The Open University

Open for Business

2013 - 2014 impacts

Life-changing Learning

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For a full copy of The Open University's 2013-14 Annual Report, entitled Life-changing Learning, including Vice-Chancellor's welcome and financial highlights, visit: **www.open.ac.uk/about/main/mission/annual-reports**

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SUPPORTING ORGANISATIONS' NEEDS

For organisations to be effective and competitive, it is crucial to have a highly-skilled, knowledgeable and experienced workforce and access to high quality expertise and resources.

The Open University (OU) focuses on providing learning and development, research, recruitment and consultancy solutions, to help organisations remain competitive in an increasingly complex global market.

For over 40 years, the OU has developed an unrivalled expertise in how adults learn and apply that knowledge at work, allowing organisations to develop the higher skills they need, in a flexible manner that reduces impact on an employee's day-to-day job.

Through the University's pioneering learning experience and cutting-edge research, the OU is currently providing first-class higher education skills to almost 200,000 people, including over 16,000 overseas. Over 70 per cent of OU students are in employment and the OU's experience in doing business with over 30,000 employers has helped to ensure that OU study has an immediate impact on staff performance.

The Open University's expertise in teaching and research spans across numerous subjects relevant to business needs including leadership and management, STEM, IT, health, education and law. The variety of the OU offering is why four out of five FTSE 100 companies have invested in OU courses for their staff.

Specialising in 'practice-based learning' means staff reflect on their performance and embed new ways of working from day one. Many organisations, such as FirstGroup, Babcock International and Hay Group, choose to work with the OU to roll out programmes across multiple sites for a consistent learning experience. Through The Open University Business School's practice-based MBA, currently celebrating its 25th anniversary, the University has taught over 24,000 of the world's current and future business managers.

The OU firmly believes in opening up a world of learning to everyone and provides many environments to encourage adults to get back into developing their knowledge and skills.

Whether it is through offering free learning resources on the OpenLearn website, podcasts on iTunesU, or playing a leading role in FutureLearn – the UK's home for Massive Open Online Courses (MOOCs) – the OU continues to find innovative approaches to help everyone gain the skills the UK needs to thrive.

It's not just learning expertise that organisations are interested in; The Open University regularly conducts large-scale research projects with industry and can provide organisations with a wealth of expertise and insight. Nearly three quarters of the OU's research has been assessed as world-leading or internationally excellent.

OU students are also highly desirable: organisations such as the Metropolitan Police Service, KPMG and Univeler seek OU graduates. Employers say that OU graduates are highly motivated and have excellent organisation and time management skills. Through OU study, using a variety of online resources and applications, graduates develop their IT skills and with 400 study locations across the UK and around 1,100 local events each year, networking is a way of life for OU students.

The following sections in this report demonstrate the various ways in which the OU has supported organisations from 2013 - 2014.

Over 1,300 organisations from a wide range of industries regularly invest in courses from the OU; including IBM, the University of Oxford and the NHS

Learning & Development

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

A NATIONAL TRAINING PROGRAMME

The OU has supported FirstGroup plc's staff development for more than 10 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.

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 one per cent of such institutions worldwide – and FirstGroup gains a pool of management-ready executives. The OUBS is 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.

Good balance between theory and practice

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 undertake projects in the workplace that would demonstrate that you understood the theory."

VIDEO: In this video, Kay Devine and Ben Gilligan from FirstGroup talk about the benefits of working with The Open University and how the OUBS practice-based MBA has helped the company to attract and retain talent: **http://youtu.be/dqyMsOQontU**

Image: Thinkstock

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 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, who provide 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.

The first cohort of over 1,500 participants came on board in November 2013: since then more than 3,500 have studied. The aim is to develop 12,000 employees through the programme in the next four years.

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. Close to 900,000 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 is approaching two million. Not only that, but courses have consistently received positive feedback with more than 90 per cent 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."

Social learning

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; each piece of course content has 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 per cent 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 per cent 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

Mike Sharples

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 BBC, consumer technology and social media backgrounds for the design of its unique online software platform, capable of accommodating an almost infinite number of learners.

