Reader

2006-2010  
Meetings Secretary, The Physiological Society. Helped to establish a place for education research within the main conference programme.

2008  
Head of School Award for Excellence in Teaching

Career

Plan after graduating?  
Early in my career I developed my research interests whilst also taking on a considerable teaching load that would probably not be considered sensible in these post RAE/REF days.

Did that change? If so, how?  
My time in Birmingham has seen a gradual shift in my focus from mainly research towards teaching and administration although I still work in the lab when I can. This has not been a carefully planned career and changes occurred through simply being a systems physiologist within a medical school and through what may be called ‘good citizenship’.

In 2012 I began using flipped teaching to replace traditional, didactic teaching that I felt was no longer aiding student understanding. This re-invigorated my teaching and was also instrumental in getting me to begin examining the evidence base for teaching methods more closely.

What are your special interests/achievements in education?  
I now hold key roles in education within my institution and my switch in priorities has enabled me to become involved in a wide range of educational activities both nationally and internationally, for example through BSc and MBChB external examining, which I have thoroughly enjoyed and found extremely informative. I have surprised myself by organising Teaching Workshops at conferences and subsequently being invited to give educational talks on subjects such as standard setting and ‘flipped’ teaching in the UK and even in Saudi Arabia!
As a child I wasn't sure if I wanted to become a doctor or a teacher. When I graduated with an intercalated BSc in Pharmacology and a medical degree from the University of Bristol I intended to pursue a career in Clinical Pharmacology.

Did that change? If so, how?

A six month demonstrator post teaching Physiology whet my appetite for education and led me to develop a portfolio career combining a teaching-focused post at the University of Bristol with clinical work as a specialty doctor in a busy department of Emergency Medicine.

What are your special interests/achievements in education?

It is important to me that my clinical work informs my teaching and that my knowledge of physiology and pharmacology underpins my medical practice. This ‘dual’ approach, for example, underpinned my contribution to pioneering the use of human patient simulators in biomedical education, through the AIMS CETL. I am also using my clinical and scientific experience to help develop the new MB ChB curriculum at Bristol.

One of the best things about an academic career focused on education is the opportunity to work with other passionate educators.
Career

Plan after graduating?
When I started my BSc I wasn’t thinking about academia – I wanted to work in industry. However, I became interested in research so did a PhD and two post-docs, where I got my first taste of undergraduate teaching.

Did that change? If so, how?
I got a temporary lectureship at the Open University and found out about distance teaching – quite unlike anything I’d done before, but I loved it. It was a steep learning curve, but my teaching materials seemed well received by peers and students. I was thrilled when I got a permanent job with the OU as a lecturer. Although I did some research, my main focus was teaching.

What are your special interests/achievements in education?
I’ve enjoyed working with fantastic colleagues to develop a robust pedagogy for distance education. There’s definitely more to it than putting your lecture slides on a website! Having started with a very focused research area – cell division – it has been a delight to have been able to research and teach in many different areas. Having to learn about new topics keeps you on your toes, and keeping interested yourself helps to enthuse your students – vital for effective learning.

After several years I found myself as Head of Department and a Professor, thanks mainly to my teaching contributions – I’ve worked on more than 25 modules, and enjoyed (almost) every minute.
Career

Plan after graduating?
After graduating, I ran my own business for 5 years as an agricultural and forestry contractor, before teaching in Further Education Colleges.

Did that change? If so, how?
After completing my PhD in my early 30s and joining the University of Reading as a post doc, I was able to fulfill a long-standing interest in teaching and pedagogy by undertaking small, teaching-related research projects alongside “normal” disciplinary research. In the late 1990s and 2000s there was significant educationally-related funding available and I was part of, and in some cases led, projects funded by JISC, the HEA and HEFCE. My secondment to the UK Centre for Bioscience in 2002 gave me access to nationwide networks and collaborations.

What are your special interests/achievements in education?
My main educational interests focus on three areas. Firstly, I am keen to involve undergraduates in research. This has led to the development of resources such as “Engage in Research” (http://www.engageinresearch.ac.uk/) and the international student research journal “Bioscience Horizons”. A second area of interest is the enhancement of student feedback, which led to the development of the “engage in feedback” website (http://www.reading.ac.uk/external/engagefeedback/EFB-Home.aspx) and a number of related publications. I am also interested in the use of technology in learning, particularly in relation to fieldwork (http://www.enhancingfieldwork.org.uk/) and I have a number of publications in this area, including a book that is currently in press.
Top Tips | for progressing your career in teaching/education...

