

Recognising Teachers in the Life Sciences



*I am indebted to my father for
living but to my teacher for
living well.* | Alexander the Great

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.¹ 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 Chrissy 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 Blair 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

<http://www.acmedsci.ac.uk/policy/policy-projects/redressing-the-balance-the-status-and-valuation-of-teaching-in-academic-careers/>

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The following section of this booklet includes 32 individual biographies, which we have classified into 3 groups on the basis of contributors' career pathways to date. These groups are further described below.

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

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Prof Maxine Lintern	10
Prof Neil Morris	12
Dr Elizabeth Sheader	14
Dr Tracey Speake	16
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Prof Olwyn Westwood	20

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

Prof Sarah Baillie	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
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Dr Dave Lewis	40
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Group 3: Contributors who combine discipline-based research or a clinical role with significant educational activity

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The final section of the booklet provides advice for those wishing to build an academic career around teaching.



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.

1995
BSc
Biochemistry
and Physiology,
University of
Sheffield

1999
PhD in
Molecular
Endocrinology,
University of
Birmingham

Post-doctoral
Fellow,
University of
Sheffield

2003
**Teaching
Fellow in
Physiology
(fixed term
contract),
University of
Leeds**

2004
Chair of Faculty
Outreach
and Public
Engagement
Group

2007
**Lecturer
in Human
Physiology**

2009
Public
Engagement
Ambassador for
the National
Coordinating
Centre for Public
Engagement

2013
Physiological
Society
Teaching Grant:
Developed a
module on life at
the extremes

Reviewer for
*Advances in
Physiology
Education*

**Promoted
to Associate
Professor
in Human
Physiology
based on
teaching and
scholarship
activities
(outreach)**

2014
Elected to
the Education
and Outreach
Committee for
The Physiological
Society

2015
Academic
Lead for Public
Engagement
with Research
for the
University of
Leeds



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!

1988
BSc Physiology,
Queen's
University of
Belfast

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

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

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

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

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

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

2011
Appointed as
Course Lead
for BSc Medical
Physiology and
Therapeutics

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



Professional Memberships/Fellowships

- 1992** Member of The Physiological Society
- 2004** Fellow of the Higher Education Academy
- 2006** Member of the Institute of Leadership and Management
- 2015** Principal Fellow of the Higher Education Academy

Awards/prizes/distinctions

- 2006** Authored '*Laboratory Skills for Science and Medicine*', (Radcliffe Publishing Ltd), which won a best undergraduate publication award
- 2011** Faculty of Health, BCU was awarded the HEA Learning and Teaching Award for our simulation centre and innovative use of simulation for nursing, medical, paramedic, radiography and science students

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.

1992
BSc in Medical Biochemistry, University of Birmingham

1996
PhD Medicine (Physiology), University of Birmingham followed by four post-doc years

2001
Lecturer in Medical Science, University of Birmingham with a primarily teaching focus

2005
Took up role as University Director of Learning and Teaching

2008
Associate Dean for Learning, Teaching, Research and Scholarship in the Faculty of Health, Birmingham City University (BCU)

2010
Started to work as a reviewer for HEA Teaching Development Grants and National Teaching Fellowships

2011
Personal Chair for Academic Leadership in Learning and Teaching and Research

2014
Published (with Elizabeth Cleaver and Mike McLinden) "*Teaching and Learning in Higher Education: Disciplinary Approaches to Educational Enquiry*" (SAGE Publications Ltd)

2015
Moved to the new Faculty of Business, Law and Social Sciences following a University restructure

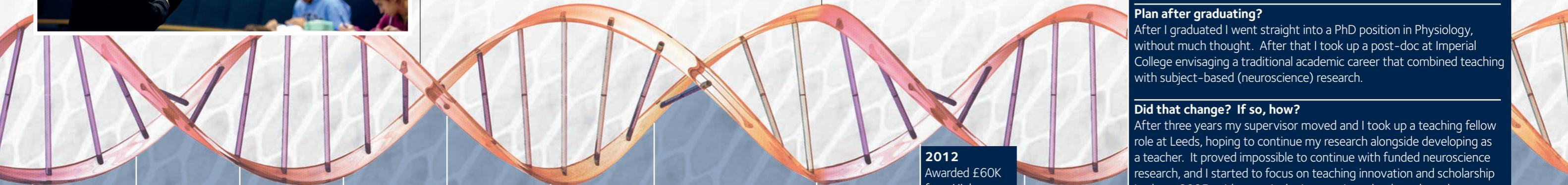


Professional Memberships/Fellowships

- 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



1996
BSc Human
Biology,
University of
Leeds

1999
PhD in
Physiology,
University of
Leeds

2002
**Teaching
Fellow in
Neuroscience,
University of
Leeds**

2004
Programme
Leader for BSc
Neuroscience,
University of
Leeds

2007
Appointed as
Faculty Virtual
Learning
Environment
Coordinator

2008
**Senior
Lecturer and
Director of the
Undergraduate
School for
the Faculty
of Biological
Sciences**

