



The Open  
University

# The Open University Annual Report

2013 – 2014

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Life-changing Learning  
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## Council membership August 2013 – July 2014

### The University's Governing Council comprises:

#### Appointed members

Pro-Chancellor and Chair of the Council  
Lord Haskins

Treasurer  
Mr M Steen (to February 2014)  
Mr H Brown (from March 2014)

Vice-Chancellor  
Mr M Bean

#### Ex officio members

President, OU Students Association  
Mrs M Cantieri

#### Members of the Senate (Employees)

Professor J Draper

Mr R Humphreys

Dr C Lloyd

Dr T O'Neil

Professor K Hetherington

#### Associate Lecturers (Employees)

Dr I Falconer

Mr B Heil

#### OU Students Association

Mr C Shaw

#### Non-academic Staff (Employee)

Mrs S Dutton

#### External members co-opted by the Council

Mr H Brown

Mr E Briffa

Dr A Freeling

Mr B Larkman

Mrs S Macpherson

Ms R McCool

Mr W Monk

Mr R Spedding

Mrs R Spellman

Professor W Stevely, Vice-Chair

Dr G Walker

## FOREWORD

### Vice-Chancellor Martin Bean

For over five years, it has been my privilege to provide an annual update on our remarkable University. Now, as I prepare to return with my family to Australia, it is with a real sense of pride that I use my final foreword to report yet more successes, and the positive way the University is preparing for the future.

Where better to start than with our students? Our excellent performance in this year's National Student Survey reflects our ongoing commitment to delivering a first-class student experience. We have made a number of improvements this year in the way they are supported, from their initial enquiry to the moment they step off the stage at their degree ceremony. Our enhanced enquirer experience provides prospective students with all the information they need to make the right decisions and get off to a flying start. Once enrolled, our new Student Support Teams offer a single point of contact for every stage of their OU journey with a clear focus on qualification expertise.

Once again, this year, our research has really captured the public's imagination. On page twenty-four you can read about our key role in the European Space Agency's Rosetta mission to land on a comet. Other research highlights range from new technology to help dogs sniff out cancer to unlocking the secrets behind successful relationships.

Our students and alumni are a key part of the UK workforce and our partnerships with business continue to go from strength to strength. This year we have worked closely with Milton Keynes Council as a lead player in the MK Smart Cities project.

Together with partners such as BT and E.ON, the project will explore how big data can improve city life. Over the last twelve months over eighty per cent of FTSE 100 organisations have sponsored their staff to study with the OU. In the public sector, our long-standing relationship with the NHS has gone from strength to strength with the creation of the NHS Leadership Academy.

This was also the year in which FutureLearn, the UK's first provider of Massive Open Online Courses (MOOCs), offered its first courses to the world's learners and we're very proud of the response we've had so far. In just 12 months FutureLearn has seen over 1.4 million course sign ups with our 40 world class partners across the UK and internationally.

Of course, along with the rest of the sector, we have had to adapt to the realities of a radically different financial climate and changes to the way students are funded. Sadly, this has led to a significant decline in the participation of mature age part-time students. We foresaw the impact, planned our finances accordingly and are pleased that our student numbers for the year were in line with our expectations. As you will read in our Financial Statements, we have strengthened our financial reserves considerably over the past four years which has allowed us to make a

number of strategic investments over the last twelve months. These investments are treated as normal expenditure and are designed to strengthen the quality of our student experience as we transform core ICT systems, student facing websites and application processes along with the start-up costs of FutureLearn. Our strategic investments account for the planned deficit for the year and I'm confident they will pay dividends for many years to come.

I dearly wish there was space to individually thank all the people who have helped make this year – and indeed my entire OU career – so special. I would like to pay particular tribute to Lord Puttnam and Lord Haskins who, as Chancellor and Pro-Chancellor during my time as Vice-Chancellor, have provided me with an unfailing source of support, wisdom and experience. As these roles are now taken up by Baroness Lane-Fox and Richard Gillingwater respectively, I have no doubt they will offer my successor the same guidance. I would also like to make special mention of my Executive and Deans who have shared this incredible journey with me.

Although I am excited to embark on a new chapter in my life and career, I shall miss The Open University so very much. It is an amazing institution which changes lives for the better – it has certainly changed mine.

## FOREWORD

## Chancellor

### Baroness Lane-Fox of Soho

It is a privilege and honour to be joining The Open University at such an exciting time in its proud history. My career has been based on the belief that technology can transform lives, and the OU itself was founded on that same principle. From audiotapes to colour television, DVDs to iPads, the University has pioneered the use of technology in teaching. Today, online learning has the power to help us make the education we offer even more accessible, inclusive and relevant. I am thrilled to have the opportunity to join the OU in the next phase of this exciting journey, building on these developments, and maximising its potential.

After my appointment, I asked Betty Boothroyd, the University's fourth Chancellor, if she had any advice for me. She replied, 'Focus on the students and don't meddle.' That is exactly what I intend to do.

In my few short months with the OU I have already heard many incredible stories from students. Some who have caring responsibilities, others with demanding careers - and many with both. Some who never believed that higher education was for them and others who have overcome tremendous obstacles before beginning their studies. My father was an exceptional teacher throughout a forty year career in higher education while my mother introduced me to the OU when she took her psychology degree here. Their example, together with these astonishing stories, has inspired me and makes me proud to be Chancellor at a University driven to help each and every student realise their goals. I look forward to working with you all.

## Pro-Chancellor

### Lord Haskins of Skidby

Over the last six years we have all become accustomed to operating in a different financial climate. Austerity and restraint now dominate the public sector, and though the private sector is at last recovering from unprecedented turmoil, confidence is still tentative and fragile.

The switch from a fee system based on direct funding from government to one financed by student loans is nearing completion. As a result students are now much more interested in the quality and value for money offered by universities.

The Open University is well placed to respond to this. Our high quality teaching and world class research, together with our flexibility for students and relevance for employers, mean that we remain an extremely attractive prospect. It's why our numbers of students continue to hold up even as the national market in part-time higher education contracts. Employers come back to The Open University again and again when they are looking for staff training and development, whether in health and social care, business and management, or languages and the law. We believe that we have a unique offer and that our courses provide students the skills they need to thrive in the modern workplace.

Our outgoing Vice-Chancellor Martin Bean has played a crucial role. His leadership has been both visionary and practical, particularly in harnessing the power of technology to transform teaching. Everyone he has encountered has benefited from his tremendous energy and enthusiasm and we all wish him every success for the future.



## NEWS

## OU ACROSS THE UK

## WATCH AND LEARN

The Open University's long-standing partnership with the BBC continues to produce some of the most innovative and thought-provoking programming around. Highlights from 2013–14 included a season of programmes to mark the centenary of World War I.

*Britain's Great War*, presented by Jeremy Paxman, described the cataclysmic impact of war on the lives of the British people.

Whilst a separate compelling one-off drama *Castles in the Sky* recounted the role of Robert Watson Watt (played by Eddie Izzard) and his team of British scientists in the invention of RADAR, which played a critical role in saving the

nation during the Battle of Britain.

*An Hour to Save Your Life* explored the life or death decisions facing doctors in the first critical hour of emergency care, from the moment a 999 call is made.

Other highlights included *The Brits that Built the Modern World*, *I Bought a Rainforest*, *The Secret Life of Books* and *The Secret History of Our Streets*.

An exciting new partnership with Sky Arts saw a cast of leading Hollywood actors, including Joseph Fiennes and Morgan Freeman, introducing viewers to the untold stories behind some of the Bard's most loved works, in *My Shakespeare*.



BBC Pictures: / Bought a Rainforest presenter Charlie Hamilton with illegal loggers

## OU ACROSS THE UK

## OU academics make their mark on 'The Conversation'

Open University academics and researchers have embraced a new way of communicating with the general public by writing articles for *The Conversation*, a news website linking topical agenda with the expertise of academia. Between November 2013 and October 2014 articles were read by 1.85m readers across the world, making the OU one of top three UK universities contributing to the website, and promoting a centre of academic excellence.

Some of the 200 articles which first appeared on *The Conversation* were later re-published by other sites, ranging from respectable titles, such as *The New Statesman* and *The Washington Post*, to popular websites, such as *Mashable* and *IFL Science*.

Overall 90 academics have joined the ranks of contributing authors, some on a regular basis as columnists, e.g. Dr Jacqueline Baxter on education, and Professor Monica Grady on space science. Lecturer in Networking Andrew Smith, who writes on cyber security and technology, became the OU's most popular author, followed by Dave McGarvie, who shares insights on volcanoes from his research base in Iceland.

The collaboration with *The Conversation* is a project under the Strategic Communications Programme (SCP), a two-year change programme led by OU Communications and Marketing.

Re-published by:  
*The New Statesman*,  
*The Washington Post*,  
*Mashable*,  
*Space.com*, *Ars Technica*,  
*NZ Herald*,  
*The Huffington Post*,  
*SBS*

90 academics  
201 articles  
1.85m readers

## OU ACROSS THE UK

## MK Smart project

For the first time in history more of the Earth's population is living in urban rather than rural areas; and with this shift comes a need for greater water efficiency, smarter energy usage and better transport solutions. As the fastest growing city in the UK, Milton Keynes in Buckinghamshire is the ideal place to explore the ramifications of rapid population expansion.

The Open University is leading the £16m MK Smart project, which is pioneering the use of large amounts of real-time data to inform transport and energy solutions – from when to water your garden, to which route to take on your way to work.

## OU ACROSS THE UK

## STUDENT SURVEY RESULTS

The Open University has again been rated one of the best in the country for student satisfaction, in the latest National Student Survey. The OU received a rating of 91% for overall student satisfaction, placing it as one of the top ten universities in the UK. This means the OU is one of only four UK universities in the survey's history to have consistently achieved more than 90%.

With almost 200,000 students, the OU is the largest university in the UK. The survey also showed that 93% of OU respondents found their course intellectually stimulating. There was also an increase of 1% in the number of students who declared themselves happy with the quality of assessment and feedback they receive – rising to a rating of 88% overall in that category.

The Open University Students Association (OUSA) enjoyed a rise of 3% in its satisfaction ratings for the second consecutive year. This means that, despite OUSA not having a students' union building in the same way as traditional universities, its rating has risen by 6% since 2012, to 64%.

The Open University operates in all four UK nations and continues to enjoy considerable success in Wales, Scotland, Northern Ireland and England:

- The OU in Wales received an overall satisfaction rating of 91% – the joint highest in Wales. The result means the OU in Wales has consistently come top across all Welsh universities for a decade.
- The OU in Northern Ireland has also come top of the table for universities in Northern Ireland for the tenth year in a row, with an overall satisfaction rating of 93%.
- The OU in Scotland achieved the second highest rating (92%) amongst Scottish universities, behind St Andrew's.

## THE OU IN SCOTLAND

## New app a real 'Gamechanger'

The OU's new Personal Best app was honoured at April's Gamechanger Awards, which celebrated the contribution made by Scotland's colleges and universities to the 2014 Commonwealth Games in Glasgow. Developer Shasha Wang from The Open Media Unit (OMU) collected an award for the free app, which uses principles from sports psychology to inspire people to set and achieve their own personal goals – from running a half marathon to writing a novel or losing weight.



## THE OU IN WALES

## Helping students on the 'Pathway to Success'

In June 2014 The Open University in Wales launched a new guide to help students to use the free online courses available on the OpenLearn website. Using a printed and online guide the Pathways to Success programme recommends a selection of free study pathways in four different subjects (arts, sciences, health and social care, and social science) and also provides access to a range of study skills units (in English and Welsh), which can either be followed as part of the subject pathways or independently. The pathways enable students who may be unsure about undertaking higher-education-level study to follow a structured programme of informal study which encourages future accredited learning.

## THE OU IN NORTHERN IRELAND

## Advancing knowledge, changing lives

The Open University, Queen's University and the University of Ulster made history when they came together on 19 November 2013 at Parliament Buildings, Stormont. The three universities organised the first joint higher education showcase to take place in the Northern Ireland Assembly, entitled Advancing Knowledge, Changing Lives, which was sponsored by the Committee for Employment and Learning. The event, attended by the First Minister of Northern Ireland, Rt Hon Peter Robinson MLA, demonstrated to over 60 Members of the Legislative Assembly (MLAs) and Ministers the impact of higher education on Northern Ireland's society and economy. The three institutions showed a number of initiatives and areas of work that are driving Northern Ireland's economy and transforming the skills of citizens.