Burgeoning partnerships

27 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 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.

Organisations working with FutureLearn include Marks & Spencer, BT and HM Government – which is supporting the OU's *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 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."

Effectively 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."

BLENDED LEARNING WITH PROFESSIONAL CURRENCY

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 10 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 iBook 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."

Andrew Smith

TRAINING TOMORROW'S NUCLEAR PROFESSIONALS

Image: Thinkstock

When the National Skills Academy for Nuclear (NSAN) identified a graduate skills gap in the valuable nuclear sector, they partnered with the OU to create a programme that could address it, resulting in a new training certificate for tomorrow's nuclear professionals.

The UK's nuclear industry employs more than 40,000 people and generates almost a fifth of the country's electricity. As older nuclear power plants are decommissioned and plans created for new ones to be built, the industry found that it needed new ways to equip engineers with the necessary skills. The OU's work with the NSAN has opened a new pathway for the nuclear professionals of the future with the Certificate in Nuclear Professionalism (CoNP).

Jean Llewellyn OBE, Chief Executive of the National Skills Academy for Nuclear, says the partnership began because employers were having issues with the skills of graduate entrants. "They were not getting the 'work- ready' graduates they needed," she says, "specifically around communication, project management, team leadership, commercial awareness and some technical nuclear skills. So The National Skills Academy for Nuclear started working with employers to understand exactly what skills were needed. It was decided we needed a flexible new programme for the industry that could be rolled out across the country. The OU's accessibility and expertise made it the ideal lead partner."

The OU has been involved from day one and helped the academy develop the overarching programme. This course was developed with feedback from the academy's 100 employer members across the nuclear industry. The key issue that emerged from this feedback was that employers wanted generic engineers and scientists – not necessarily those with nuclear specific degrees, but rather entrants who understood the industry and held 'softer' skills. While graduates' technical skills and knowledge may have been high, the commercial skills needed to cost or manage a project were lacking.

"The partnership is an innovative training model and a unique collaboration between industry and university," says Llewellyn. "I don't believe something like this has been developed before. I see this qualification becoming the UK's benchmark for nuclear professionalism with the potential to become globally recognised."

Magnox Ltd is the largest employer sponsor of the qualification. Mandy Walker, L&D Manager of Magnox Ltd, says "This qualification provides our high potential graduates with the core skills essential to our nuclear decommissioning business. What makes this programme different is its ability to support us in developing 'nuclear professionalism'. Some of our graduates are the first to complete in the country – which is a key achievement for us."

The successful Certificate of Nuclear Professionalism qualification was recognised with an award from the influential Nuclear Engineering International magazine in its first year of presentation. Award judge Ulrik von Estorff, operating agent at the European Human Resources Observatory for the Nuclear Energy Sector, called the The CoNP "a very innovative and professional course with a high involvement of the nuclear industry in its design."

Find out more about the Certificate in Nuclear Professionalism at: **www.nuclear.nsacademy.co.uk**

CELEBRATING 25 YEARS OF THE MBA

The Open University Business School (OUBS) is proud to celebrate the 25th anniversary of the MBA programme in 2015.

The triple accredited MBA, which was featured amongst the best in the world in the Financial Times Online MBA Rankings 2014, has experienced considerable developments over the past 25 years; from presenting the first MBA graduates with their awards in 1992 to the launch of the new MBA programme in 2010, enabling students to complete many elements entirely online and benefit from peer support via forums and shared projects.

The 25th anniversary is being celebrated with a range of events and activities and you can find out more at **www.open.ac.uk/business-school/study/mba/mba-25th-anniversary**

MBA Explorer iPad App

OUBS has also launched the 'MBA Explorer' iPad app, which is revolutionising the way prospective students research the most suitable MBA for them.

Launched in October 2014, the app is a Higher Education sector pioneer, containing useful interactive tools such as a fee calculator, a study readiness test and the latest MBA module content.

Unlike other MBA apps, which are micro-versions of the course websites, this provides an interactive, media-rich experience for users that is both enjoyable and simple to use.