2009
Elected
as Faculty
representative
on University's
Taught Student
Education Board

2011
Member of
Education and
Outreach
Committee
for the
Physiological
Society (until
2014)

2012
Awarded £60K
from Higher
Education
Academy for
research grant
into multimedia
interactive
eBooks in
practical settings

**Started
fractional
secondment
as University
Blended
Learning
Champion**

2014
**Promoted
to Professor
and Chair of
Educational
Technology,
Innovation
and Change
and Director
of Digital
Learning**

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.



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.

1994
BSc (Hons) in Physiology, University of Liverpool

1998
Awarded PhD in Physiology from University of Manchester followed by postdoctoral research in renal/cardiac physiology

2001
Awarded PGCE (Further and Higher Education) from Bolton University (taken part-time through evening classes)

Appointed as Teaching Fellow in Faculty of Life Sciences, University of Manchester

2006
Took on additional pastoral support role of Senior Tutor to medical students (Phase 1: years 1 & 2)

Had my first educational publication in the journal *Advances in Physiology Education*

2009 Promoted to Senior Lecturer (on the basis of track record in teaching, scholarship and administration)

2010
Co-organised with Tracey Speake & Tristan Pocock the "Sustainability of Physiology Teaching and Teachers" symposium at Physiology 2010

2014
Appointed as Medical OSCE Co-lead for Phase 1: years 1 & 2

2015
Programme Director for Physiology at the University of Manchester



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.

1993
BSc in Physiology and Pharmacology at the University of Southampton

1997
Awarded PhD in Physiology at the University of Manchester, followed by five years of postdoc work

1999
Began studying for a Certificate of Education in the evenings

2001
Teaching Fellow, Faculty of Life Sciences, University of Manchester (at first employed 50:50, teaching: research)

2002
Recognised that my career aspirations lay in teaching and became a full-time Teaching Fellow

2007
Appointed Programme Co-director for Biomedical Sciences programme – the largest in the Faculty

2010
Co-organised the "Sustainability of Physiology Teaching and Teachers" symposium at Physiology 2010

2011
Promoted to Senior Lecturer on the basis of track record in teaching and administration



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

Faulty representative for the HEA Centre for Bioscience

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



Professional Memberships/Fellowships

- 1993** Member of the British Society of Immunology
- 1999** Fellow of the Institute of Biomedical Sciences
- 2001** Member of the Institute of Learning and Teaching (then Fellow of the Higher Education Academy)
- 2001** Member of the Association for the Study of Medical Education (ASME)
- 2004** Member of the Association for Medical Education in Europe (AMEE)
- 2005** Fellow of the Royal Society of Medicine
- 2015** Principal Fellow of the Higher Education Academy

Awards/Prizes/Distinctions

- 1994** British Council Award to Australia: *Transfer of health professional training into higher education*
- 2007** Education Fellowship to University of Brunei Darussalam
- 2013** Elected Staff President of Student Union's Medical Education Support Society
- 2015** Queen Mary University of London Student Union award – Course Rep Champion

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 curricula 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).

1980
BSc in Nutrition at the University of Surrey

1989
PhD in Biochemistry at Kings College London, followed by a postdoctoral fellowship at St. George's Hospital Medical School

1992
Lectureship in Immunology at University of Surrey, Roehampton

2001
Sabbatical Fellowship to Australia, to evaluate the Curriculum for Diabetes Educators

2003
Appointed as Director of Curriculum Development for the new Medical School at Swansea

2005
Reader in Medical Education, University of Surrey

2006
Became a General Medical Council visitor (biomedical scientist) for Quality Assurance in Basic Medical Education

Elected to Council of ASME

2008
Chair in Medical Education, Queen Mary University of London's Barts and The London School of Medicine and Dentistry

Associate Dean (Education Quality) leading the medical school through two successful GMC education audits