## THE OU IN ENGLAND

## FOOTBALL LEAGUE TRUST PARTNERSHIP

Working in formation, The Open University and the Football League Trust have teamed up to score the goal of the season with the launch of a new BA (Honours) in Business Management (Sport and Football). The course analyses crossovers between sport and business, using case studies to develop an understanding of business, management, training and sport. The degree is aimed at anyone who wants to enhance their career with a respected qualification; from fans with an interest in both football and business, to those aspiring to earn a business degree with a difference. It would also appeal to those already working within the football industry, or community organisations that want to underpin their football experience with an education in business and management.

Image: Thinkstock



## OU ACROSS THE UK

## Remembering Colin Pillinger and Stuart Hall

This year the OU lost two iconic former members of staff, Stuart Hall and Colin Pillinger. As head of the OU's Planetary and Space Sciences Research Institute (PSSRI) until 2005, Colin Pillinger was a charismatic figure, most famous for leading the British space mission Beagle 2. The mission, to investigate the possibilities of life on Mars, captured the public's imagination and made Pillinger a household name. The legacy of his research lives on. When the European spacecraft Rosetta landed on the Comet 67PChuryumov/Gerasimenko in November, it deployed an experiment designed and built at the OU, with Pillinger named as lead investigator.

Stuart Hall was one of the founders of the academic discipline of cultural studies and a leading thinker on questions of race, identity and multiculturalism. He joined the OU in 1979 and was head of the Sociology Department for a decade before retiring to become Emeritus Professor in 1997. Martin Bean, Vice-Chancellor of The Open University, described Hall as 'a committed and influential public intellectual of the new left, who embodied the spirit of what the OU has always stood for: openness; accessibility; a champion for social justice and of the power of education to bring positive change in people's lives'.



Colin Pillinger



Stuart Hall

## OU ACROSS THE UK

## Empowering the public with money matters

Launched in 2013, the True Potential Centre for the Public Understanding of Finance (PUFin) at The Open University Business School aims to empower more people to take control of their personal finances through education and research.

A suite of free learning resources is available on OpenLearn [www.open.edu/openlearn](http://www.open.edu/openlearn) to provide people with the tools and knowledge they need to make better financial decisions. PUFin was established with support from True Potential LLP, the financial services organisation led by entrepreneur and OU MBA alumnus David Harrison.

2014 also saw the launch of *Managing my Money*, a Massive Open Online Course (MOOC) created by PUFin and offered free on the FutureLearn platform [www.futurelearn.com](http://www.futurelearn.com)

## THE OU IN WALES

## 'IT'S ABOUT TIME': OU IN WALES AND NUS WALES RESEARCH INTO PART-TIME STUDENTS

The *It's About Time* report is the result of a year-long research project by The Open University in Wales and NUS Wales into the realities of part-time study in Wales. The research was conducted through a quantitative survey of over 1000 part-time students in Wales followed by a qualitative phase of interviews to dig deeper into the student experience. The research revealed the real value and vital role that flexible learning plays in Wales. The report showed for the first time just how diverse a group part-time students is,

taking in people of all ages and different circumstances with high numbers of students either having disabilities, caring responsibilities or being in employment. This provides vital evidence to show the value of part-time study to growing the economy and enhancing opportunities for those who may find it hardest to access further or higher education. Following the success of the research approach in Wales, the OU has received funding from the Higher Education Academy to roll this innovative project out across the UK.

## OU ACROSS THE UK

## Innovation Awards for 'OU Anywhere' app

The simple yet innovative concept behind our new *OU Anywhere* app was hailed by judges at the Guardian University Awards in February 2014, where the OU took home prizes in the Distance or Online Learning and Student Experience categories. Developed by Learning and Teaching Solutions (LTS), the app marks the culmination of an ambitious drive to digitise all our undergraduate course materials, giving students more freedom than ever before to study wherever and whenever they like using their mobile and tablet devices. The project will soon be extended to postgraduate course materials.

## THE OU IN NORTHERN IRELAND

## OU sponsors new 'Learning in Practice' nursing award

The Faculty of Health and Social Care was proud to sponsor the new Learning in Practice award at the Royal College of Nursing Northern Ireland Nurse of the Year Awards, held in May at the Culloden Hotel in Belfast. Karen Moore, a health visitor from Lisburn, received the award for the support she provided to a nurse who was updating her skills and practice. The judging panel commended Karen for her inspirational, compassionate and caring qualities, while her nominator said: "Working with Karen has been an enormous privilege. The respect with which she treats clients, colleagues and students is exemplary."

## THE OU IN SCOTLAND

## New resource shows that caring counts

June 2014 saw the launch of *Caring Counts*, a free online resource aimed at helping carers to reflect on their career ambitions and recognise the skills they have developed whilst carrying out their caring responsibilities.

It follows research by the National Union of Students (NUS) and national carers' organisations which highlighted that many carers are eager to participate in learning and training opportunities, but often face real difficulties in doing so.

Dr Lindsay Hewitt, from The OU in Scotland, was involved in developing the resource. She explains: "Carers do not always recognise the skills and qualities they have developed in their caring role, such as patience, resilience, organisational skills and time management. It is hoped that *Caring Counts* will give them greater confidence to participate in learning and training opportunities."

## OU ACROSS THE UK

## Monitoring eruptions

A new system enabling the global monitoring of volcanic activity by satellite is expected to be unveiled within three years. Developed by researchers from the Faculty of Science led by Professor Fabrizio Ferrucci, the system will expand on the success of the recent European Volcano Observatory Space Services (EVOSS) project, providing real-time data on erupted lava, gas, eruptive columns and ash plumes anywhere and at any time.

"The timeliness and reliability of news about volcanoes depends very much on where they are located, as more than 90% of volcanoes are not monitored on a permanent basis," says Ferrucci. "However, here at the OU we have the skill and technology for making – within a strong international partnership – the real-time monitoring of volcanoes worldwide a reality."



## FROM SPACE TO RACE

**Technology being developed to survive the harsh conditions of outer space is being harnessed to drive the Milton-Keynes-based Infinity Red Bull Racing team to even greater success on the track.**

In an exciting new partnership, Space Instrumentation researchers from The Open University's Faculty of Science are working alongside the motor-racing giants Red Bull to offer a competitive advantage over their rivals. Led by Dr Neil Murray, Research Fellow from the Centre for Electronic Imaging (CEI), the OU team has drawn upon its world-leading expertise which has previously been utilised in space missions involving the European Space Agency (ESA) and NASA. The result is cutting-edge hardware and analysis software which can be employed by Red Bull during free practice and test sessions to glean greater insights into car performance.

Murray explains: "From the outset of the project it became apparent that many parallels could be drawn between the development of hardware suitable for use in the harsh environment of space and that for use out on the race track, such as low mass, high reliability and resistance to mechanical shock, vibration and thermal cycling."

Earlier this year, Red Bull invited OU experts to support test and development campaigns of the system at three in-season test sessions held at Bahrain, Barcelona and Silverstone.

Murray is confident that the burgeoning partnership will propel Red Bull to even greater levels of success: "It has been a real privilege to have worked alongside the Red Bull team, particularly during the very intense test sessions and many trips to the factory, where we got to experience first-hand the determination and passion of the whole team in trying to make use of every precious second of track time available for development. The thing that a lot of people probably don't realise is that the technology development is so cutting-edge and moving so fast, that the car doesn't really fully exist until just a few minutes before the engine is fired up for the run, and so developing hardware is somewhat more complicated than in a laboratory."

The CEI is an industry-sponsored research group that was formed to support the commercial needs of the UK space industry and the research goals of the academic community, and celebrated its 10th anniversary in May. The CEI maintains an active role in many international space missions and provides training programmes in imaging sensor technologies for its PhD students, staff and other space industry partners, hosted at the OU as part of their internal continuing professional development (CPD).

In March, Red Bull Racing was awarded the Freedom of the Borough of Milton Keynes in recognition of its contribution to the local economy. Team Principal Christian Horner collected the prize alongside Adrian Newey, the team's Chief Technical Officer.

# Learning

41% of our undergraduate level students have one A level or lower on entry  
Over 20,000 students with disabilities study with us  
OU students are taught by over 6,000 Associate Lecturers

OPUS  
BUILDING SERVICES

"All I left school with was a B in graffiti," jokes Gavin Richardson, 39, founder and managing director of the mechanical and electrical contracting company Opus Building Services. But failing to pass anything except his art GCSE hasn't stopped his hunger for success, and his business now has a turnover of £8m.

"I just wasn't stimulated at school," explains Gavin, who left his local comprehensive in Sunderland at 16. Indeed, it was the wake-up call of poor GCSE results that made him determined to succeed in the future, and he went on to achieve a distinction in his BTEC at college and subsequently be accepted on a four-year apprenticeship. His talents were quickly recognised and rewarded, culminating in winning the national Electrical Contractors Association (ECA) Apprentice of the Year award in 1997.

Gavin quickly climbed the ranks, but in 2005, when he was in middle management, his company put him through a Professional Management Certificate with The Open University Business School. And that's when his career started to sky-rocket.

"Engineering is black and white, so learning softer managerial skills took me outside my comfort zone. I discovered so much about motivational skills, communication skills of translating the theories into my day-to-day work was so immediate that I felt stunned. There's no doubt it gave me an edge. I started to believe I could run the business better myself."

In fact, just as he was completing the qualification, Gavin decided to leave the company to set up his own business.

"My thought processes around management had been changed so dramatically that I was far more business efficient and made fewer mistakes" he says.

"The course was like a gift that kept giving." Indeed, Opus Building Services has completed £34m worth of business to date, despite the recession, and currently employs 80 people.

"I've changed the way I communicate now, not only in business, but also with friends and family too. After the management certificate I progressed onto an MBA, as well as creating another business, Opus Green. I also became non-executive director of insurance companies ECIC and ECIS and a trustee on the board of the Chartered Management Institute (CMI). The smarter business knowledge I learned with the OU means things have really snowballed for me."

# Widening participation

## OPENING UP EDUCATION TO ALL

For a select group of Year 12 students at Sir Christopher Hatton Academy in Wellingborough it's time for maths – but this lesson is being taught by a rather special teacher: Mairi Walker, PhD student in pure mathematics at The Open University. The talented pupils are following a special course, *Mapping the Coastline of Great Britain*, based on Walker's research in fractal geometry.

Walker's lesson is the direct result of a partnership between the OU and the Brilliant Club, a non-profit organisation that recruits, trains and places doctoral and postdoctoral researchers in non-selective state schools serving low participation communities. They deliver programmes of university-style tutorials to small groups of outstanding pupils, helping them to develop the knowledge, skills and ambition that can help them to secure places at top universities. It's the first step on an education pathway that might start with encouraging a pupil to consider university, and end wherever ambition takes them.

This collaboration with the Brilliant Club is just one example of the OU's commitment to widening participation in higher education. But as the OU has demonstrated again this year, through a series of new and developing initiatives, there is no one way to go about it. From the Brilliant Club's PhD students, to ensuring the language of learning materials is accessible, to making sure we get tutors into prisons so offender learners have the opportunity to study, it's the idea that lies at the heart of everything the OU does.

The OU's Widening Access and Success Strategy 2012–15 identifies five priority groups: students from low socio-economic groups; black and minority ethnic students from low socio-economic groups; disabled students; students who are carers; and offender learners. They're all very different groups with one thing in common – incredible potential. And there are so many ways of tapping into it. The University is demonstrating its commitment by offering 5000 free places on its Access modules to those taking their first steps into education.

"Globally, the history of participation in higher education has tended to favour highly elite groups," points out Dr Liz Marr, Director of the OU's Centre for Inclusion and Collaborative Partnerships. "It wasn't so long ago, for example, that women were not allowed to attend university. That particular barrier has come down in the UK,

but many still remain. Social class issues, financial challenges and simple prejudice are very much present in the 21st century, and still prevent many people from participating in an education which could see benefits down the generations."

Many people with the ability to study with a university have not been encouraged to think of themselves as academic, resulting in a lack of confidence and leaving them unsure about what would be expected of them. Bridging this gap is essential, enabling new students to find out what they are capable of before daring to aspire to a qualification.

The OU's specially designed Access modules offer a supported and guided path into higher education. Broad module topics give students the chance to try out a range of subjects, and focused one-to-one support helps them acquire the skills needed for university study.

"Skills and abilities are distributed right across society," says Marr. "If we only privilege certain groups of people, we are missing out on what others might bring to the table. We're not allowing them to develop their potential and seek fulfilment as humans."

### From screen to study

Developing unfulfilled potential is what another of the OU's joint widening participation projects is all about. Drawing on previous work by Open Cinema, a national network of community cinemas for homeless, vulnerable and excluded communities which has launched film clubs at 30 venues in the UK and Ireland, the OU has collaborated in a pilot to offer educational pathways alongside film screenings.

