



**A POSTGRADUATE  
STRATEGY FOR BRITAIN  
EXPANDING EXCELLENCE,  
INNOVATION AND  
OPPORTUNITY**



million+ is a university think-tank, working to solve complex problems in higher education through research and evidence-based policy.

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## Foreword

Postgraduate study is an integral and crucial part of the activities, opportunities and qualifications provided by the UK's universities. For some occupations in the private and public sectors, these qualifications are a key pre-entry requisite. In other areas, postgraduate study provides individuals with an opportunity to improve their employment opportunities, be the innovators of tomorrow, contribute to businesses, improve outcomes, organisation and practice and develop the solutions required to resolve global and societal challenges.

UK universities teach and accredit postgraduate courses in countries throughout the world. Our universities are a key destination for EU and international postgraduate students whose study brings mutual benefits to Britain, their home countries and universities through higher education partnerships which straddle the globe.

However, as this report confirms, the UK faces its own challenges. The number of UK-domiciled postgraduate students has not significantly increased over the last five years and funding regimes are not geared to innovation, either in terms of new disciplines vital to the economy or in respect of flexible delivery.

Universities themselves have often been innovators in postgraduate provision. Modern universities have been particularly adept at identifying new curriculum areas and markets, for example, in business and management and in the digital and newer creative industries. This has been vital in ensuring that Britain is a world leader in these industries and a world leader in new higher education markets.

Surprisingly, in spite of the importance of postgraduate study to the economy and society, there has been no comprehensive assessment of the scale, scope and delivery of the UK's postgraduate provision until a review was commissioned by Lord Mandelson, Secretary of State for Business, Innovation and Skills, in 2009. The terms of the review were wide-ranging. However, sharp differences of opinion arose as a result of claims that the UK would be better served if funding for postgraduate doctoral provision was limited to a minority of universities (essentially those which have benefitted from a government policy to concentrate research funding).

It is evident that some policy-makers and other stakeholders wrongly assume that postgraduate study is the province of a small number of universities. In fact, research is integral to the role of any university. For those universities awarded university title since 1992, postgraduate provision has not been a 'bolt-on' but a central part of their activities. Their long track records in undergraduate and postgraduate provision, and in teaching and research, are the very reason why they were conferred with the right to award teaching and research degrees.

The publicly available statistics on which this report relies, confirm that modern universities deliver 37% of all postgraduate provision in the UK, 30% of all international postgraduate provision and almost 10% of the doctorates studied by international students, often in new subject areas and disciplines.

The evidence outlined in this report confirms that there is no sound academic basis for concentrating postgraduate doctoral funding. Indeed, such a policy would stand in sharp contrast to that being adopted in Australia where postgraduate provision is being expanded and funded in all universities. Once the lower levels of research funding received by modern universities are taken into account,

pound for pound these universities are more productive in their delivery of postgraduate provision which has always been reliant on the quality of teaching and supervision rather than on intensity or critical mass of research funding.

As a result, there is no economic case to concentrate funding which would have the added disadvantage of damaging innovation in those universities which have shown that they are 'fleet of foot' in identifying new curriculum areas for undergraduate and postgraduate study. Such a policy would also undermine any attempt to expand and support a more representative postgraduate student population in the UK and seriously limit opportunities for individuals and in particular black, Asian and minority ethnic students. Inevitably, concentration would also do great damage to the capacity of universities to compete in the international postgraduate and undergraduate market.

Excellence, innovation, opportunity and fairness should be the cornerstones of future postgraduate taught and doctoral provision in the UK's universities. *A Postgraduate Strategy for Britain* sets out a series of recommendations which, if adopted by government, the research and funding councils and universities, would deliver these principles and the expansion of postgraduate provision which the UK needs.



**Professor  
Les Ebdon CBE**  
Chair



**Pam Tatlow**  
Chief Executive

# Recommendations

## Promoting postgraduate provision

> Government should spearhead a strategy with universities, business, public sector bodies and student organisations to promote the value of postgraduate qualifications to individuals and employers. This should include examples of best practice, projects with employers and the promotion of one-stop shop websites and graduate school portals.

## Employer-focused funding

> Research and funding council regimes should reward and encourage universities to develop postgraduate work placements and flexible provision that is suited to business and employers (including small and medium size enterprises).