2011
Assessment advisor for Royal College membership examinations

2014
Education advisor for Modernising Scientific Careers, Health Education England

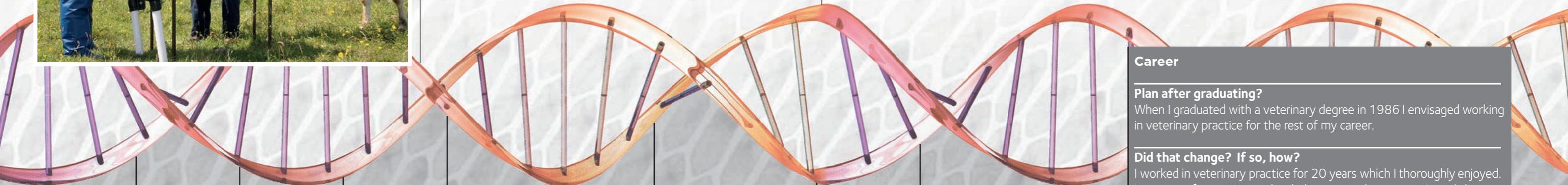


Professional Memberships/Fellowships

- 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

- 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



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

Awarded a visiting Research Fellowship at Bristol Robotics Lab

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.

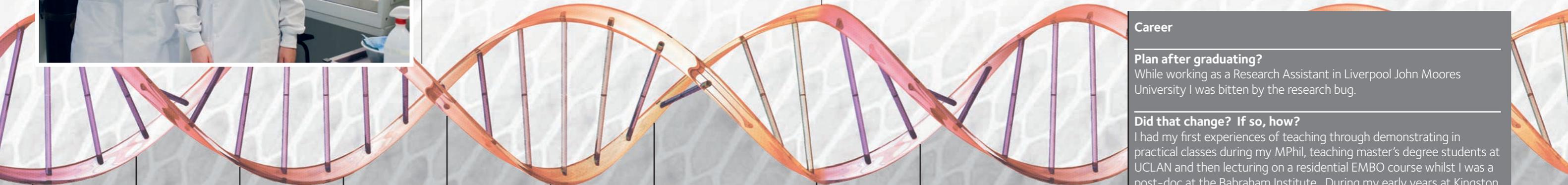


Professional Memberships/Fellowships

- 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



1987
BSc in Physiology and Psychology, University of Central Lancashire

1990
MPhil at Liverpool John Moores University

1995
Awarded PhD in cardiovascular physiology, University of Central Lancashire (UCLAN)

Post-doctoral research post (4 years) at the Babraham Institute, Cambridge

2001
Lecturer at Kingston University

2003
Promoted to Senior Lecturer

2006
Promoted to Principal Lecturer and Faculty of Science Learning and Teaching Co-ordinator (a 0.5 FTE position)

2007
Awarded a University Teaching Fellowship and began my first pedagogical research

2012
Awarded a Physiological Society Teaching Grant

2015
Kingston University nominee for a National Teaching Fellowship

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 effect 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

- 1983** Member of The Physiological Society
- 2013** Principal Fellow of the Higher Education Academy

Awards/prizes/distinctions

- 2003** National Teaching Fellowship
- 2006** First prize in the eTool of the Year competition for Profile, one of the earliest e-portfolios

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.

1976
BSc in Pharmacology at King's College, London

1980
PhD in Neuroscience from The Institute of Neurology, University of London

1982-83
Research projects at Lund University, Sweden and The Royal Free Hospital Medical School, London

1985
Appointed to teach neuroscience at Bristol Polytechnic/University of the West of England (UWE), Bristol

2007
External evaluator of CEPPL, one of the CETLs awarded to Plymouth University

2009
Professor and Head of Work Based Learning, Plymouth University

2012
Seconded to the HEA as Academic Lead for Online Learning and headed up their contribution to the UK OER and "Changing the Learning Landscape" national programmes

2013
Visiting Professor at Plymouth University

2014
Moved to Pearson Education to research the impact and efficacy of digital resources on teaching and learning



Professional Memberships/Fellowships

- 2002** Member of British Association of Clinical Anatomists
- 2002** Member of the Anatomical Society
- 2006** Fellow of the Higher Education Academy

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

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

Transferred into a teaching career by accepting a Teaching Fellow post at The University of Manchester

2009
Promoted to Senior Lecturer

2014
Promoted to Professor of Anatomy

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.