Open Cinema worked with the charity Crisis to identify areas of potential interest among homeless people at the Crisis Skylight Centre in London, and then delivered a programme of mainstream cinema, documentaries and independent cinema, linked to a specific OpenLearn audiovisual resource related to the subject matter, followed by group discussions.

"I found the format really interesting," said one film club member "in the way that we all came in [to watch a film] but we knew there would be a discussion later, so we knew it was an academic exercise anyway. You knew we had to get our

## IMPACT ON LEARNING

brains switched on. And I found that helpful in getting tuned in.”

Opportunities with the OU were highlighted at several points throughout the 12-week season, including further informal learning through OpenLearn. Free places on the Access courses were offered to film club members and recommended as a means of pursuing their interests through higher education.

So whether it's planting the seed of education in young minds or finding ways back into education for prisoners, carers or people on low incomes, the OU is meeting the widening participation challenge head-on. It recognises, of course, that there's no one-size-fits-all solution. England, Scotland, Wales and Northern Ireland have increasingly varied funding and student finance regimes, and consequently, they face different participation challenges: in Northern Ireland, for example, white Protestant males are a target group; while in Wales certain geographical areas are targeted.

One of the approaches in Wales, the Access to Education for Carers pilot programme, has found an innovative way to help carers with little time or money to spare to access open educational resources. It's one thing to have everything online, says Marr, but it's quite another to expect those unfamiliar with higher education to find their way around.

“OpenLearn, where students can access free material, is a fantastic resource,” she explains. “But if you haven't studied in higher education and you're not used to learning opportunities, it can be difficult to use. So we're developing people we call OpenLearn Champions, who work with carers and other groups, to guide them through the online resources. Once they're familiar with OpenLearn, the carers are encouraged to try one of our access modules, and perhaps go on to undergraduate study.” The programme has been successfully replicated across Scotland and is now being rolled out across England.

### Reaching out

The OU does two things that no other university can do in terms of access. As an institution with no requirement for previous qualifications, it offers opportunities to those who faced disadvantages early in life which prevented them from reaching their full potential at school. In addition, distance learning is the only way to reach those who cannot easily leave their homes to study – perhaps due to a remote location, a disability or caring responsibilities.

Another aspect of the OU's widening participation activity is reaching out to disabled students – it is the UK's biggest provider of education to people with disabilities and is leading the way in new, accessible technology. For instance, the Digital Accessible Information System (DAISY) is a tool for creating digital talking books for people who need to listen to material rather than read it – those with 'print disabilities' such as blindness, impaired vision, or dyslexia. The system also makes it possible for users to navigate around material, enabling learners to access specific information within a mass of content, such as an encyclopedia.

Of course, in some cases, widening participation can be as simple as providing a small grant. One solution is The Open University Students Educational Trust (Ouset) which provides funds raised by students for



Dr Liz Marr, Director of the Centre for Inclusion and Collaborative Partnerships

students in need. For these people, £50 for books or £500 to replace a broken laptop can be the deciding factor in whether or not they complete their learning journey.

“They have taken this second chance and embarked on this journey but are unable to finish it through no fault of their own,” says Victoria Clark, Deputy Operations Manager at Ouset. “Our work goes back to the ethos of the OU – open access. Sometimes people need a bit of extra help to take advantage of that access. You might start with the best intentions and have life planned out, but then life changes. Things go wrong, people fall ill and aren't able to work any more. People lose their jobs. It's soul-destroying to get so near your goal and then not be able to reach it.”

This diversity of solutions underlines the depth of the widening participation challenge, says Marr. “It runs through everything – the technology, the levels you are working at, the language that you use. For example, one of the really challenging areas for all universities is what we call the black and minority ethnic (BME) attainment gap. More white people will get Firsts and 2.1s, while BME students tend to get more 2.2s and Thirds. Our Great Expectations project is looking at how we reduce that gap and how we are supporting people from BME backgrounds to make sure they are not disadvantaged in any way by our curriculum or our teaching methods.”

Tapping potential is never going to be simple. But that potential, once harnessed, is limitless. Marr points to research on a scheme providing access courses to parents at children's centres and nurseries which found that parents weren't just learning – they were also changing the way their children thought about learning, and setting examples for them in the future.

“Widening participation is who we are and what we are, and what we were set up and designed to do,” she says. “And it goes way beyond just getting people in. It's also about making sure those people can succeed.”

## SUPPORTING STUDENTS EVERY STEP

**Keith Zimmerman (Director, Students) explains how the launch of our new Student Support Teams is ensuring that students get the most out of their Open University experience...**

“In recent months we have instigated something of a revolution in the way we provide support to OU students. Amid much fanfare, February saw the launch of our brand new Student Support Teams – the culmination of several years of extensive planning and research involving dedicated teams from across our faculties, regions and nations. Following this substantial overhaul of our advice and guidance services, we are now better equipped than ever to navigate our students through the triumphs and pitfalls of their learning journey – giving them the very best opportunities to complete their studies and achieve a qualification that will transform their lives and careers.

### Assigning students to subject experts

Our Student Support Teams build on the contribution our Associate Lecturers (ALs) continue to make in supporting our students on a daily basis. The most significant change is that we now assign students to one of 17 Student Support Teams on the basis of the qualification they're studying for. Because our new teams are made up of experienced, recognised experts across all academic and student support areas, when students get in touch with us they can now do so in the knowledge that the advice they're given is coming from someone with recognised expertise in their field of study. So we're much better positioned to offer students specialist, tailored advice about the things that matter to them during their studies – their module options, study support, preparing for exams, career progression and much more.

These new clusters of specialist expertise are a huge step forward and a marked improvement over our previous model, where students were allocated to support teams on the basis of their location. This could only have been achieved as a result of close collaboration across the University, particularly between the Faculties and Student Services.

Our new Student Support Teams are quickly becoming a real asset to the OU, and we're proud that we've managed to gather together dedicated groups of staff blessed with an infectious enthusiasm for their role. My colleague Christina Lloyd (Director, Student Support) summed it up best recently when she said: “Supporting students to achieve their aspirations is probably what makes getting out of bed every morning highly rewarding for many of us. It's exciting to think that we're drawing together the very best of our people and services to provide integrated and continuous support to students throughout their studies.”

We are becoming much more proactive at intervening to offer help to students who might feel like they're struggling against a rising tide of coursework and assessment deadlines. That's particularly true when the majority of our students have so many competing demands on their time, such as work and family commitments. We can't just sit by the phone and wait for those students to get in contact with us.

Instead, it's essential that our Student Support Teams are mobilised as a first line of defence to protect students who might be seriously thinking about giving up. We need to be there to help them get their studies back on track. To this end, students now receive a range of communications from us at critical junctures of their course, such as the countdown to assignment deadlines and examinations. These messages ensure that students are informed about the support we can offer them and urge them to get in touch if they're having difficulties. Our teams actively make contact with students we've identified as being most at risk of non-completion, such as some with carer responsibilities who have a particularly demanding workload to contend with. It's hugely reassuring for students to know that we are only ever a quick phone call or email away.

The creation of our Student Support Teams is just one of a series of changes we're introducing as part of our wider Study Experience Programme, which will provide students with a range of first-class services, resources and support, ensuring that, more than ever, we're there to help our students every step of the way.”





## FUTURELEARN: A YEAR ON

“For the first time we’ve been able to apply our expertise at massive scale. This is what I’ve been looking forward to for the last 25 years. It’s a new era of learning.” It’s been an exciting year for Mike Sharples, Professor in The Open University’s Institute of Educational Technology.

Sharples is the Academic Lead for FutureLearn, the online learning platform founded and led by The Open University, which offers free courses known as MOOCs (Massive Open Online Courses) to the world. More than 600,000 learners, drawn from more than 190 countries, have signed up for FutureLearn courses since its launch in October 2013, and many have come back for more – the actual number of course registrations has exceeded one million. Not only that, but courses have consistently received positive feedback with more than 90% of learners rating them ‘good’ or ‘excellent’.

FutureLearn CEO Simon Nelson is equally excited. “We have smashed pretty much all our targets in terms of partners, courses and learners, as well as our initially modest revenue targets,” he says. “We have come into a market dominated by US providers and brought the UK higher education sector together in an almost unprecedented way to create the best quality product in the marketplace – one which is confounding the scepticism about MOOCs.”

### Breathtaking scale

For FutureLearn’s architects, though, success isn’t just in the numbers, however impressive they may be. “Our biggest success is in pioneering a new approach to teaching and learning that we call ‘social learning’, an approach which is different from the other big MOOC providers,” says Sharples. “It’s about learners supporting each other. Each piece of learning content is associated with its own rich discussion, which flows alongside the content instead of being in a separate course forum. This has worked, and worked at massive scale.”

That scale can be breathtaking. Some 120,000 learners from around the world have come together on the British Council’s Discovering English course; separate pieces of course content have attracted up to 30,000 learner comments. To manage these discussions FutureLearn uses techniques from social media sites such as Facebook and Twitter.

Proof that it works comes in the outstanding rates of participation and engagement that FutureLearn’s courses are achieving. On average 22% of people who start a course complete all their assessments and the majority of course steps, which equates to roughly double the completion rates reported by other MOOC providers. In addition 38% of learners are active on social media, posting comments and having conversations which themselves become rich sources of learning content.

Perhaps this shouldn’t come as a surprise, because it was Sharples and his academic colleagues at the OU who laid down the core teaching and learning principles that all the FutureLearn providers’ courses follow. In doing so, they were drawing on more than 40 years’ expertise in designing effective open, distance and online learning. Elsewhere, FutureLearn has recruited software developers from a BBC, consumer technology and social media background for the design of its unique online software platform, capable of accommodating an almost infinite number of learners.

### Burgeoning partnerships

Twenty-seven UK and 10 overseas universities, along with the British Council, British Library and British Museum, are now FutureLearn partners, and more partnership announcements are imminent. While the OU’s courses – notably *Start Writing Fiction* and *Forensic Psychology* – have been among the most successful in terms of numbers and participation rates, all the partners are learning from one another, and from the rich data on learners’ progress yielded by FutureLearn’s online platform. Businesses and organisations

are also getting involved. FutureLearn is the first MOOC provider to have a course recognised by the ACCA (Association of Certified Chartered Accountants) as counting towards one of its qualifications. This is only one of a burgeoning number of partnerships with industry and professional bodies. Organisations now working with FutureLearn include Marks and Spencer, BT and HM Government – which is supporting the OU’s new *Introduction to Cyber Security* course through the Institution of Engineering and Technology.

“Through the use of MOOCs we will be able to provide huge opportunities for our members to brush up their skills,” says the Institution’s Amanda Weaver. “Our involvement will also boost our efforts to support STEM (science, technology, engineering and mathematics) courses and attract more people into the subjects. There is a global skills crisis affecting engineering and technology. Through this work we can open up learning and knowledge to the next generation of engineers and technicians.”

FutureLearn’s university partners, including the OU, work with business sponsors to create individual courses. All the science MOOCs from the OU have been produced with the kind support of Dangoor Education, the educational arm of the Exilarch’s Foundation, and three free courses on personal finance produced by the True Potential Centre for the Public Understanding of Finance. The Centre is generously supported by True Potential LLP.

Effectively, then, FutureLearn is the catalyst for a learning revolution spreading out through the higher education sector, as Sharples explains: “One of the main reasons universities are getting involved in MOOCs is because they are a testbed to try out new and different approaches to teaching and learning. It’s part of a movement towards ‘blended learning’, making materials such as lectures available online, and blending this online content with traditional on-campus teaching to create new types of courses – things the OU are already doing and have been doing for years.”

Mike Sharples, Professor in Education Technology





## OU CHANGING LIVES AROUND THE WORLD

**Improving the classroom experience of millions of pupils in elementary and secondary schools across India is just one of the ways that The Open University plans to make a difference around the world; ambitious aims that are already starting to bear fruit.**

The TESS-India (Teacher Education Through School-Based Support) project, is working with the Indian Government to help the country reach its target of free, compulsory and quality education for all children by 2017. "The population is 1.2bn and there is a huge shortage of teachers as well as a lot of untrained teachers trying to fill the gap," says Sarah Davies, Senior Project Manager.

Funded until 2016 by UK aid from the UK Government, the aim at TESS-India is to raise standards of education by giving primary and secondary school teachers the support they need without taking them out of the classroom. TESS-India will do this by making high-quality Open Educational Resources (OERs) freely available to all in print, online and via mobile devices and tablets. The OER materials are being produced by the OU in close collaboration with Indian experts and will be available at [www.TESS-India.edu.in/resources](http://www.TESS-India.edu.in/resources).