Dean of The Open University Business School, Professor Rebecca Taylor, said: "The MBA market remains highly competitive and this app reflects the innovative technology and expertise enjoyed by our students, giving our prospective students a taste of what we can offer them."

The MBA Explorer iPad app is now available for free through the iTunes Store: **www.openuniversity.co.uk/mbaexplorer**

Masters in Finance or Human Resource Management

The Open University Business School's MSc in Finance is a specialist qualification and will enable practical and professional development for individuals who wish to advance their career as finance professionals or who are seeking a transition into the sector.

And for employers, the MSc in Finance, which has been accepted into the CFA Institute Recognition Programme, will further develop their employees' skill set and support improvements to working practices in the organisation.

The scope of readily-applicable knowledge, skills and applications that students will acquire will enable practical and professional development in wide ranging roles in finance, including: investment and portfolio management; corporate finance and treasury; consultancy and investment banking.

For this reason, the content is equally relevant for early career finance professionals and those aspiring for a transition into the financial sector.

The MSc in Human Resource Management is developed and delivered by world-class academics and practising business professionals to develop a robust theoretical foundation with a practical understanding of what it is to be a human resource practitioner.

The CIPD accredited qualification provides students with the specialist skills essential for a career as a modern human resource practitioner and breaks new ground as it incorporates cutting edge learning materials and thinking about strategic approaches to human resource management with the practical application of these ideas to areas such as recruitment and talent management, employee relations and employee engagement, and learning coaching and mentoring. In addition, the MSc will be delivered completely online.

The content of both these Masters degrees is aimed at UK and international students to prepare students for the increasingly diverse global economy.

Pathways to Success

In June 2014 The Open University in Wales launched a new guide to help students 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.

OU Anywhere app award

The simple yet innovative concept behind the '*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 the OU's Learning and Teaching Solutions (LTS), the app marks the culmination of an ambitious drive to digitise all OU 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. **More on Page 19**.

Organisations such as Metropolitan Police Service, KPMG and Unilever seek OU graduates

Recruitment

CAREERS: RECRUITING THE RIGHT TALENT

The Open University (OU) works with employers to help students and graduates achieve their personal and professional goals. It's dedicated to fulfilling both sides of the job market; providing students with education and advice to support their studies, transition into the workplace and aiding their careers and ambitions, as well as working with employers to help fill vacancies from a huge and varied pool of OU graduates.

The OU Careers Advisory Service builds effective relationships with regional, national and international employers, from large supermarket retailers to SMEs; raises employers' awareness of students' potential in the workplace; and facilitates lines of communication between employers and applicants from The Open University for employment, work experience and mentoring.

Working with employers to advertise vacancies

The OU offers a service to employers in JobZone, a free-of-charge online vacancy service which allows organisations to advertise job opportunities to an audience of OU students and graduates. Other services for employers include information on recruiting OU students and graduates, finding out more about the graduate labour market and the OU student profile. Recent employers taking advantage of this service include Allianz, Aldi, NatCen and IBM.

One of the OU's unique selling points is the sheer number and diversity of its students and graduates, spread geographically across the UK, Ireland and further abroad; that's a community of around 500,000 people that can be accessed via a single free-of-charge advert. And Rebecca Fielding, from GradConsult, knows, first hand, the benefit of recruiting from The Open University **(see Page 14)**.

The OU Careers Advisory Service works with employers to advertise vacancies, raising employer profiles with students and initiates interaction between organisations and students via online forums, where employers can answer questions from students – a free service not confined by geographic location.

Prepared for working in global and virtual context

"What we have to offer employers is the sheer number of students, the geographical coverage and the diversity of our student body. And also the transferable skills as many of our students have already been in employment," says Matthew Woolley from the OU's Careers and Employability Project Team.

By the nature of OU study, predominantly part-time and via distance learning, much of The Open University's student population is already working; OU students fit their studies around their working and family lives and already have the transferable skills required of employers in the workplace.