Professional Memberships/Fellowships

2011 Member of the Royal Society of Biology



1975
BA in Natural Sciences (Cambridge University)

1979
Awarded a PhD in Plant Biochemistry (Cambridge University)
EMBL Fellow at European Molecular Biology Laboratory, Heidelberg

1981
MRC Cellular Immunology Unit, Oxford

1985
Appointed Lecturer in Plant Biology Department at the University of Birmingham, teaching undergraduates and developing research on the cell biology of fungal pathogens of plants

1995
Promoted to Senior Lecturer in the School of Biological Sciences
Sabbatical for 6 months at the University of Queensland, Brisbane, Australia

2006
Lead for MSci and MSc programmes in the School of Biosciences, Birmingham

2008
Appointed Head of Education, School of Biosciences

2011
Appointed Director of Education, College of Life & Environmental Sciences

2013
Appointed Deputy Pro-Vice-Chancellor (Education)

Promoted to Chair in Life Sciences Education

Member of HUBS Executive Committee of Royal Society of Biology

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.



Professional Memberships/Fellowships

1997 Member of The Physiological Society



1985
Graduated from UCL with a BSc in Pharmacology and started my first 'real' job as a research technician in the Wellcome 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
Became a member of the judging panel for the 'SET for Britain' early researcher awards, presented annually at the Houses of Parliament

2015
Joined the editorial board for 'Advances in Physiology Education'

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 Us' (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.



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 postdoc 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



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© (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*.

1991
BSc in
Physiology,
University of
Manchester

1994
Awarded a PhD
in Physiology,
University of
Manchester,
followed by
2-year postdoc
position

1996
**Lecturer in
Biomedical
Science,
University of
Sheffield**

2002
**Associate
Professor
and Course
Director
for Medical
Physiology at
St George's
University,
Grenada, West
Indies**

2007
**Associate
Professor,
Memorial
University in
Newfoundland,
Canada**

2008
**Associate
Professor of
Physiology at
University of
Central Florida
(UCF)**

Became
Associate Editor
for *Advances
in Physiology
Education*

2009
Published my
own textbook
- *Medical
Physiology:
The Big Picture*
(McGraw-Hill)

Became Chair
of UCF College
of Medicine
Program
Evaluation
Committee

2010
Appointed
Assistant
Dean for
Undergraduate
Medical
Education

2014
**Promoted to
Full Professor**

Elected chair of
the American
Physiological
Society Teaching
Section and
appointed
Deputy Editor
of *Advances
in Physiology
Education*

2015
Co-investigator
on National
Board of
Medical
Examiners
Stemmler
Fund grant to
develop an
"Intelligent
Formative
Assessment
System"



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 whenever 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/working 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

Became the Editor in Chief of the journal *Bioscience Education*

2014
Awarded a Chair in Learning and Teaching

Appointed as Associate Dean in Learning, Teaching and Quality



Professional Memberships/Fellowships

- 1993** Member of The Physiological Society
- 2003** Member of the Society for Neuroscience
- 2008** Member of the Laboratory Animal Science Association
- 2009** Member of the British Pharmacological Society
- 2012** Fellow of the Royal Society of Biology

Awards/prizes/distinctions

- 2008** University of Leeds Developmental Student Education Fellowship, with a Full Fellowship in 2010
- 2012** The British Pharmacological Society's Rang (Teaching) Prize in Basic Pharmacology
- 2013** The Physiological Society Otto Hutter Teaching Prize
- 2015** Finalist, HE Bioscience Teacher of the Year Award
- 2015** National Teaching Fellowship

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.

2010
Co-convenor of The Physiological Society's Education and Teaching Theme and member of the Education and Outreach Committee

Elected Chair of both the British Pharmacological Society (BPS) *in vivo* training group and the International Union of Basic & Clinical Pharmacology's Integrative & Organ Systems Initiative