To this end, the team has developed elementary and secondary-level OER across English, maths, science and language and literacy subject sets. To support the changes in teaching practice promoted in the materials, TESS-India is also developing a set of Leadership Development units so that school principals can be active in leading educational reform in their schools.

The OERs will also be complemented by audiovisual clips filmed using real teachers and real teacher-educators to add authenticity. "We really wanted to capture the journey," says Davies, "and generate discussion among the teachers."

AK Kirti, Principal of the Boys Anglo Bengali Inter College in Lucknow, is a firm advocate, from what he has experienced so far.

"The TESS-India audiovisual activity at our school has brought new learning and experiences. During the training period when the teachers introduced the new teaching techniques, they not only helped to change the mode of teaching but also checked absenteeism among the children."

### HESS Ghana

HESS (Higher Education Systems Strengthening) Ghana is a result of a collaboration between the National Council for Tertiary Education, Ghana; the OU in the UK; and others working to increase quality, large-scale access to higher education in Ghana. The OU UK held in-country workshops to provide expert facilitation of the discussions leading to a concept note, proposing the Open Universities of Ghana (OUsG). When funding is secured, OUsG aims to enable the sector to increase HE enrolment from 280,000 to 600,000 students (aged between 18-24) by 2020, enhancing graduate employability and partnering with industry.

## Human Resources help for Ethiopia

**Ethiopia is one of 57 countries listed by the World Health Organization (WHO) as having a health workforce 'crisis'. There is a lack of midwives and anaesthetists and a lack of leadership and managerial skills at a national level. "HRH (Human Resources for Health) Ethiopia looks at strengthening these pressure points," says Susan Fawcett, the OU's academic project manager for the HRH programme.**

The programme, written mostly by Ethiopian academics with help from OU experts, consists of two strands, one addressing HR and one addressing health economics, with some shared modules. "Our students are

going to be people already working as health managers," says Fawcett, "so we wanted to produce modules that had a strong applied aspect to them." Materials will be delivered in a blended learning format, where students receive the materials as hard copy and study independently. They also attend one of the delivery universities for a week of intensive study each month, allowing them to continue with their jobs as health managers.

Gondar University has already started to deliver the programme, which is funded by USAID and partnered by Jhpiego, an international, non-profit health organisation. Addis Ababa and Jimma universities are

hoping to follow suit soon. "It's going to be a steep learning curve," says Fawcett, "but we hope it will encourage managers to improve their practice to a more evidence-based approach. They will have concepts to enrich their approach and a network of colleagues across the country to liaise with."

It's already making a difference in the classroom. Telake Azale, from Gondar University, has been involved in the writing process, and says: "The structure of the teaching materials is very good. Focusing on learning outcomes and activities helps keep the students' interest because it is task-directed and focused on their practical problems being solved."



**Morag Storrar lives in West Sussex. She is currently studying for an Open Degree whilst working in a company that makes handmade boxes for people to store wedding dresses and hats.**

When Morag was expelled from school for having purple hair and piercings, she thought that was the end of her education and the beginning of a life of dead-end jobs.

But thanks to The Open University, Morag got a second chance. She became so committed to studying that she took her books with her when she went travelling – writing one assignment on a beach in New Zealand on Christmas Day.

“I didn’t fancy uni because I didn’t see a course that made me go ‘Yes! That’s definitely what I want to do a degree in!’. Then someone told me you could study online and in any subject you fancied so I looked into it and found the OU. I signed up for AA100 the beginners’ course in art studies.

“My tutors have been really great. Just the best I could ask for.”

Morag will receive her degree results in December. “All in all it was worth dyeing my hair purple! I got there in the end. I just took a longer, more circuitous route than most people do.”



**Angus Condie, 49, lives in Newcastle, but works in Cambridge, where he is Head of Technology at Xaar Plc. He did an MBA with The Open University Business School from 2010 to 2013.**

Angus had an unusual reason for applying for an MBA. “I live in Newcastle with my family, but I work in Cambridge during the week.

“I thought it would be a more efficient use of my weekday nights than sitting on the sofa watching TV or going down the pub,” he laughs.

Quickly, however, he realised that the study was changing not just his management style, but his whole outlook on life. “What I learned applied not only to work but how you influence anyone. It’s even

changed the way I communicate with my daughter.”

He found that meeting other managers during the summer school was particularly helpful. “You get used to a particular kind of working culture, but meeting managers from other environments was a huge learning curve.”

His work skills improved immediately, believes Angus. “You think managing people will come naturally because surely it’s just telling people what to do. But I soon learned it’s more about working with people to get win-win situations, as well as trying to influence the business more generally.”



Earlier this year, Imogen Bankier and Robert Blair won the Bronze title in the mixed-doubles badminton championship at the Glasgow Commonwealth Games.

But that's not all they do. Imogen and Robert, who both live in Glasgow, combine their badminton training with studying towards the BA/BSc Open degree, with support from Winning Students scholarships.

"I enjoy studying through The Open University as it gives me a focus outside of my badminton," says Imogen. "Being a student and playing badminton at this level isn't easy, but I wouldn't have one without the other."

For Robert, it is the flexibility of the OU that stands out. "I wish I had done distance learning earlier. You can learn at a nice pace that suits you," he says, adding that the subjects he's studying for his degree could open up career options for when he eventually retires from professional badminton.

There are currently six professional badminton players studying with The OU in Scotland, supported by the Winning Students network.

"We're very lucky these options are available because we're not in a high earning kind of sport where you're set for life," says Robert.



Priscilla Hogan, 55, lives in Milton Keynes. She did a BSc in Health and Social Care, which she completed in 2012.

Priscilla believes her move to the UK was a life-saver. "If I was still in Rhodesia, as it was known then, I could easily have died of HIV because the disease is just so rife over there," she says. "I have lost so many people to it."

So when Priscilla saw a local post advertised

for someone to help people with HIV, she went for it. Soon she was doing her NVQs in Health and Social Care, and it was then that she bumped into an old friend.

"This friend had turned her life around and improved herself beyond all recognition," she says. "Naturally, I asked her what the secret of her success was. She smiled and said the OU."

Inspired by her friend, Priscilla enrolled on a

BSc via the OU, combining study with working at her local hospital.

Juggling the two was challenging, particularly when she discovered she had dyslexia, and it took her 10 years.

"I'll be forever grateful to the OU for the difference it's made to my life," says Priscilla, who now works as a support planner with people who are HIV positive.

# Research

The Open University was the first to:

- Develop an early warning system for detecting epidemics
- Set up a centre for research into the effects of surveillance on society
- Develop a device to predict the duration of volcanic eruptions

Helping dogs sniff out the tell-tale signs of cancer among humans doesn't sound like the typical role of a lecturer in computing and communications. But for Dr Clara Mancini, head of The Open University's Animal-Computer Interaction laboratory, the battle against cancer and other diseases is at the heart of her recent work studying the relationship between animals and technology.

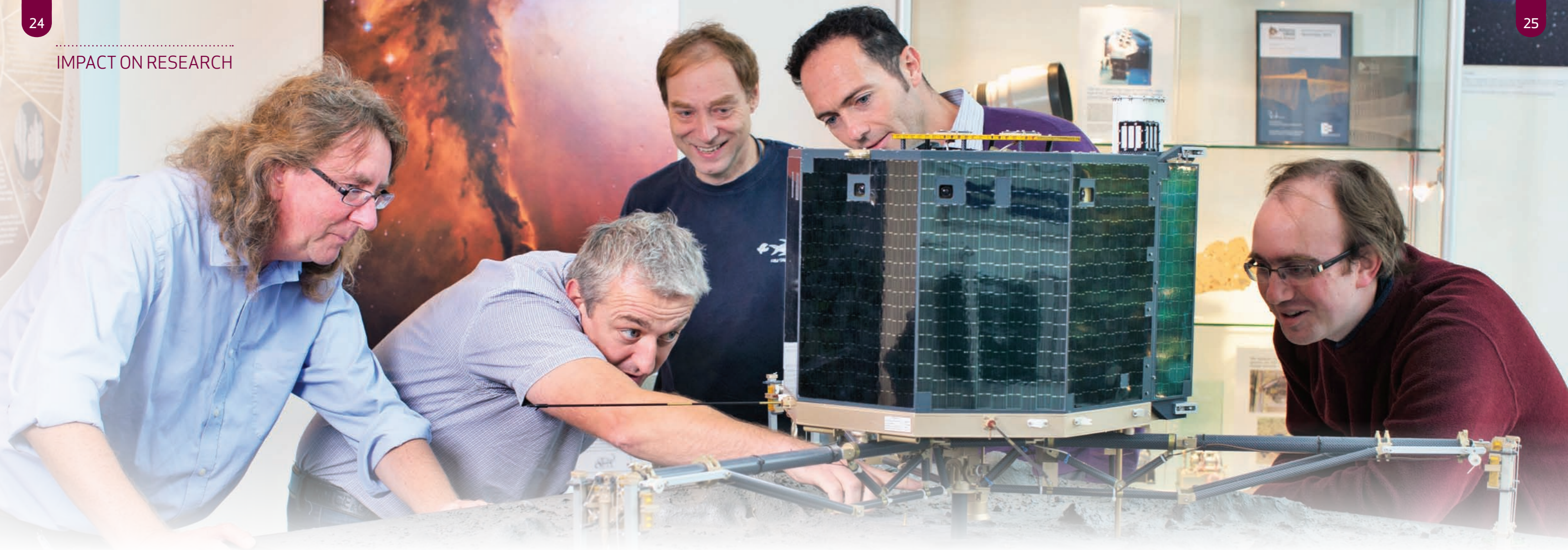
"Dogs have a sense of smell which is thousands of times more sensitive than that of humans so they can be trained to recognise the odour of human disease, particularly the volatiles from cancer cells in biological samples, at very low concentrations. Our research partner, the charity Medical Detection Dogs, trains their cancer detection dogs on samples of urine, sweat or breath and teaches them to signal when they recognise these volatiles, the early signs of cancer. This is important because, for a number of cancers, current early screening methods are still unreliable or not sufficiently accurate," she says.

But that signal is the issue. "The problem is that, in order to clearly communicate with their trainer, the dogs need to be

taught to exhibit an easily recognisable stereotypical behaviour, for example sitting down in front of samples that they believe are positive. However, this only allows the dogs to say 'yes' (there is something here) or 'no' (there is nothing here), and does not account for possible nuances in the sample's content. Additionally, the dogs' behaviour often deviates from the expected pattern, which sometimes leaves the trainers unsure of what exactly the dog is trying to tell them. Our job is to work with the trainers, the dogs and the technology to help give dogs a 'language' that is more spontaneous for them and that allows them to express more nuances."

Mancini's team has already found that the dogs' sniffing behaviour changes depending on what is in the sample, therefore using sensor technology to record the interaction of the dogs with the samples researchers can begin to map different sniffing behaviours to different amounts (and possibly kinds) of volatiles in the samples. "Thus, trainers can teach the dogs to use their own sniffing behaviour to signal what they find in the samples, allowing them to communicate in a way that is more natural to them, and more nuanced and more reliable for trainers."

Mancini's team still has some way to go, but so far the results are promising. "The impact of our research collaboration with Medical Detection Dogs could be far-reaching. Scientists around the world are trying to develop so-called artificial noses, using technology rather than dogs to detect what's in these samples. If we can increase the levels at which dogs can express themselves and the precision of their signalling behaviour, we will also help the scientists developing these devices. In short, we are giving them more indication about what they should be looking for in terms of chemical signatures in the detection of cancer."



# Beyond Earth

Space may have once been famously described as the final frontier – but it's just the beginning for The Open University, widely regarded as a leader in the exploration of the cosmos. The skies above our heads are full of instruments designed and made by the OU's space scientists, gathering and analysing data right across the Solar System and using that information for practical purposes on a daily basis.

From exploration of the surface of Mars to measuring dust particles on Saturn, The Open University's Department of Physical Sciences (DPS) has been for many years at the forefront of international space missions. But as well as pushing back the boundaries of space knowledge, its groundbreaking work has an enormous impact on scientific innovation closer to home.

"What drives our work is space exploration – we want to know what's out there,"

says Professor of Planetary Sciences Ian Wright. "But in doing so we are able to develop technologies that have a host of applications here on Earth – and test them on a scale that would otherwise simply never get this level of funding."

## OU at the forefront

Open University instruments have been aboard many major European Space Agency (ESA) missions – and were at the forefront again in November this year with the culmination of ESA's 10-year Rosetta mission, one of the most ambitious space programmes ever conceived. The mission is named after the stone that unlocked the secret of Egyptian hieroglyphs, because the hope is that it will achieve a similar breakthrough in the understanding of comets and the early Solar System.