Ellen Cocking, Deputy Head of OU Careers, says the OU has something special to offer employers. "You get a unique student experience when you study with the OU. The way our students study involves things like interactive online classrooms, so our students are brilliantly prepared for working in a global and virtual context. "Our student population is also unique," she says. "We have career entrants – those who are just starting out in the world of work; we have career changers – those already in work but looking to move to a completely different career; and we have career developers – those in work who are looking to move forward in their current career.

"So as well as focussing on the graduate recruitment market, there's also huge potential to look at things like part-time opportunities and experienced hires."

Geraldine Harrison, Learning Design Manager (HR) at Rolls Royce, says they employ in excess of 300 graduates of Open University Business School programmes, and they recommend it to their management population.

Employers are also invited to provide video or audio clips or quotes on careers-related topics about the value of OU study to an organisation, as well as putting organisations in touch with academic departments to help engagement over courses for the purpose of recruitment.

Recruiters who are particularly keen to raise their profile with OU students and graduates can work with the team to create a Showcase entry and become one of a discrete range of employers who are already highlighting opportunities with their company in this way. Kuehne & Nagel, Slaughter & May and Waitrose have all taken up this opportunity.

Doubling the number of job opportunities

The OU Careers Advisory Service is currently working on a pilot scheme to increase engagement – launched in October 2014, it's already doubled the number of job of opportunities being advertised to students and graduates compared to the same time last year, with almost double the number of students and graduates now looking at vacancies.

As part of this pilot, vacancies are being promoted on the *Open Uni Careers* profiles on Facebook, Twitter and LinkedIn, and a suite of webinars and online events will follow in which employers can talk to potential recruits. A second strand of the pilot will home in on mentoring, whereby employers will have an opportunity to mentor OU students.

They're also looking to work with industries that are struggling to recruit into their sectors. Retail, logistics and energy companies all find it hard to recruit and OU Careers Advisory Service is interested in working with them to promote vacancies and the benefits in working for them.

They can pinpoint, for example, how many students are registered on a certain module in a specific area of the UK to help target employers in those areas. It also plans to work with SMEs, as the largest recruiter of students in the UK.

You can find out more about services for employers here:
www2.open.ac.uk/students/careers/employers

Image: Thinkstock

GETTING THE BEST OUT OF RECRUITMENT

When Rebecca Fielding, MD/Owner of Gradconsult, was debating the target list of universities with her line managers, she found that jelly babies provided a useful metaphor. She believed that if they continued to go to the same universities as everyone else they were going to continue to get the same nice, young, middle-class, affluent graduates – or 'jelly babies'. But if the company was serious about diversity, it needed to go looking for different types of people, in different ways, in different types of institutions. And that is exactly what it did, with great results, as Rebecca explains…

The days of spending money in poorly attended on campus presentations were behind me. Instead I enjoyed free sessions, well supported, promoted and attended, and ultimately had the pick of the very best students there. If you're thinking seriously about social mobility and genuine diversity, here are the lessons I learnt to help you seek out your very own gobstoppers, flying saucers and fizzy fish…

1. Forget what you think you know

If you have always had a traditional target university list, you will have views about the types of students you may find at other institutions. This may or may not include: less geographically mobile, less academically successful, less aspirational or less employable. In my experience these assumptions, like all generalisations, were neither true nor helpful. One of the hardest things for me to do was recognise my own preconceptions and put them to one side.

2. Check the numbers

Compare numbers from your current target universities with some of the institutions you might be thinking of working with. The numbers can be insightful and startling. I advise looking at:

- Total financial support they provide to students (Offa reported £386.5 million on bursaries and scholarships in 2011/12, helping 455,000 students from lower income and other under-represented groups. In 2013/14 they plan to invest £442.2 million). This number is distinctly different from outreach investment, which often includes school/community work and might not be representative of the student profile.
- If you can, find out fee-paying versus state-school student proportions, bearing in mind a large per cent of the UK population don't go to fee-paying schools!
- Numbers for part-time students and those studying through an access route (a non-traditional route, typically not A-levels and Highers in Scotland).
- Diversity profile in terms of age, gender, disability, ethnicity (and things like religion or sexual orientation if you wish, and if the university captures this).