Personal development

Plan your career: a heavy teaching load will never be sufficient in itself to gain promotion through education. You need to:

- Study the relevant promotion criteria in your HEI
- Engage with a range of activities that allow you to demonstrate, with evidence, that you have the skills, knowledge and experience to meet those criteria
- Find a good mentor (preferably someone who is also passionate about education) and discuss how your CV addresses the promotion criteria
- Complete an educational qualification; this could be through your own university or an external body, e.g. the HEA. You’ll learn a lot and meet people who share your ideas and with whom you can work
- Engage with the HEA and seek accreditation through them
- Focus your scholarly effort: you can’t be an expert in all aspects of education so find a niche, develop expertise and make a name for yourself in an area that appeals to you

Maintain an evidence portfolio of your achievements

Keep careful, up to date records and gather evidence to support educational aspects of your case for promotion. Your portfolio could include:

- End of module student feedback
- Your own student evaluations (these could go beyond routine Likert questionnaires)
- Peer observation records
- How you’ve changed your practice as a result of peer and student feedback
- Unsolicited ‘thank you’ emails from students and staff
- Student performance indicators (if these clearly relate to your own teaching)
- Case studies on educational leadership, research and innovation (including impact)
- Invited talks
- Workshops attended
- Funding awarded for educational projects

Developing a profile within your institution

A range of strategies will help to raise your internal profile:

- Teamwork is important as it can be challenging to develop new ideas on your own, so work with like-minded colleagues to develop new approaches to teaching and learning in the same way that you discuss discipline-based research
- Education isn’t just about delivery so get involved with institutional strategy and action-planning by joining education-related committees and groups at departmental, school, faculty and university level
- Take (or create!) opportunities to talk about your achievements
- Develop opportunities to share best practice across your school/faculty/university
- Volunteer for roles that appeal to you
- Work positively with administrative colleagues. They are experts in their area and can help you achieve some of your goals: this shares the workload, is likely to be more effective in the long-run and can also be enjoyable

Developing a profile beyond your own institution

Promotion to senior level invariably requires establishing an external profile so, despite your ‘internal’ workload, it’s important to develop this by:

- Disseminating your work through:
  - Presentations (talks and posters) at educational workshops and conferences
  - Papers submitted to peer-reviewed journals
  - Articles in magazines/newsletters published by learned societies and professional bodies
- Getting involved in education and outreach activities at a national level through:
  - Joining the Education Committee of your learned society/professional body
  - Involvement with the HEA
  - Offering to organise events such as teaching workshops, outreach activities
- Attending education workshops and conferences, and establishing links with like-minded, teaching-focused colleagues. These can lead to effective cross-institutional collaborations.
- Being prepared to take on external examining, programme reviewer and journal refereeing roles
- Becoming a STEM ambassador and engaging with schools and the general public

Scholarship and pedagogy

You need to go beyond being an excellent teacher to gain promotion to a senior level, and to develop scholarly activities and pedagogic expertise by:

- Engaging with educational literature
- Reflecting on your approach to education
- Conducting some rigorous, pedagogic research by:
  - Designing and evaluating new approaches to teaching & learning according to core research principles
  - Considering collaboration with people from other disciplines (e.g. Education)
  - Seeking external funding (however small) for teaching & learning projects
- Publishing/presenting your findings and submitting them to peer review

Working with (and for) students

Students are central to education so...

- Get to know your students – they will inspire you to improve your practice
- In any interaction with students: prepare well, engage both with them and the subject matter, and make all teaching sessions interesting. The rewards (for everyone) are well worth the effort!
- Make teaching all about the students, not about how clever you are
- Listen to students’ comments – they are new to the field and are excited by their subject and want you to help them find out more about it. You can also learn a good deal from them!
- Involve students in helping to develop your ideas, and in evaluating and publishing innovations in education

...collated from advice provided by all the contributors to this booklet.