Joined the BPS Education and Training Committee

2012
Gave up my research laboratory in order to focus on educational activities

2014
Elected to the Council of the International Union of Basic & Clinical Pharmacology's Education Section

1985
BSc Pharmacology, University of Leeds

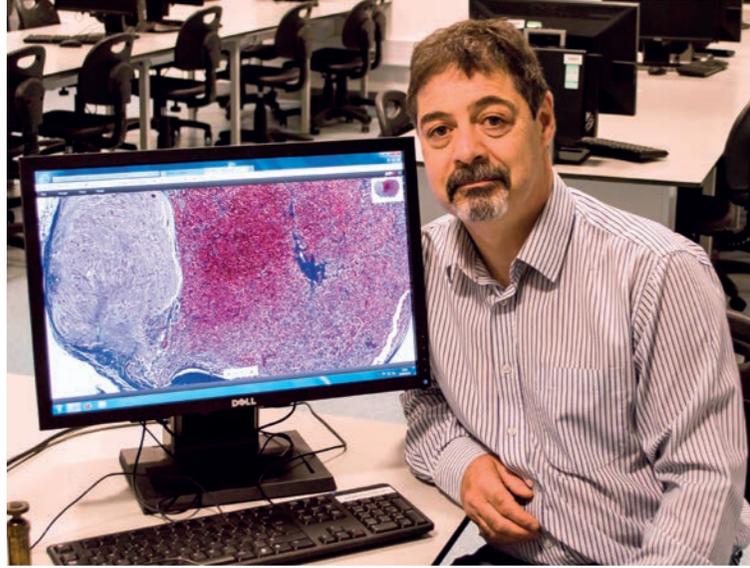
1989
Awarded a PhD in Physiology from University of Birmingham, followed by 6 years as a postdoc

1995
Lecturer in Physiology, University of Birmingham

1999
Lecturer in Exercise Physiology, Leeds University

2004
Promoted to Senior Lecturer in Neuroscience and Scientific Ethics, predominantly due to track record in student education

2006
Seconded part-time to the Leeds-based Interdisciplinary Ethics Applied Centre of Excellence in Teaching and Learning



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 lectureship 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**

Attended
week-long
residential
course on
education

2007
**Promoted
to Senior
Lecturer
(Education)
mostly on
basis of
teaching and
administration**

Published first
education-
related article

2008
Appointed
Deputy
Director,
Biomedical
Science, QUB

2015
Appointed
Acting Director,
Biomedical
Science, QUB



Professional Memberships/Fellowships

1992 Member of The Physiological Society



1984
BSc in
Physiology at
University of
Glasgow

1988
Awarded PhD
in Physiology
at University
of Glasgow
followed
by postdoc
positions in
Germany, India,
Denmark and
Newcastle-on-
Tyne

1993
**Lecturer in
Physiology at
University of
Aberdeen**

1997
Developed
and co-
ordinated new
postgraduate
generic skills
training
programme for
all PhD students

2001
Appointed
Degree
Programme
Co-ordinator
for a range
of medical
sciences BSc
programmes

2002
**Promoted
to Senior
Lecturer on
the basis of
track record
in research,
teaching and
administration**

2003
Appointed as
first Director
of Teaching
in School
of Medical
Sciences

2014
**Promoted to
personal chair
in recognition
of teaching
and learning
achievements**

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 freshen 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.

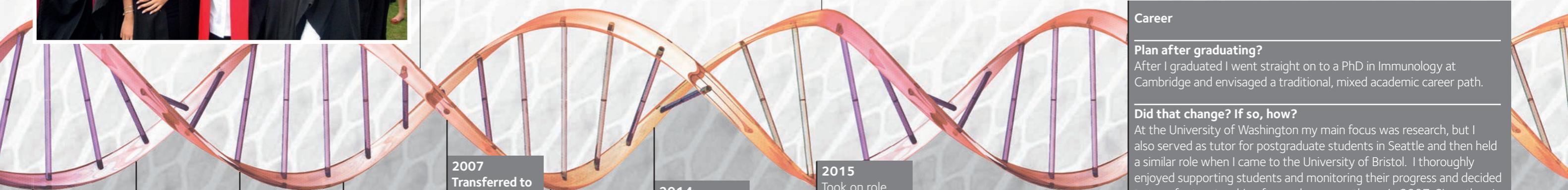


Professional Memberships/Fellowships

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



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

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

2008
Director of Teaching for the School of Cellular and Molecular Medicine

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

Appointed Faculty Education Director and Undergraduate Dean

2015
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

External examiner for Kings College London

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 HEA 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!