Having these numbers helped me to understand why our current intake looked the way it did, enabling me to build a rationale for choosing new partners and tell the story to others.

3. It's not just post-92s

When you think outside of the normal target population you might immediately think of post-92 newer universities. Think more broadly than this; to distance learning institutions like The Open University **(see case study on Page 14)**.

4. Think part-time

Part-time students aren't normally on campus and/or interested in the normal graduate

recruitment activity, so can be missed by most recruiters. And yet part-time students are often studying whilst working, come with in-built life/work experience, prioritisation skills, high motivation and a clear career driver for study. What's not to like? I used to time events with evening classes, or speak with tutors of part-time courses about targeting their students. According to HESA's most recent stats, there are 210,620 post-grad UK students and 396,555 undergraduate students studying part-time across all UK HEIs. That's 607,175 talented people not being routinely targeted.

5. Be confident
If you decide to go to places you haven't been before you will be challenged. I was questioned by line managers in the business, colleagues, my boss (at times), other recruiters and even some of the existing graduates. You need to hold your nerve, explain your rationale and be confident in your decision to try something new. Knowing your numbers (see below) can really help with this. After all, if you keep doing what you've always done, you're going to get what you've always got. Be proud to change the game!

6. Go with the people not the place
Find great careers people that 'get' you, your business and that you could enjoy working with. Look for an idea or opportunity to work together, however small, and just give it a go. If you find the right people to work with it often ends in success. And of course, once you have a few great people in your business from an institution it becomes so much easier. Edge Hill and Huddersfield were both great examples of this for me when I was at the Co-operative Group.

7. Tell your stories
When it works tell your stories – like the relationship between Heinz and Northumbria business school. It started small with one or two success stories of undergraduate placement students that led to a fantastic pipeline of their best graduates choosing Heinz year after year. Tell your stories using real people, not just externally but internally too.

People remember stories. I hope you remember this one and break out of the jelly baby mould...

HOW OU OFFERS QUALITY AND QUANTITY

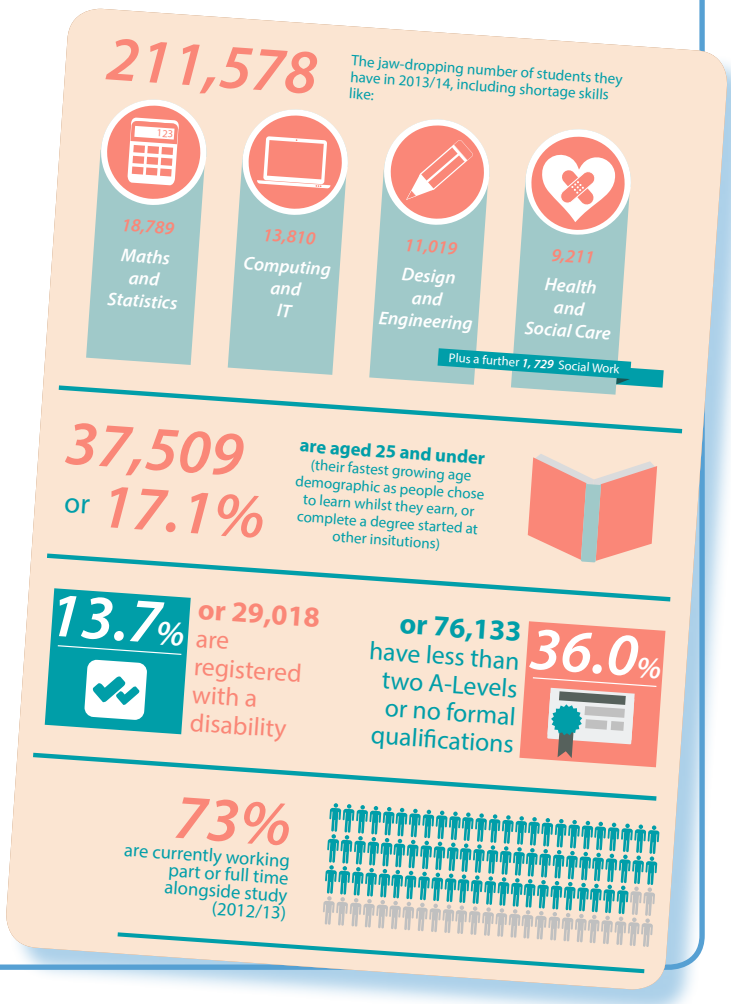
I started work with The Open University in 2004 on an early version of a 'virtual careers fair' and some initial job postings. I was keen to target them as part of the Co-operative Group's 'altogether different' inclusive and age-positive campaign.