Rosetta's unmanned craft, which blasted off in March 2004, recently reached the orbit of Comet 67P/Churyumov-Gerasimenko after a journey of 6bn kilometres and will spend around 12 months with the comet, relaying unprecedented data and observations that could have a fundamental impact on our understanding of big questions such as "where did life on Earth come from?".

Instruments fashioned at the OU are also measuring the dust particle population around Saturn on the ESA/NASA craft Cassini-Huygens and imaging sensors developed by the OU's Centre for Electronic Imaging (CEI) are used by ESA's Gaia mission to map a billion stars. The OU is also providing instruments for JUICE, an ESA mission to explore Jupiter's moons, and DPS-developed tools are assessing the effects of radiation on India's lunar mission Chandrayaan-2.

Then there's the successful launch of the UK's first national CubeSat, UKube-1, a miniaturised satellite for space research. Onboard when the nano-satellite took off from Kazakhstan in July was a space camera developed at the OU. This light, multi-sensor device can explore how space radiation affects sensors. The OU's device is the size of two credit cards, weighs just 200 grammes (about the same as a bar of soap) and can be cheaply mass produced – which could ultimately result in a network of cameras above the Earth giving 24/7 imaging of our planet for the first time. "This is the world stage," says Wright. "Many of these projects, such as Rosetta, are the first time the human race has attempted to do anything like this and the OU is at the heart of it."

## Endless possibilities

However, the OU is not just pushing back boundaries in space. The innovative technologies we are creating for planetary exploration have significant implications for life on Earth.

The OU's Space Sensing Technologies Programme sees OU innovators share and apply their knowledge with other professionals in a range of scientific fields, such as improving X-ray imaging and spectrometry in hospitals; providing improved geology equipment to gather data in volcanoes, oceans and glaciers; and developing compact tools to monitor transport, the environment or global climate change.

"We are creating small, compact, portable, reliable, robust sensors and instruments capable of gathering and analysing data in the most hostile environments," says Wright. "For instance, our developments on Rosetta in how we measure gases can be applied in hospitals, or to monitor pollution in the air around us or even in our homes."

The OU's collaboration with Chelmsford firm e2v to develop silicon-imaging sensors for space exploration has a range of everyday applications, says Dr Ross Burgon, DPS's Knowledge Exchange Fellow.

"When developing systems for space you need something that works in such a hostile environment. If it works there, it will likely work anywhere. The converse however is not always true," he says. "Our work on CMOS (complementary metal-oxide semiconductor) image sensors, which can typically be found in devices such as digital cameras, mobile phones and barcode machines, has shown that they can also be used for high performance space imaging applications, opening up a whole new avenue of space exploration possibilities."

"Assessing the wider impact has become part of what we do," says Wright. "Others work out how they can use their research methods and instruments in a wider context – but we're the ones who kick down the door."

"The possibilities are endless. We are constantly looking for a killer application that can use our data and technology. Space exploration is our passion, but it's also exciting to know, and for our students to feel proud, that the University has such a major internationally recognised presence."



## The hunt for dark matter

The Open University is one of two UK universities building a visible-light camera for a European Space Agency mission to search for dark energy and dark matter. The mission, called Euclid, will be one of the largest telescopes in space, taking precise measurements of galaxy distortions in its search for dark energy and dark matter.

Dark matter is a mysterious invisible substance that explains why stars in galaxies, and whole galaxies themselves, move around much faster than expected. The explanation is the influence of gravitational forces from unseen dark matter. This invisible stuff makes up most of the matter in the Universe. Dark matter also warps the space and time around it, so galaxies seen through a clump of

dark matter look warped. This is called a gravitational lens.

Dark energy is something even stranger, that is flinging the Universe apart for reasons unknown. Euclid will map out the dark matter and dark energy throughout half the Universe, using gravitational lenses.

Dr Stephen Serjeant, Head of Astronomy at the OU, was part of an international team that pioneered a spectacularly fast and efficient way of finding these gravitational lenses, the best way to uncover the secrets of dark matter. He says:

“Using our new techniques we’ve roughly doubled the number of strong gravitational lenses that are known. And I’ve found that using the Euclid space telescope from about 2020, and later on using the Square Kilometre Array of radio telescopes, we’ll be

able to discover strong gravitational lenses in enormously greater numbers.

“Euclid’s images will be much finer than is possible from ground-based observatories under the Earth’s turbulent atmosphere. Euclid’s image quality will even approach that of the Hubble Space Telescope, yet Euclid will map half the entire sky. Its deep cosmological imaging will also be a major leap forward from Hubble Space Telescope surveys. In all, the legacy value and scope for new discoveries in Euclid’s exquisite and enormous data set will be tremendous.

“Having lots of strong gravitational lenses means we can track the evolution of dark matter through the Universe, and dark matter is most of the matter in the Universe so it profoundly changes how galaxies like our Milky Way evolve.”

## ACADEMIC SPOTLIGHT: WALTER OECHEL

This year Walter Oechel, Professor in Biosphere Atmosphere Exchange from the Faculty of Science, was recognised by Thomson Reuters as one of their Most Influential Scientific Minds in 2014 and received the American Meteorological Society Award for Outstanding Achievement in Biometeorology. He says...

“From the Alaskan Arctic to the Mediterranean climate zones of California, and from the mangrove lagoons and desert ecosystems of Mexico to the tropical peatlands of Borneo – it’s been a fascinating year. The impact of climate change is no respecter of national boundaries, which means my research into the effect of climate variability and climate change on ecosystems takes me to some far-flung locations. So far, in this wide-ranging research, we have found no ecosystem unaffected by human activity.

My research shows the tight link between climate and climate variability on ecosystem behaviour and performance, as well as the other side of the coin: the impact of ecosystem activity on climate and the atmosphere. Studying the Arctic is particularly important because it is home to huge stores of carbon (more than twice as much as is already present in the atmosphere). This carbon is found in the frozen ground (permafrost) and seasonally thawed layer (active layer), having accumulated over thousands of years due to the cold, water logged nature of Arctic wetlands.

The release of carbon in these quantities could result in huge releases of carbon dioxide (CO<sup>2</sup>) and methane to the atmosphere; this is bad news in terms of impact on global warming. Carbon dioxide is the main greenhouse gas causing increases in global warming, and while methane’s lifetime in the atmosphere is shorter than carbon dioxide’s, it is 27 times more potent in increasing temperatures over a 100-year period.

The Intergovernmental Panel on Climate Change (IPCC) was sufficiently interested in our results to use the data in its reports. The real value, we hope, is that our observations and experiments will be critical in helping predict the rate of greenhouse gas increases in terms of future global warming. In a continuation of our work, studies in the semi-arid regions of California have shown that chaparral ecosystems can be used to slow the rate of increase of CO<sup>2</sup> in the atmosphere. However, they also show that the combination of global warming and increasing atmospheric CO<sup>2</sup> could decrease the amount of water flowing to streams and reservoirs while simultaneously increasing the risk of fire in semi-arid Mediterranean-type regions of the world, including the Mediterranean basin and southwest USA and northwest Mexico: a scary prospect.

Our results from tropical peatlands in Borneo show that areas of land-use change, including areas of tropical forest converted to oil palm plantations, result in large losses of carbon to adjacent river systems. Not only does conversion of tropical peatlands to oil palm plantations generally increase the decomposition of soil peat to CO<sup>2</sup>, it also has the potential to increase the export of organic matter to streams and rivers, and subsequent production of CO<sup>2</sup> to the atmosphere.

Taken together, the overwhelming response to global warming and increased atmospheric CO<sup>2</sup> of the natural ecosystems that we have studied is ‘positive feedback’ on global warming. That is, the warmer it becomes, the more these ecosystems studied amplify the rate of warming. The positive feedback makes it especially important to study and understand the response of natural ecosystems to the global changes that are already underway.”



### What next?

In the near term, I will increase the geographical scope of our Arctic research and interact more with atmospheric measurements and models, improving estimates of the impact of the pan-Arctic on global climate. I am also working to initiate new experiments on the effect of climate change on Mediterranean Basin ecosystems, especially oak woodlands of southern Europe. And I hope to intensify research on the effects of land use on greenhouse gas emissions in tropical peatlands, especially in Indonesia.

# Enduring Love

What's the secret to staying together with your partner? "I think it's very important, especially as you get older, to have a sense of humour," says Anne, who has been married to Owen for 50 years. "You've got to trust each other and you've got to communicate." "Yes, dear," Owen replies, deadpan, and they both laugh. "That's the secret, I'm told," he goes on, "that I say 'yes, dear' to everything!"

Anne and Owen feature in the podcasts recorded for the OU's ground breaking *Enduring Love? Couple Relationships in the 21st Century* project, funded by the Economic and Social Research Council. The two-year large-scale study set out to discover how some couples manage to work through the tough times and make it, against seemingly insurmountable odds, to their golden anniversary and beyond.

Why does this matter? Because solving this mystery could have a huge impact – not just on the world of relationship counselling, but on the wellbeing of millions of couples worldwide.

"There's lots of research around the factors that break people up," says Dr Jacqui Gabb, Associate Dean (Research) in the Faculty of Social Sciences and lead author of the study. "For example, the first child is a difficult time in a couple's life, and we know that couples are more likely to get into trouble at that point. But there wasn't actually any substantive work which focused on how couples are managing to stay together."

## Negatives into positives

As well as the 50 in-depth interviews with couples across the spectrum of class, race and sexuality, the study also analysed an online survey of 5445 adults worldwide. It asked them what they did every day to help keep their relationship going – everyday

things, rather than grand gestures. Over the course of the study, it became clear from both the qualitative and quantitative data that couples who stay together aren't miraculously lucky and immune from all life's woes. They still go through the same stresses – bereavement, moving house, unemployment – as those who break up. But somehow, they manage to turn these negatives into positives.

Yet there's no magic formula, says Gabb. Rather, what comes most clearly from the research is that each couple develops strategies that work for them. Those ways are as diverse and characterful as the people themselves – whether it's a shared joke, a cup of tea, talking, companionable silence, or cuddles, which proved to be just as important as sexual intimacy.

## A leap forward

However, the research did throw up certain factors that seemed common to successful relationships, such as communication. "But people still do it in different ways," says Gabb.

"So 'communication' for one couple might be a strategy of not talking, while for another it might be talking about everything. And that will feed into the sense of 'we really know each other, so we know we don't have to talk about that', or, for another couple, 'we really know each other, so we want to talk about the minutiae of the day', however trivial that might seem to the first couple."

The study is a leap forward in academic understanding of couple dynamics. But it's also helping policymakers and counselling experts to translate these real-life strategies used by couples whose relationships are enduring into help for those struggling to keep a relationship going. Gabb and

her team are now working closely with relationship support organisations including Relate, the Tavistock Centre, OnePlusOne and the Family Planning Association.

The *Enduring Love?* research is helping these organisations to refine their understanding of what couples are and what they do, so couples can be better supported through counselling and relationship intervention. And that's vital work, not just for the wellbeing of individuals, but also for society as a whole. The Centre for Social Justice estimates that family breakdown costs £44bn a year.

One innovation in particular is proving hugely useful: the 'emotion map'. "This asks couples to think about and 'locate' what they do and where in terms of their couple relationship, using emoticon stickers to denote different kinds of emotions," says Gabb. "We've been piloting that with various counselling and family support services to use as a method of relationship intervention. It's being used in a very positive way and having great results. It's a wonderful way to facilitate reflection on everyday experience and interactions, in the counselling context."

According to Gabb there's also been a huge public interest in the study, as people start to really think and talk about their relationships. Following their academic book on the study, the project team is planning an advice book for couples, ensuring that the research reaches as many people as possible. After all, sustaining a healthy relationship is something that affects us all.

"Everyone wants to know the answer," says Gabb. "But people know that it isn't that easy, that we're not putting out a simple message. A relationship is something you have to work at – and hopefully, that's something we've helped to get people thinking about."

## Love is all around

The *Enduring Love?* study made headlines worldwide, although not all of them were entirely accurate – such as the assertion in the South China Morning Post that "British people prefer a cup of tea to sex". But the study was covered by all the national papers, including *The Guardian*, the *Daily Telegraph*, the *Daily Mail* and *The Times*, and by magazines including *Psychologies*. Gabb was interviewed on BBC TV news and by news websites with an international readership such as *The Huffington Post* and CNN.





## Educational Technology

**Brian Stamp is not easily deterred. A visual disability and the side effects of diabetes had ended earlier attempts to study, but he refused to let his academic ambitions die. Which is why, in 2004, he turned to The Open University to ensure he would have access to all the learning he needed, thanks to the specially designed technology being developed by the OU's Institute of Educational Technology (IET).**

A key tool is the University's OU Anywhere app, which allows students to access OU course materials on tablets, smartphones and other mobile devices. "Being able to have the books online via OU Anywhere is absolutely brilliant," says Brian. "I use a lot of screen readers, so having everything available online means the screen readers can pick them up and read them to me, which is great."