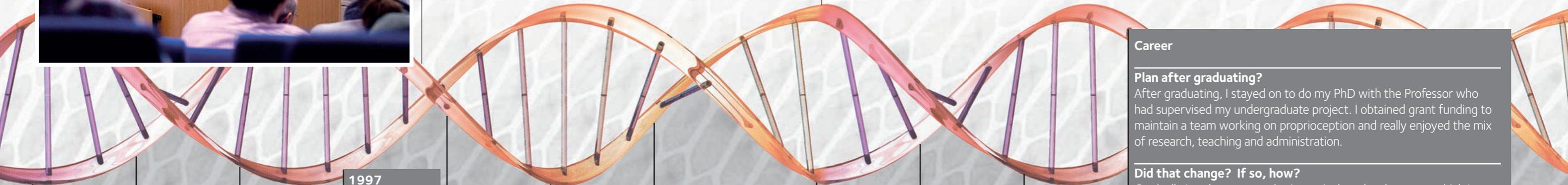


Professional Memberships/Fellowships

- 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



1979
BSc in Biological Sciences, Durham University

1982
PhD in Neurobiology, Durham University followed by postdocs in Paris and Durham

1987
Lecturer in Physiology, University of Leicester

1997
Promoted to a Senior Lectureship on the basis of research, teaching and administration

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

2013
Elected to the Executive Committee of the Heads of University Biosciences

2014
Co-convenor of The Physiological Society Education and Teaching Theme

2015
Appointed Pro Vice-Chancellor (Student Experience), University of Leicester

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 restructuring 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

- 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)

Career

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.

1989
BSc in Zoology at Newcastle University

1993
PhD in Bird Behaviour, Edinburgh University

Research Associate, Dove Marine Laboratory, University of Newcastle

Lecturer at University College Scarborough

2003
Director of Learning and Teaching in the Department of Biological Sciences, University of Hull

2008
Head of the Department of Biological Sciences

Decided to focus on teaching biology rather than biological research

2010 Promoted to Senior Lecturer on the basis of teaching, research and administration

2013
Invited to join the Education and Public Affairs Committee of the Society of Experimental Biology

Appointed Editor in Chief of the Journal *Bioscience Education*

2014
Became Associate Dean (Learning and Teaching) for the Faculty of Science and Engineering at Hull

2015 Promoted to Professor of Bioscience Education on the basis of teaching and scholarship



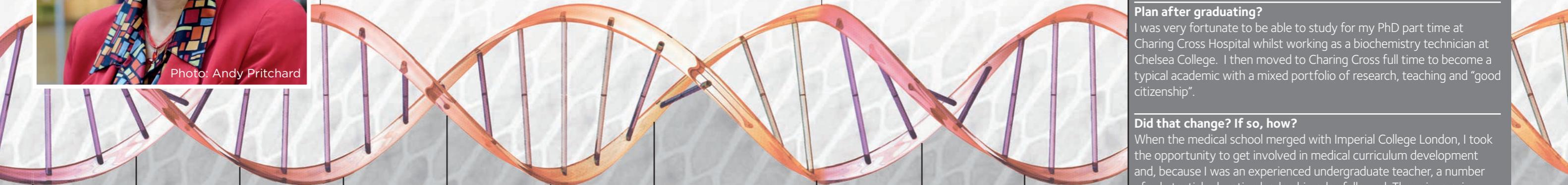
Photo: Andy Pritchard

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



1977
BSc (Hons)
Pharmacology,
University of
Liverpool

1978-85
Part-time PhD
student, Charing
Cross Hospital
and part-time
Biochemistry
technician,
Chelsea,
followed by
roles as a
postdoctoral
scientist and a
clinical scientist
at Charing Cross

1996
**Lecturer,
Charing
Cross and
Westminster
Medical
School** (later
merged with
Imperial
College)

1997
Co-convenor of
Pharmacology
and
Therapeutics
Course, part
of Imperial
College's new
MBBS/BSc
programme

1999
**Senior
Lecturer**

2000
Deputy Head
(Teaching),
National Heart
and Lung
Institute,
Imperial College
London

2007
**Reader in
Medical
Education**

2010
Deputy Director
of Education,
Faculty of
Education

2012
**Chair in
Medical
Education**

2014
Director of
Admissions,
Equality and
Diversity,
School of
Medicine

Founding
Director,
Medical
Education
Research Unit

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.