That year we received recognition from the AGR, EFA and AGCAS for diversity but crucially we achieved one of the most diverse applicant/graduate pools for years with superb mix of age, disability, ethnicity and social backgrounds. Yes, it was part of a bigger campaign so our work with the OU cannot be directly attributed, but other benefits can be.

OU students applied to us for a wide range of other jobs, and employees who were studying with the OU fed back hugely positive comments about our partnership (and how valued they felt as a result). Quality wise, the candidates often did well, due to their greater work experience and clearer career aspirations. And the quality of research was evidenced in a top third UK research position with over half of research deemed world-leading or internationally excellent RAE (2008). But if you remain unconvinced by the quality argument, the quantities might just convince you.

Times have moved on and employers can now participate in digital events, forums, webcasts, job postings and more interactive content.

If you would like to find out more about working with the OU you can contact Matt or Pam at **careers-service-employers@open.ac.uk**



This article and infographic (Page 13 & 14) are taken from the August/September 2014 edition of Graduate Recruiter, the official magazine of the Association of Graduate Recruiters (AGR)

WIN-WIN FOR EMPLOYERS AND EMPLOYEES

When Donna Goss did a degree in politics aged 18, she had no idea what career path to follow. But 10 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 placements are worked out together by the university and the hospital, so she gets a good balance of learning inside and outside that hospital. Her employer gains too, hanging on to a valued member of staff, not only once she's qualified but during her training, too. "Once qualified, the idea is that I'll be a prime candidate for 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 to catch up with, compared to where I am."

Angus Condie, 49, 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."

'Meeting managers from other environments'

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, says 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."

Adam Priestwood, a 28-year-old from Torquay, 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've seen the benefits... as I studied, I was able to use the experience in my work'

"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."

Through our Knowledge Transfer Partnerships, internshps and providing organisations with access to OU academics, our expertise helps organisations grow

Expertise

KNOWLEDGE TRANSFER PARTNERSHIPS

The OU's Dr James Bruce, one of the KTP academics

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." The KTP recently finished and was awarded an outstanding grade by the Technology Strategy Board.

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.

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."

INTERNSHIPS

Small and medium-sized enterprises (SMEs) across the UK are benefiting from the OU's Internship Programme, which sees postgraduate research students seconded to businesses and other organisations, who use their skills to improve their productivity and competitiveness.

"We invite SMEs to participate in the OU 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 placements 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."

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

Fredi Nonyelu, founder and CEO of Brite Yellow and OU intern Bartlomiej Barc

"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 £1,500 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."

NEW EDUCATIONAL TECHNOLOGY INNOVATIONS

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 award-winning 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 1,000 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."

Leaders in learning analytics

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.

Manageable, effective and enjoyable

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 learning more manageable, effective and enjoyable for students, while also helping staff, students' families and other education providers and learners worldwide.

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 ground-breaking 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."

Rosetta mission

Open University instruments have been aboard many major European Space Agency (ESA) missions – and were at the forefront again in November last 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?"

Space camera onboard

Using know-how from the Rosetta mission, the OU has worked with BAE Systems to develop an award-winning vital piece of safety equipment on board Royal Navy submarines **(see Page 23)**.

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 grams (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."

Academics from the Department of Physical Sciences with Rosetta's Philae lander

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.

Assessing the wider impact

"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, a leading global provider of technology solutions, to develop silicon-imaging sensors for space exploration has a range of everyday applications, says Dr Ross Burgon, DPS's Knowledge Exchange Fellow **(see Page 22)**.