He has also found the online OU student community a valuable source of support. "The module groups on Facebook are very motivating," he says. "If you're stuck or you're having problems there are a lot of people on the same course: 100 to 120 students doing the same module. They are very supportive and help you find the right way to think about things. The tutors do the same, of course, but they can only do so at certain times. With the forums there are people there 24 hours a day." Alongside other students on his *Computing with business* course, Brian has now helped to create the OU Computer Club, an extra source of assistance for students dealing with IT problems.

### Improving the learning experience

Brian's experience is just one example of the way The Open University, through its willingness to invest in the development of new technology to support learning, is making a direct and immediate difference to the learning experiences of students.

The OU Anywhere app reproduces teaching materials in multiple formats, which include PDF and ePub files for eBooks. This means students can download teaching materials to Apple or Android devices when they have a good internet connection, then use them whenever and wherever they want to. The app also enables access to more than 1000 books, more than 500 hours of audio material and 600 hours of video. It had been downloaded more than 72,000 times by the end of August 2014.

"The primary mode of delivery is still via physical items or the module websites – this is a supplementary tool," says OU Anywhere project manager Tammy Alexander. "But it has standardised the way OU module teams produce content, so it is improving efficiencies in the organisation."

Much of the work the OU does in this area is led by IET, which researches and develops new technologies for open and distance learning. It often works in partnership with, but also inspires similar

projects at, other universities and educational institutions around the world. "What we do has always been of value to other providers," says Patrick McAndrew, Professor of Open Education and Director of IET. "But the benefits of this work are almost always felt first by OU students and staff."

### World leaders

The OU is also a world leader in its use of analytics technologies that monitor the way students learn, interpreting data about the learning experience and predicting the future behaviour of its students. "We can use that information to provide personalised support and feedback," says Dr Bart Rienties, Reader in Learning Analytics in IET. "Every university is collecting information about their students, but very few are linking those different data sets. Following our lead, other universities are considering how analytics might help them."

Similarly, Juxtalearn – a Europe-wide project led by IET that encourages students to use creative activities, in particular video-making, to enhance their science and technology learning – is developing a pedagogical and technological framework for the use of performance techniques to assist learning.

Juxtalearn helps students overcome barriers to learning presented by complex concepts, in particular within the STEM subjects (science, technology, engineering and mathematics). Using a performance element, such as a film or animation created using Juxtalearn tools, helps students to help each other to understand these concepts. They are then able to begin developing a much deeper knowledge of the subject.

"Students really need to have understood what they have been taught if they are going to be able to tell the stories back to each other," explains Dr Anne Adams, Senior Lecturer in IET. "The tools help: using iPads to create videos, for example."

The project began in late 2012 and the first Juxtalearn tools have been in use from early 2014. IET ran a pilot in a few schools in the UK and Sweden, and the success of the project has encouraged schools and education organisations in other countries to join them.

The OU has also supported the development of a comprehensive set of online services offered by The Open University Students Association (OUSA), including a 'virtual Freshers' Fair' designed to give new students swift access to all the information they might need at the start of their courses, which includes Q&A sessions online with current students and tutors, as well as an online radio service.

The Open University remains committed to opening up study to everyone and to developing and using new technology to make studying more manageable, effective and enjoyable for students, while also helping staff, students' families and other education providers and learners worldwide.



## KNOWLEDGE TRANSFER PARTNERSHIPS

**What links contact lenses, cupcakes and shiny cars? The answer is silicones, versatile materials that industries the world over are using in increasingly diverse ways.**

Silicones are found in a host of everyday products from cookware (think of those soft, floppy cupcake moulds) to shampoo; the scope for even more new applications is enormous. But the chemistry that unlocks the magical properties of silicones is studied by only a handful of chemists worldwide.

That's why more and more companies are knocking at the door of The Open University, to tap the expertise of one of the top silicone chemistry research groups in the world. And it's a welcome experience for Professors Peter Taylor and Alan Bassindale, who have represented the core of the research group for more than 30 years.

"In the last few years we have really blossomed," says Taylor. "We're having an impact in a large number of different industries, which are much more related to people's daily lives, than we did when we were just following the traditional academic pathway of publishing in journals. Although these are UK companies, they're doing business around the world so our work is having an impact worldwide."

### Specific expertise

Taylor and Bassindale's research group is one of only two or three in the UK carrying out academic research into types of organo-silicon materials known as silicones. Their specific expertise is in a versatile form of silicone known as silsesquioxane, studied by only a handful of research teams across the world.

The OU group's rare expertise is now being harnessed by small and medium-sized enterprises (SMEs) across the UK, thanks to a series of Knowledge Transfer Partnerships (KTPs). A KTP involves an academic supervising a recent graduate, known as an

'associate', who works full-time within the partner company to transfer and embed knowledge and expertise the company lacks. The company supervises the associate on a daily basis. For SMEs two-thirds of the KTP's costs are paid for by Innovate UK and the remaining third by the business.

But businesses can expect to more than recoup their costs, as KTP programme statistics show that they will see, on average, an increase of more than £250,000 in annual profits, the creation of three new jobs and an increase in the skills of their existing staff, by the end of a three-year KTP project.

### High performance

The OU group's first KTP came about after an approach from Reading-based Hichrom Limited. The company manufactures and supplies high performance liquid chromatography (HPLC) columns used by the pharmaceutical industry and in forensic testing. In order to meet market demand, Hichrom needed to grow its in-house capability to develop new columns based on newly designed multi-functional silanes.

"We had the solution, but we didn't know they had the problem. This is often the case with academics and industry," says Taylor. The three-year KTP resulted in Hichrom producing new commercially viable HPLC columns which were unique to the market.

So pleased is Hichrom that the firm is continuing to work with the OU's chemists beyond the life of the partnership. "This KTP project provided us with the opportunity to develop our knowledge of the chemical industry. It gave us credibility when talking to other industrial research partners," says Stuart McKay, Managing Director of Hichrom. "It is also rewarding to see academic research turned into valuable products."

Another firm benefiting from the OU chemists' expertise is Suffolk-based Cornelius Specialties Ltd. Cornelius manufactures intermediates, the basic

silicone material from which contact lenses are made, and has embarked on a 33-month KTP with The Open University to improve formulations.

The OU team has already found a way to make the material more cheaply. They are now pursuing more ambitious improvements – making it possible for the firm to create new intermediates that make more comfortable and more moisture-retaining lenses.

They are also coming up with new product ideas to enable Cornelius to diversify their business away from relying on a single market. "We believe that there are big market opportunities for large-scale silicone products, so we are looking at areas like wound dressings and coating for electronics," says Taylor.

Dr James Bruce, a member of the OU research group, is academic supervisor on a new KTP with Buckinghamshire firm Ambridge Thermoplastics Ltd that paints line markings on our roads. White line technology has remained almost unchanged since the 1970s, but Bruce and colleagues will explore using novel technologies to make road markings more durable, visible and self-cleaning.

### Energy waste

The OU team is also working with other partners on improving retrofitted damp-proofing in older buildings, which will reduce the energy wasted in heating them; and on so-called 'omniphobic' coatings which repel everything from water to grease to ice and have myriad applications – including, Taylor jokes, the 'self-cleaning car'.

He says OU academics have benefited greatly from a new understanding of how the business environment works. "I've faced challenges which as an academic researcher I've never faced before. And we are feeding this new knowledge into our teaching – it has a much more industrial focus now."



Charlie Lewis, 46, is based in Newcastle and is an ambassador for the homeless charity, Crisis. He studied two Open University art courses across 2012/13 and 2013/14.

Charlie, who is homeless and suffers from mental health issues and periods of alcoholism, didn't see himself as a prime candidate for adult education. "But on a Crisis open day, there was an OU stand run by a woman called Kim. I checked it out." But being homeless and having left school with no qualifications put him off. "Although I enjoy art, I felt too scared."

After a few meetings with Kim, however,

Charlie decided to 'go for it' and, as a result of his OU studies, he has discovered a new level of confidence that has transformed his life.

Not only is he now an ambassador for Crisis, representing them on forums and giving presentations, but he's also been encouraged to submit his artwork to various competitions.

At a recent OU Legacy event in our Gateshead office, Charlie was able to share some of the issues he has faced and his experiences of studying with the OU. "It wasn't easy studying with no fixed address. I had to use the library a lot. But it changed my life."



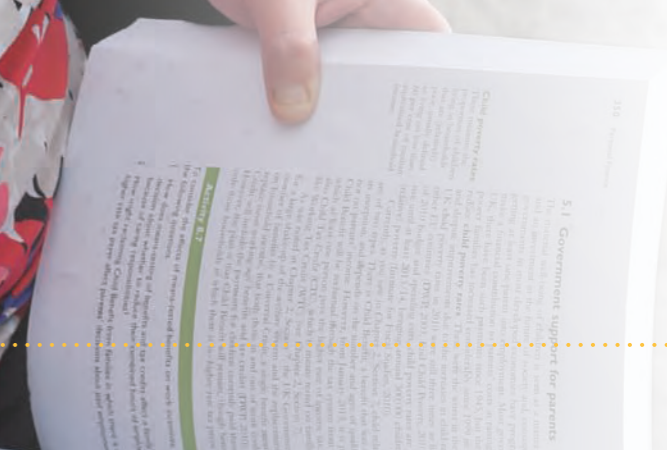
Catherine Watkins, 39, lives in Barry, Wales. She has studied for three OU qualifications: a Diploma in Social Policy and Criminology from 2010-14; a BA Hons in Criminology, ongoing since 2009; and a Foundation degree in Counselling, ongoing since 2009.

Catherine has five children, four of whom have learning disabilities and two of whom have epilepsy. She is also disabled herself. "I've had nine surgeries in the last three years alone," she says.

You might wonder how on earth she fits in OU courses, but Catherine says study has been her lifeline. "I suffered domestic violence until six years ago, when we left the situation. Since then, having the counselling course to concentrate on has meant I got us through it. As with all the courses I've done, you wouldn't believe how much focus it's given me."

Before studying with the OU, Catherine spent her days looking at four walls, feeling very ill. "Now I study in the evenings and I feel both happier and less ill. Even if I am in hospital, I do exams there."

It's important for Catherine that her children value learning. "Just because I'm unemployed doesn't mean they have to see me doing nothing." Catherine's experience of OU the has led to two of her children, and several of her friends, doing OU courses. Meanwhile, she has started up a club for children with learning disabilities – "something the OU courses gave me the confidence to do."



**Ryan Adair, 30, lives in Belfast, where he works as a social worker. He studied Health and Social Care with The Open University between 2008 and 2011.**

Ryan was like any young person with an active social life. He was also a wannabe rock star, playing gigs or on tour with his band. Having left school with no real qualifications, he took a job in the health service but had ambitions to go much further.

It had been so long since he'd studied that Ryan felt sure he wouldn't manage. "I hadn't been the best of students the first time around and I couldn't afford it anyway." But trade union UNISON funded him for the first course, for which he received an award. "Never in my wildest dreams did I think I'd get an award in recognition of studying."

Having completed the course, Ryan applied for a new job and gained OU student support to do a second one. On completion of that course, during which Ryan was even able to buy a home, he had enough points to study for a degree in social work and now he's just started his first graduate job.

"As a social worker, you help people to help themselves, and I love the fact that it's so empowering."

**Candice Whittaker, 30, lives in Yorkshire, where she combines motherhood with studying for a BSc (Hons) Psychology degree, which she began in 2011 and will complete this year.**

If anyone had told Candice when she was at school that by 30 years old she'd be thinking about doing a PhD, she'd have laughed. Having left formal education with 10 GCSEs, and with a love of performing, she became a dance teacher, but when she had children she decided she wanted a change. Tentatively she applied to do an OU access course in Health and Social Care.

Surprised to find that she had academic ability, Candice then applied to do an OU degree. "My husband had been doing a business management course through the OU and raved about it – and now I rave about my OU course," she says. "I've been able to study at my own pace, in my own time and around my other commitments including my amateur dramatics, which I love."

"The experience has made me realise that most things can be achieved if you are willing to put the effort in," she says. "And perhaps most importantly, my children see first-hand how excited their parents get about learning, which is a great ethos to promote."