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

1979
BSc (Hons)
Biological
Sciences,
University of
Aston

1983
PhD in
Developmental
Neurobiology,
University
of Aberdeen
followed by
1-year postdoc

1984
Temporary
Lecturer in
Anatomy and
Cell Biology,
University of
Sheffield

1987
**Permanent
Lectureship,
University of
Sheffield**

1994
**Promoted
to Senior
Lecturer
on basis of
research
(fertility/
infertility)
and teaching**

2000
Director of
Learning and
Teaching
Development
for Faculty of
Science, later
becoming lead
for Biomedical
Science
teaching

2007
**Promoted
to Professor
for teaching,
research and
administration**

2008
Invited to
become Faculty
Director of
Learning and
Teaching,
responsible
for ca. 4000
science
students across
seven science
departments

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

- 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

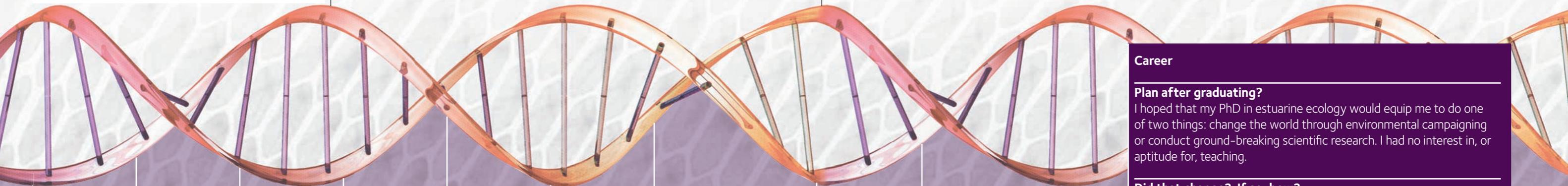


Professional Memberships/Fellowships

- 1990** Student then full member of the British Ecological Society
- 1990** Member of the Scottish Association for Marine Science
- 2000** Member of the Institute for Learning and Teaching, then Fellow of the Higher Education Academy
- 2014** Fellow of the Royal Society of Biology

Awards/prizes/distinctions

- 1997** Postgraduate Certificate in Tertiary Teaching Methods
- 2009** Centre for Biosciences Ed Wood Teaching Award (fore-runner to HE Bioscience Teacher of the Year Award)



1993
PhD in Ecology from Aberdeen University

1995
Lectureship in Environmental Biology at Edinburgh Napier University

1998
Became an Edinburgh Napier University Teaching Fellow in recognition of excellence in teaching

2000
Published my first pedagogical research paper as well as an edited textbook on science and environmental decision making

2003
Senior Lecturer, on the basis of teaching and research

2004
Awarded Senior Teaching Fellowship in recognition of contributions to teaching

2006
Arranged an exchange to Sydney, which gave me experience of teaching in a different institution and culture

2010
Chair in Teaching and Research in Environmental Biology

2014
Began a seconded post as Director of Academic Strategy and Practice

Career

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 Post graduate 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

- 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



1984
BSc in Biochemistry, Kuwait University

1986
MSc in Physiology, Kuwait University. Then worked as an instructor and tutor in physiology for two years

1994
Awarded a PhD in Physiology from the University of Manitoba, Canada followed by 3-year postdoctoral fellowship at the University of Nevada, Reno, USA

1997
Assistant Professor in the Physiology Department at Kuwait University

2000
Honorary Lecturership/ Senior Research Fellowship at University College London

2004
Senior Research Fellowship at King's College London

2005
Honorary Teaching Fellowship in Department of Physiology, Royal Free and UCL Medical School and a member of the UCL Academic Centre for Medical Education

2006
Senior Research Fellow at Imperial College London

2009
Lecturer in cardiac electro-physiology at the University of Surrey

2015
Promoted to Senior Lecturer at the University of Surrey on the basis of research, innovative teaching and administration

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 under- and post-graduate 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).



Professional Memberships/Fellowships

- 1989** Member of the International Society for Arterial Chemoreception
- 1991** Member of The Physiological Society
- 2008** Member of the American Physiological Society

Awards/prizes/distinctions

- 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!

2012
Appointed to Professor of Physiological Science at the University of Birmingham and Director of Education, College of Medical and Dental Sciences - a role that opened my eyes to more business-focused elements of teaching in HE

2008 – 2014
Phase 1 (years 1-2) and then Deputy MBChB Programme Lead. Helped lead change on curriculum development and assessment