"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."

We regularly conduct large-scale research projects with industry and provide organisations with a wealth of expertise and insight

Partnerships

RED BULL RACING: FROM SPACE TO RACE

Technology being developed to survive the harsh conditions of outer space is being harnessed to drive the Milton Keynes-based Infiniti 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 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."

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, Infiniti 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.

Developing the next generation of scientists

The OU is home to the Centre of Electronic Imaging (CEI) in collaboration with e2v, a leading global provider of technology solutions for the medical, science, aerospace, defence, commercial and industrial markets.

Headquartered in the UK, e2v employs around 1,600 people and is a world leader in the supply of image sensors to organisations such as NASA for the Hubble Space Telescope. e2v provides sponsorship for research training at postgraduate and post-doctoral levels. The main focus of CEI's work is the development of imaging sensors for space applications and to promote knowledge exchange within the industry. The centre has around 20 researchers and PhD studentships and there is also the option for e2v employees to gain a PhD on a part-time basis.

Dr James Endicott, Principal Applications Engineer, says: "The knowledge exchange is two way. It's moved from us having 30 years' experience in imaging and training research students to them coming to us with thought-provoking work."

Professor Andrew Holland, who leads CEI, says: "The OU and e2v collaboration is a leading example of knowledge exchange between academia and industry. It helps promote the UK industry overseas and develop the next generation of scientists and engineers."

Do the maths: Putting technology into finance

Innovate Finance is the newly announced industry group for the promotion of the FinTech sector within the wider Finance industry and positioning London/UK as the global centre of this momentum.

FinTech, essentially, is the application of technology into the finance sector and the resultant applications and approaches such as mobile banking, crowdfunding etc.

Innovate Finance launched in August and now has over 60 members including the major retail banks, as well as leading Fintech players such as Monetise, through to new entreprenuerial start-ups.

The Open University is the official education partner of Innovate Finance, and is now working with member companies to develop courses aimed at educating this sector on FinTech and the impacts and changes this will have to individual roles, organisations and business at large.

PARTNERSHIP ENHANCES SUBMARINE SAFETY

Scientists from the Space Instrumentation Group (SIG) at The Open University and BAE Systems have worked together with members of the MoD's Defence Equipment & Support (DE&S) to develop a step-change in a vital piece of safety equipment on board future Royal Navy submarines.

Submarine atmosphere monitoring is a specialist area that holds particular challenges and requires specialist equipment for long-term monitoring across the vessel. BAE Systems and DE&S identified the need to develop a UK capability in this area and the need for a new analyser, harnessing the expertise behind Ptolemy - the shoe-box sized instrument OU scientists developed and built in collaboration with the UK's Science and Technology Facilities Council's (STFC) RAL space team for the European Space Agency's Rosetta mission.

Business Secretary Vince Cable said:"Rosetta is a great example of how our investment in big space programmes delivers a wide range of benefits for the UK. Not only do we get to explore our solar system and push the boundaries of science, but we reap the considerable economic and social benefits that new space technologies provide. It's great to see the skills and technologies our scientists and engineers have developed for this mission being applied in other areas."

The OU team, led by Dr Geraint Morgan, was selected for the project as the approach required to develop space instruments, unlike traditional academic departments, requires a multi-disciplinary approach and collective experience of developing systems that push the boundaries of engineering. The team applied their cutting-edge know-how to the development of the new analyser, enabling the creation of a design that would be smaller, cheaper and more capable than the existing solution. DE&S funding was sought and won via the BAE Systems Technology Demonstrator Programme to investigate and then develop a UK capability.

Improved accuracy and precision

Mark Scaife, Engineering Manager at BAE Systems Submarines said: "Nuclear submarines are amongst the most complex machines ever devised, patrolling a hostile environment 24 hours a day, 365 days a year, in some of the most remote places known to man. The Atmosphere Analyser is capable of giving real-time readings to crews so they can react quickly to any dangerous build-up of gases, an invaluable safeguard and one that can potentially save lives."