# Business

Over 80% of FTSE 100 companies have sponsored OU students  
 The OU teaches 43% of part-time undergraduates in the UK  
 More than 73% of students work full-time or part-time during  
 their studies

When Donna Goss did a degree in politics at the age of 18, she had no idea what career path to follow. But ten years on, thanks to an Open University degree in nursing, she's been able to embark on a career she feels passionately about, while her employer has gained a truly committed member of staff.

"My first job out of university was working with the theatre department at Northampton General Hospital. As an admin support worker I got to see the comings and goings of theatre and I loved the environment immediately," explains Donna.

Having been keen to find a more exciting role, she was quick to apply for the role of theatre support worker. "I was lucky enough to be successful and because my ambition not to stay stagnant continued, the next logical step was to train to be a nurse."

The benefits of studying for the degree through The Open University have been multiple for Donna: she remains employed by her local hospital; the programme works around her shifts as a theatre support worker; and the placements are worked out together by the University and the hospital, so she gets a good balance of learning both inside and outside that hospital.

Her employer gains too, getting to hang on to a valued member of staff whom they know will be an asset, not only once she's qualified but during her training, too. "During the four years' training – which I'm halfway through – they have peace of mind that I'm keeping up with my skills and staying aware of any changes in the department."

Her employer also gets to see how committed Donna is to learning and that she's not going stale in her job. "Once qualified, the idea is that I'll be a prime candidate for any relevant positions, which is a huge benefit to both my employer and the wider community. After all, if someone comes in newly qualified from university who has never had a support worker role here, there's a lot of training they'll need to catch up with, compared to where I am."



Through the MBA, the OU has provided practice-based learning to over 24,000 of the world's current and future business leaders

## CHANGING WORKPLACES TOGETHER

The business world is driven by numbers. Profit and loss, turnover, employees in, employees out – it's a 'figures first' environment, and one that may not at first glance have much apparent crossover with the academic world.

But among all the facts and figures generated by UK plc, there is one statistic that The Open University is particularly proud of: four out of five FTSE 100 companies have invested in OU courses for their staff. The University also has a reach right across the business spectrum; more than 30,000 organisations have invested in staff development with the OU, from small and medium-sized enterprises to large multinational corporations and public-sector bodies including the NHS, Europe's largest employer.

The OU provides learning and development, as well as research and consultancy solutions, to help organisations remain competitive in an increasingly complex global market. And through collaboration with Britain's biggest companies and institutions, the OU ensures that many thousands of employees gain the qualifications they need to succeed in the workplace – benefiting themselves, their businesses and the economy.

### The benefits of flexibility

The OU has supported FirstGroup plc's staff development for more than ten years. FirstGroup offers its graduate trainees the chance to pursue a fully funded MBA from The Open University Business School (OUBS), helping them acquire skills and knowledge to take on senior management positions in one of the world's leading ground passenger transport companies.

Kay Devine, Graduate Development Lead at FirstGroup, says: "FirstGroup chose to work with the OU because they are so flexible and meet our business needs. This flexibility has been a huge benefit for our organisation.

"The OU has been very professional, informative and supportive. They recognise that it is about ensuring our employees have the best possible experiences and succeed.

"A traditional classroom course every Wednesday night would just not work for us. The OU offers various types of learning, both face-to-face and online. It means that our staff can fit it around their work and life commitments."

The formula has proved immensely fruitful for the company and its employees alike. FirstGroup now receives more than 1,300 applications for the 20 or so places on each year's graduate programme.

### Practice-based MBA

After successful completion of their initial two years in training, the candidates take on their first line management positions and are able to join the practice-based MBA. They benefit from gaining a business qualification from a triple-accredited business school – a distinction held by only 1% of such institutions worldwide – and FirstGroup gains a pool of management-ready executives. The OUBS are among the top business schools and one of an elite group to have earned AACSB, AMBA and EQUIS accreditation, awarded by the world's leading international management education associations.

Ben Gilligan, Managing Director of FirstGroup subsidiary First South Yorkshire, says: "I studied the MBA over four years, and it has certainly expanded my knowledge of skills, management techniques and leadership behaviours. I've been able to take things into the workplace that I wouldn't have been able to do had I not done the MBA.

"The Open University has worked with a lot of different employers and it's clear that they understand what goes on in the business. There's a good balance between theory and practice. Typically you'd learn about theory then have the opportunity to go and do projects in the workplace that would demonstrate that you understood the theory."

### Promoting engagement

Clearly, then, employer-sponsored study can significantly promote higher levels of motivation and engagement within the workforce.

The Department for Business, Innovation and Skills has estimated that disengaged employees cost the UK economy between £59.4bn and £64.7bn per year; so finding ways to retain talent and increase productivity is a national priority. And at an individual level, it can be a life-changing experience.



A case in hand is Adam Priestwood, a 28-year-old from Torquay, who joined Alpha Financial Consultants eight years ago as an office junior, having earlier left education after sixth form. “After two years at Alpha I began to think I really should have got a degree and considered leaving to go to a local university. The firm wanted me to stay as part of the team and so they agreed to pay for me to do a BA Hons in Business Studies with the OU.

“They set aside time, a laptop and a room for me to do my studies in the office, and after five and a half years of study – during which I also picked up other financial qualifications – I graduated with a 2.1. It’s had a massive impact on my job. Although I initially took a pay cut to study, I gradually began taking on more responsibility. I am now a project manager overseeing everything, earning more than double what I did when I first started. It was a big commitment from my employers, but I hope that they’ve seen the benefits: as I studied I was able to use the experience in my work.”

From passenger transport to financial expertise, Open University partnerships are enriching lives – and ensuring that UK plc has the skills it requires to drive economic growth.



Adam Priestwood

## NHS Leadership Academy

**When the NHS in England, in the midst of a major organisational and structural change, wanted to develop its staff offering, particularly in terms of its leadership, it turned to The Open University and Hay Group, a global management consulting firm. The result was the Mary Seacole Programme – Leading Care I.**

“The Open University was chosen because of its excellent record in widening participation in education,” says Karen Lynas, Deputy Managing Director of the NHS Leadership Academy. “The programme it runs with us will for the first time provide structured high-quality leadership development at a national level for staff preparing to step into their first leadership role.”

Developed by The Open University Business School (OUBS), the subsequent fully accredited 12-month national programme

aims to improve and reinforce the leadership skills of junior staff in both clinical and non-clinical roles.

The OUBS worked closely with the NHS Leadership Academy to understand its requirements and then led on the scope and design. It also consulted with a wide range of stakeholders – including healthcare and patient advisers, subject matter experts, healthcare providers and potential participants – to make sure the course content was set in the right context for the NHS and that appropriate learning outcomes were developed to maximise the programme’s impact on the organisation.

The resulting programme blends OU-developed online learning with face-to-face training. Tutorials are delivered by a team of academics from the NHS Leadership Academy, Hay Group and the OUBS, providing subject matter experts who are also specialists in supporting learning to combine study with work priorities. Face-to-face sessions are delivered regionally, providing opportunities for participants to network and share their experiences and best practices with people from different organisations and professions.

The strong practical focus of the programme, along with continuous access to learning

materials, means participants can apply their new-found knowledge instantly – bringing immediate benefits to the workplace. A requirement of the programme is for each participant to complete a work-based service improvement project that directly applies to their role and department.

Another big benefit for the NHS is that time out of the workplace – along with associated travel and accommodation costs – is minimised, due to a large proportion of the programme being delivered online. The flexibility of the programme means that participants can study at times which suit their work priorities.

As well as providing participants with expert advice and a range of support resources, the OU provides advisory support to help Hay Group and the NHS Leadership Academy to meet the corporate requirements and expectations, and reports to both organisations on a monthly basis.

The first cohort of more than 1500 participants came on board in November 2013, since then more than 3500 have studied. The aim is to develop 12,000 employees through the programme in the next four years.

## ACADEMIC SPOTLIGHT: ANDREW SMITH

**Andrew Smith, Lecturer in Networking, focused on investigating the differences in the learning experiences of ‘simulation’ and ‘remote’ students versus those having an ‘in-class’ and ‘hands-on’ experience. He says...**

“For most employers in the IT world, ongoing professional development is as important as a degree. And in that world vendor certifications are often regarded by employers as the industry standard – which is why the work I lead on with Cisco Systems is so vital in terms of recognising the potential for reaching students who would, through work, life or other commitments be unable to access industry-recognised professional development.

Cisco Systems has long been established as a certification body, giving students around the globe the opportunity to gain recognition for their network engineering competence. Its Academy programme has a respected tradition of in-class teaching worldwide; students who study in the programme and gain the certification often see their employability recognised by the industry around the world.

And just over ten years ago, the OU and Cisco came together to introduce a new hybrid – the blended distance learning model. The Cisco Networking Module combined day schools to ensure hands-on practical experience, remote lab equipment and use of the Packet Tracer simulator, a powerful network simulation program. Repurposing the Cisco Academy teaching content, the OU also added degree-level assessment and rigour to the experience.

It’s a unique offering. Over time, the OU has become the leading Cisco Academy in the UK – our reach is more than double that of the next largest academy. All the tutors we recruit are qualified Cisco Instructors from other academic institutions within the UK Cisco

Academy programme, and we are able to benefit from their collective expertise. In the past year, the use of day schools has seen support for the key Cisco Academies across the UK and Ireland continue to grow. And putting the day schools on a weekend means that the OU enables these academies to earn extra income and make best use of their resource at a time that would otherwise be unused.

Another unique aspect of the programme is the integration of the undergraduate CCNA (Cisco Certified Networking Associate) and CCNP (Cisco Certified Networking Professional) certification – for the former we are the UK’s largest Cisco Academy, and for the latter we are by far the largest in the world. In addition, we have a proud tradition of working with underserved communities, and we are currently working with Cisco Systems and other worldwide leaders to support the development of Cisco education for blind and visually impaired students. We’re also supporting research into the development of an eBook interface for the Cisco Academy Packet Tracer Network simulator. In the last year, the OU has been repositioned within the Cisco Academy programme as an Academy Support Centre. The overall message is that the Cisco partnership reflects our unique position. Our role is to support, develop and explore how distance learning via the OU can reach a wider audience.”

### What next?

My hope for the future is that the Cisco modules at the OU will continue to grow and shape the landscape of the UK and Global Cisco Certification space. The module team is working on a range of initiatives intended to extend this provision into the domain of IT infrastructure management.

# Internships

Small and medium-sized enterprises (SMEs) across the UK are benefiting from the OU's Postgraduate Internship Programme, which sees postgraduate research students seconded to businesses and other organisations, who use their skills to enhance the way they operate and benefit the people they reach.

"We invite local SMEs to participate in the OU's internship programme and tell us their specific needs with a very clearly defined programme of work," says Open University Enterprise and Knowledge Exchange Manager Dr Malcolm Stokes, "and we provide a highly-skilled research student whose studies, interest and expertise exactly mirror those requirements. And of course this isn't just good news for the company and the student, but often brings direct benefits to the SME's clients or customers and the University in terms of new collaborations and partnerships."

So as well as providing invaluable work experience for the student, the organisation gets the services of a highly motivated and skilled postgraduate student who can have a major impact at a critical time in the organisation's development.

The OU provides a range of skilled interns from all faculties, and whether their specialty is languages, computing, sciences, education, arts, social sciences or one of a host of other disciplines, their placement make an enormous impact.

Andrew Slucock, Professional Services and Delivery Manager at Dynamic Business Intelligence, says: "We felt we could broaden our horizons by bringing in someone from an academic background to provide alternative ideas, points of view and development techniques – and ultimately that's proven to be successful."

As part of the internship programme Slucock was able to call upon the services of Vassilis Angelis, studying for a PhD in Computing at the OU. "My research was based around using neural networks to see how humans perceive rhythm in music, identifying patterns in some sort of stimulus," says Angelis. "It's the same technology that is used in identifying patterns in any kind of data. My employer thought this kind of capability would be innovative because there's nothing like that in the business.

"One of the biggest challenges was realising how different it is to work in a team as opposed to working by yourself. But the internship also gives you the opportunity to experience how things are in the market, and that helps you with your decision as to what it is you want to do when you finish your studies."

"Vassilis quickly became a well-liked, core member of my team," adds Slucock, "so it's really been a success. We will definitely be looking at internships in the future and if we can get more guys like Vassilis then we'll be very happy."

## Enhancing employability

Another satisfied employer is Fredi Nonyelu, founder and CEO of wireless communications provider Brite Yellow, who was so impressed with his OU intern, Bartłomiej Barc, that at the end of the three-month programme he immediately offered him a full-time contract.

"We wanted someone who had the right skills set but who could also get up to speed quickly with our projects," says Nonyelu. "With some of the cutting edge stuff we do you need to research and understand and be up and running fast. Interns show that capability to apply their knowledge quickly and the skills set he brought was bang on what we were expecting. It's a real pleasure to know the OU is bringing out this kind of student."