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

1997
Promoted to Reader

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

1991-1995
Lecturer, University of Birmingham

1989-1990
Temporary Lectureship, University of Birmingham

1986-1988
Postdoc, University of Reading

1982-1985
DPhil Physiology, University of Oxford

1979-1982
BSc in Physiology, University of Leeds

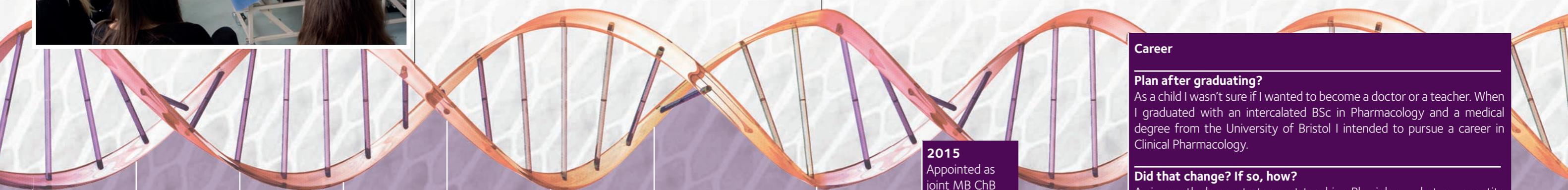


Professional Memberships/Fellowships

- 1996** Member of the British Medical Association
- 2013** Member of The Physiological Society
- 2013** Fellow of the Higher Education Academy

Awards/prizes/distinctions

- 2004** University of Bristol Faculty of Medical and Veterinary Sciences Rising Star Teaching Award
- 2010** University of Bristol Students' Union Teaching Award
- 2011** The Physiological Society Otto Hutter Teaching Prize



1993
Intercalated BSc in Pharmacology, University of Bristol

1996
MB ChB, University of Bristol

2000
Appointed Special Lecturer, Department of Physiology, University of Bristol

2004
Appointed Specialty Doctor in Emergency Medicine (0.2 fte)

2005
Member of the core team of the Applied and Integrated Medical Sciences (AIMS) Centre for Excellence in Teaching and Learning (CETL)

2008
Promoted to Senior Teaching Fellow

Appointed Honorary Tutor, Severn Deanery School of Surgery

2010
MB ChB Preclinical Programme Director and Deputy Director of Student Affairs

2013
Member of local organising group for the International Union of Physiological Societies Satellite Teaching Workshop, Bristol

2015
Appointed as joint MB ChB Programme Director: Curriculum Development for an innovative MB ChB degree programme to be rolled out at the University of Bristol from 2017

Revalidated my medical licence to practise

Career

Plan after graduating?
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 speciality 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.



Professional Memberships/Fellowships

- 2003** Member of The Biochemical Society
- 2005** Member of the British Society for Immunology
- 2009** Fellow of the Royal Society of Biology

Awards/Prizes/Distinctions

- 1999** Open University Award for exceptional performance
- 2000** Open University Award for exceptional performance
- 2002** Open University Teaching Award
- 2009** Open University Teaching Award

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.

1974
BSc in Genetics and Microbiology, University of Sheffield

1977
Awarded PhD in Molecular Biology at the University of Edinburgh, followed by post-doc positions

1983
Temporary lectureship at the Open University; when the contract ended in 1986 I took on lots of small consultancy and teaching jobs

1994
Permanent job teaching at the Open University

2001
Promoted to Senior Lecturer largely on the basis of teaching and administration

2005
Took on the roles of Health Sciences Programme Director and Lead for Foundation Degrees

2007
Became Head of Department

2011
Member of the Heads of University Biosciences (HUBS; a Special Interest Group of the Royal Society of Biology), elected Chair in 2012

2013
Invited to join national steering group examining the status of teaching within Universities

2014
Promoted to Chair on the basis of teaching and leadership



Professional Memberships/Fellowships

- 1991** Member of the British Ecological Society
- 1991** Member of the Association of Applied Biologists
- 2010** Chartered Environmentalist
- 2013** Professional Agriculturalist
- 2013** Principal Fellow of the HEA

Awards/Prizes/Distinctions

- 2008** National Teaching Fellowship

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 fulfil 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/internal/engageinfeedback/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.

1983
BSc in Agriculture, University of Newcastle

1988
Certificate in Education, Wolverhampton Polytechnic (now University of Wolverhampton)

1993
PhD in Agro-ecological Systems at Cranfield University

1994
Lectureship at University of Reading

1996
Programme Director BSc Rural Environmental Science

2002
0.2 FTE Secondment to the UK Centre for Bioscience Education, Leeds

2004
Promoted to Senior Lectureship

2008
Became Associate Dean for Teaching and Learning in the Faculty of Life Sciences at Reading

2010
Promoted to Professorship

Undertook Management and Leadership in Education Programme at Harvard University

2014
Became Head of School of Agriculture, Policy and Development



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 own 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.

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