The equipment has been tested on patrol and has demonstrated a significant performance improvement over the existing equipment with improved accuracy and precision, a greater range of analytes measured, enhanced automation, a significantly improved user-interface and lower unit cost. The system has now become part of the design for the Vanguard replacement programme. There is also an opportunity to fit onto Astute Class boats, and across the entire fleet to provide performance/safety improvements and eventual cost savings. The UK company Analox Military Systems has now been selected to finalise the development and to manufacture the systems.

NEWS

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

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 is the ideal place to explore the ramifications of rapid population expansion. MK:Smart is a £16m initiative led by The Open University, which brings together higher education and industry partnerships with the aim of helping to secure the future economic growth of Milton Keynes.

The OU is working with a variety of partners, including BT, E.ON and Milton Keynes Council, to develop solutions to water, transport and energy challenges in Milton Keynes.

At the centre of this programme is the MK Data Hub, a state of the art data acquisition and management infrastructure, which curates and makes available a variety of data sources relevant to how the city functions, including: local and national open data resources; key infrastructure networks (energy, transport, water); satellite data; relevant sensor networks (e.g., weather and pollution data); and crowdsourced data from social media or through specialised apps.

In particular, the MK Data Hub will make it possible to implement radical new solutions for managing demand, a key enabler to ensure that the city's capacity to reach forecast growth potential of 64 per cent by 2026 can be effectively and sustainably realised.

The reusable solutions we are developing have the potential to be applied to cities worldwide.

Visit **www.mksmart.org** for more information.

Changing lives in India

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**

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.

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 per cent for overall student satisfaction, placing it as one of the top 10 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 per cent.

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

The Open University Students Association (OUSA) enjoyed a rise of three per cent 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 six per cent since 2012, to 64 per cent.

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 per cent – 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 10th year in a row, with an overall satisfaction rating of 93 per cent.

• The OU in Scotland achieved the second highest rating (92 per cent) 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 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."

OU ACROSS THE UK

Cyber security recruitment boost

The UK is suffering from a worrying shortage of skilled professionals in the cyber security sector. Over 90 per cent of IT employers have reported difficulty in recruiting for cyber security positions and 60 per cent indicated that the demand would increase over the next five years.

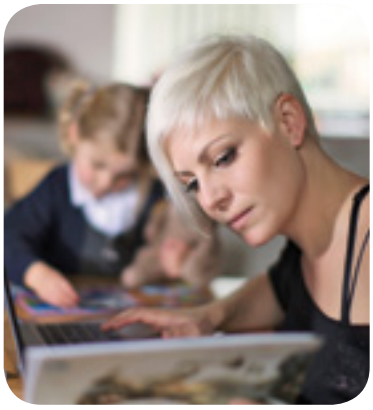
To help inspire more people into the industry, The Open University has teamed up with the Government and security industry to create The Cyber Security Challenge and developed the first government supported 'Massive Open Online Course' (MOOC) to inspire and educate the next generation of cyber security professionals in the UK. Available on the OU-owned FutureLearn, the free online course will help to inspire the next generation of cyber security professionals, ensuring the UK has the knowledge and capability to meet current and future challenges our digital network may face.

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 1,000 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.

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 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

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)** 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**

OU ACROSS THE UK

HELPING DOGS TO SNIFF OUT CANCER

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 (pictured right), 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.

Thanks to their canine computing interface, 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."

OU ACROSS THE UK

OU success at Times Higher Education Awards

The OpenScience Laboratory (OSL) won the award for Outstanding ICT Initiative of the Year at The Times Higher Educations Awards, held in November 2014.

The innovative OSL platform for online practical science enables remote observations and manipulation or control of experiments via the internet, providing interactive access to real data through authentic interfaces.

OU Science students now go to do practical work in OSL's virtual laboratory space. In addition to supporting science learning, it also equips students with 21st century professional skills - operation of equipment 'at a distance' and remote control of measurement systems is widespread (e.g. Earth-monitoring satellites, in-flight engine monitors, sports activity logs, teleclinics, etc.).

OU ACROSS THE UK

Monitoring volcanic eruptions in real-time

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 per cent 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."