And for Barc it was all about adding a practical dimension to his PhD studies in Physical Sciences. "Being engaged in the project meant I faced real-life problems – the challenges faced in the commercial world. This is a different dimension to focusing purely on the science, because you have to focus more on the competition. And, of course, it was valuable to me as it resulted in my employment!"

"Our internships develop commercial skills and enable our researchers to translate their academic knowledge into everyday life situations," says Stokes. "It also greatly enhances their employability. When we started the scheme we looked for placements for our students. Now organisations are coming to us requesting multiple placements."

The internships are sponsored by Santander Universities Global Division, part of the banking giant, providing £1500 to support the intern's salary during their placement. Carlos Leira, Santander Universities' Marketing and Communications Director, says the schemes allow the bank to 'give back to society'. "Supporting students and recent graduates to take their first steps in the job market is crucial to the economy."

But according to Leira, the programme's benefits reach far beyond the student and the SME – and even further than Santander and The Open University. "SMEs need this 'new blood' arriving in the company with a wealth of new knowledge and enthusiasm and they will benefit from new ideas to grow and expand," he says.

"For students it is an excellent opportunity to value SMEs over larger corporations, having more chances to be heard and seeing the direct results of their work. Ultimately this will benefit their communities as a whole, generating welfare and better societies."

Fredi Nonyelu and OU Intern Bartłomiej Barc of Brite Yellow



# Making the difference

Alumni of The Open University are known for their hard work, drive and determination, but equally impressive is their generosity. In the last year alumni, supporters, trusts, foundations and organisations have donated over £2.9 million to the University.

## Gifts from alumni and friends

2013/14 was another record-breaking year, with gifts to the University from more than 9000 individual donors totalling an unprecedented £735,000. Every penny donated means the University can do more to support students with disabilities and disadvantaged students, providing high-quality university education to all who wish to realise their ambitions and fulfil their potential – regardless of who or where those students are and the challenges they face.

## Lasting legacies

The University has continued to see increasing numbers of alumni and friends supporting the OU through a legacy gift. More than a thousand supporters have told us that they are remembering the OU with a gift in their Will. This year, the University's work has benefited from a total of £456,170 in bequests.

In 2013 the OU transformed a historic walled garden at the heart of its Milton Keynes campus into a Legacy Garden to honour the donors who have remembered the OU in their Wills. In June this year the first plaques celebrating the lives and achievements of donors were unveiled in a special ceremony.

Alumni, family and friends joined staff to visit the garden and witness the unveiling of plaques honouring 18 named donors whose gifts have been received by the OU. A further 11 anonymous donors were thanked as part of the event.

Among those attending the ceremony was Patricia Campbell, whose husband Norman Walton is remembered on one of the plaques. Norman began his first OU course in 1975, achieved his BA in 1977 and continued studying with the OU for a further decade.

The gift he left to the University was unrestricted, meaning the OU can put it to use wherever funds are most needed. Two current University priorities of support for students with disabilities, and education in developing countries, were causes of interest to Norman and Patricia.

"I know Norman would have been very proud; I certainly was," said

Patricia. "You cannot give people anything better in their lives than education, because it frees them from poverty of knowledge. Once you give people knowledge, you empower them."

You can find out more about supporting the next generation of students and projects of the future, through a gift in a Will, at [www.open.ac.uk/legacy](http://www.open.ac.uk/legacy)

## Gifts from charitable trusts, foundations and companies

The OU's work in taking education to countries which face enormous challenges received the massive boost of a £750,000 donation from OPITO International, the global oil and gas industry's training standards body. The funding will have multiple benefits across developing regions, such as establishing new projects.

"The beauty of OPITO's financial support is that it is flexible, ensuring that we can react quickly to meet specific in-country needs," says Danni Nti, Director of the OU's International Development Office. "With OPITO's support, we can uncover new solutions, support local partners and deliver effective programmes which really meet local needs."

A gift of more than £247,000 from the Esmée Fairbairn Foundation is helping the OU-led Floodplain Meadows Partnership to safeguard some of Britain's most fragile, beautiful and species-rich landscapes. For the next three years it will fund the vital work of the Partnership's research and outreach co-ordinators, as well as ensuring a strong legacy for this habitat in the future.

Emma Rothero, Outreach Co-ordinator, says: "Britain lost 98% of its flower-rich floodplain meadows last century. My role is to engage with landowners, site managers, the conservation sector and community groups and help them understand how best to manage and restore these meadows. The research co-ordinator organises the gathering and logging of research data on which this advice is based.

"Our traditional floodplain meadows are sustainable, resilient ecosystems which have been managed in the same way, in some cases, for more than one thousand years. They have enormous value as

### How to donate

To help us offer life-changing learning to everyone with the determination to study, please visit [www.open.ac.uk/giving](http://www.open.ac.uk/giving)

wildlife habitats, in helping to reduce the impact of flooding, absorbing nutrients and as places of cultural, recreational and spiritual value. We are very grateful for the Esmée Fairbairn Foundation's continuing support in helping us to reverse their decline before it's too late."

Generous funding from banking group Santander through their Santander Universities scheme has supported postgraduate research students and OU academic staff in a range of research activities. These include collaborative research with other Santander Universities in Europe, Latin America and the UK, field research in Latin America, exchange trips and attendance at overseas conferences. Santander Universities have recently agreed to further support the OU in these activities over the next three years.

Researching Flood Plain Meadows

## SUPPORT THE OU AND MAKE AN IMPACT

The Open University would like to thank all those who gave gifts between 1 August 2013 and 31 July 2014. A full list of donors can be found at [www.open.ac.uk/donors](http://www.open.ac.uk/donors)

### Vice-Chancellor's Circle

The University recognises the exceptionally generous support of the following named individuals, trusts, foundations and corporations and two anonymous donors:

Banco Santander  
Mr Howard Brown and Mrs Elizabeth Brown  
Mr Richard Delbridge  
Eranda Foundation  
Ethiopiaid  
The Exilarch's Foundation  
Miss Ann Goldsmith

Lord and Lady Haskins  
The William and Flora Hewlett Foundation  
The Hintze Family Charitable Foundation  
Mrs Joanna Hunt  
Intermarine Offshore Services Ltd  
Mr Roger Jefcoate and Mrs Jean Jefcoate  
The Richard & Anne King Charitable Trust  
OPITO International  
PF Charitable Trust  
Baron Thyssen  
True Potential LLP  
Mrs Rachel Webb  
Professor David Wield  
The Wolfson Foundation

The University recognises the generosity of the following, and four anonymous donors, who have made donations of between £1000 and £5000 in the past year:

Mr George Ahier  
Miss Alex Alec-Smith  
Dr Kenneth Cameron  
Mrs Kay Catherall  
Mr Neil Davidson  
Dr David Day  
Dr John Drysdale  
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Mrs Irene Sherrington  
Mr Michael Steen  
Professor Mary Stuart  
Mr Paul Todd  
Mr Richard Trounson  
Mr William Vallance  
Mr Reinalt Vaughan-Williams  
Dr Charlotte Wood  
Mr Derek Yeomans

# Financial highlights for 2013/14

During the year the University continued to adapt to the changes to the funding regime in England introduced in 2012/13, with funding for higher education in England being shifted from mainly funding body grants to largely student fees; the total funding received per student full-time equivalent (FTE) from all sources is broadly unchanged – it is the different mix of funding sources that can be seen in the financial statements. These changes affected many facets of the Financial Statements in 2012/13, most notably Funding Body grants, tuition fees, debtors, creditors, and cash flow. The changes were only implemented in England but, since the market in England is so significant, the overall results have been affected. This year is the second year under the new funding regime; the continuing effects of the changes can be seen in the results for the year, most notably in the anticipated reduction in student numbers, further increase in tuition fee income and decrease in funding body grants.

Total income decreased by £43.3 million or 10% to £404.2 million. Funding body grants decreased by £49.1 million or 25% to £149.0 million largely as a result of the reduction in recurrent grant from the Higher Education Funding Council for England (HEFCE); this decreased by £58.5 million or 38% to £96.3 million but still represents 72% of all recurrent grants from the various funding bodies. Some of this decrease is the result of recurrent grants in Northern Ireland transferring to the Department for Employment and Learning (Northern Ireland) (DELNI) from HEFCE. The total recurrent teaching grant received from DELNI was £6.1 million; the University also received recurrent teaching grants from the Scottish Funding Council (£21.0 million), the Higher Education Funding Council for Wales

(£9.4 million) and the National College for Teaching and Leadership (£0.1 million).

Fee income increased by £6.6 million or 3% to £213.1 million. The majority of the increase was in respect of fees paid by students, or on their behalf by their employers or the Student Loans Company, in England, which increased by £8.8 million or 6% to £167.8 million. This increase is a result of the changes in funding regime. The combined decrease in fee income outside England was £2.2 million.

Income from research grants and contracts increased by £0.8 million or 5% to £15.5 million, due to increased work funded from Research Councils and other sources. Other income decreased by £1.1 million to £23.4 million. Endowment and investment income decreased by £0.5 million or 14% to £3.2 million.

Expenditure decreased by £7.6 million or 2% to £421.1 million, after incurring £28.0 million on approved strategic projects, and was well within the budget set. Total staff costs increased by £6.7 million or 2% to £281.6 million and other (non-pay) operating expenses, excluding depreciation and interest, decreased by £14.7 million or 10% to £129.5 million.

The net result was a deficit before tax of £16.9 million compared to a surplus of £18.8 million last year. Whilst a deficit was budgeted for 2013/14, a return to surplus is planned for 2014/15.

The move from a surplus of £18.8 million in 2012/13 to a deficit of £16.9 million in 2013/14 is a result of a decrease in income of £43.3 million (10%) not being offset by the decrease in expenditure of £7.6 million (2%).

The major cause of the decrease in income was the 25% drop in funding council grants not being fully replaced by increased tuition fee income. The most significant driver of this reduction in income was the reduction in student numbers from last year of 9% in headcount and 8% in full-time equivalents largely as a result of the funding changes in England that have impacted in the whole part-time sector.

The Open University is performing very well in a competitive and contracting sector, achieving its strategic objectives to support better its students and maintain financial sustainability. It has met its student market targets again this year, based on the UK Market Strategy it adopted in 2012 in the light of significant changes in fees and funding. The targets it set for student numbers in 2013/14 were ambitious, building on the success achieved in the two previous years. It has substantial reserves, and has anticipated and planned for a reduction in overall student numbers. It has recorded a planned deficit this year, which is 4% of its total turnover, partly as a result of the changes in fees and funding and the need to continue to invest in strategic projects. The Open University has planned to return to surplus in 2014/15.

For a full understanding of the University's financial position please refer to the audited financial statements, which can be found at [www.open.ac.uk/foi/main/expenditures](http://www.open.ac.uk/foi/main/expenditures)

RESULTS, CASH FLOWS, ASSETS AND RESERVES	YEAR ENDED 31 JULY 2014 (£m)	YEAR ENDED 31 JULY 2013 (£m)
Funding body grants	149.0	198.1
Tuition fees and education contracts	213.1	206.5
Research grants and contracts	15.5	14.7
Other income	23.4	24.5
Endowment and investment income	3.2	3.7
<b>TOTAL INCOME</b>	<b>404.2</b>	447.5
<b>TOTAL EXPENDITURE</b>	<b>421.1</b>	428.7
<b>(DEFICIT) / SURPLUS FOR THE YEAR BEFORE TAXATION</b>	<b>(16.9)</b>	18.8
Net cash flow from operating activities	62.9	16.5
Net returns on investments and servicing of finance	5.4	4.1
<b>NET CASH FLOW BEFORE INVESTING ACTIVITIES &amp; TAX</b>	<b>68.3</b>	20.6
Fixed assets	145.7	154.4
Endowment assets	0.5	0.6
Net current assets	243.5	256.7
<b>TOTAL ASSETS LESS CURRENT LIABILITIES</b>	<b>389.7</b>	411.7
<b>TOTAL RESERVES</b>	<b>254.7</b>	271.6
<b>OTHER KEY STATISTICS</b>		
Number of full-time equivalent students	<b>73,528</b>	79,586
Total number of students	<b>187,338</b>	206,300
Percentage of students satisfied with the quality of their course (2014 National Student Survey)	<b>91</b>	92
FutureLearn total course registrations	<b>721,137</b>	n/a
FutureLearn total OU course registrations	<b>103,341</b>	n/a

# 91%

Students who are satisfied with the quality of their course, as measured by the National Student Survey 2014

# 73,528

Number of full-time equivalent students

# 187,338

Total number of students



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