## Knowledge Transfer Partnerships

> The Technology Strategy Board should provide more timely responses to Knowledge Transfer Partnership applications: KTPs include postgraduate provision and facilitate the work which universities are undertaking to promote industry-sponsored qualifications and a more responsive service to business and employers.

## Professionally-focused postgraduate studentships

> The research councils should adopt positive policies to promote professionally-focused and employer-focused postgraduate studentships, including in new curriculum areas and new markets in the private and public sectors.

## Promoting modern universities

> BIS and the relevant departments in the devolved administrations should promote a better understanding within government of the role of modern universities in the postgraduate international market. Modern universities deliver 37% of all UK postgraduate provision, almost 10% of the doctoral provision for international students and 30% of the total international postgraduate market and they should be included in trade missions and in other initiatives promoted by UKTI and relevant departments e.g. DfID.

## UKBA and the Home Office

> UKBA and the Home Office must develop an improved understanding of the operation of the postgraduate international market including the flexible start dates offered by modern universities. The role and economic value of modern universities in developing higher education partnerships in countries of strategic importance to the UK could be undermined if the UKBA, the Home Office and universities are unable to forge a close and responsive working relationship.

## The Research Councils

> Research council block grant schemes should be reviewed. The current policy perpetuates the concentration of funding in a small number of universities where the focus is often on traditional disciplines and on courses without a professional or employer-focus. Schemes often assume critical mass and favour institutions with higher levels of research funding to the detriment of other institutions. This has the effect of reducing opportunities for students, universities and employers. A fairer share of this funding should be used to support innovation in postgraduate provision in new subject areas and in emerging markets vital for the economy.

> Unless there are specific requirements for capital intensive facilities (which are funded by the research councils), models of geographic concentration for post-graduate provision are out-moded, undermine the participation of under-represented groups and the subject mix available at postgraduate level and fail to take account of the new technologies used by all researchers and research groups to collaborate on a global basis.

## New targets for expansion

> New targets should be set to increase the number and diversity of UK-domiciled postgraduate students and the role of modern universities in achieving those targets should be recognised and incentivised.

> A new and more representative generation of academics is needed to renew the UK's academic workforce. In addition to incentivising the recruitment of UK-domiciled students, there is a particular requirement to develop academic staff through postgraduate routes in new disciplines. This includes the newer creative industries and other areas likely to be of key importance to the economy and society in the future.

## A more representative postgraduate profile

> Robust equality impact assessments should be applied to postgraduate funding regimes to ensure that they promote fairness and opportunities across all the potential postgraduate student population. The impact of research council and funding council regimes on the diversity of the postgraduate student profile should be fully assessed and urgently adjusted as required.

## Participation

> Best practice in universities which are most successful in achieving more socially inclusive UK postgraduate student profiles should be promoted. Research should be commissioned to identify the barriers to entry into postgraduate study for UK-domiciled students who are currently under-represented in the student profile.

> Part-time, flexible and accessible postgraduate provision which meets the needs of students as well as employers is critical to future expansion and should be incentivised by research and funding council funding regimes.

## Research concentration

> The policy of the Department of Business, Innovation and Skills which requires the funding council for England to support greater levels of concentration in high level STEM from 2010-11 should be set aside. The policy will promote protectionism rather than value for money, reduce funding for world-leading and internationally excellent research in new areas and reduce the capacity of universities to compete for research council awards linked with postgraduate provision; it will also undermine the innovation and flexibility which should be the hallmarks of research funding and postgraduate provision in the UK.

## Postgraduate doctoral funding

> There should be no further concentration of funding for postgraduate doctoral degrees and proposals to concentrate doctoral funding according to intensity of institutional research funding or through regional doctoral centres should be set aside.

> Measurements of research intensity and arguments for critical mass, in all but the most capital intensive subject areas, fail to take account of economic impact, value for money or subject mix (which would be reduced by concentration).

> Excellence in doctoral provision is dependent on the quality of supervision, can be equally well achieved in small research groups and is not related to intensity of research funding.

> Pound for pound, universities which have received less quality-related research funding are more productive in terms of postgraduate taught and doctoral provision than universities which have historically been beneficiaries of significant amounts of research funding.

“The capacity of universities to compete internationally would be damaged by any policy to concentrate doctoral and research funding.”

> Participation of students who are already under-represented in the overall UK postgraduate student profile group, but who are much better represented in the postgraduate population of modern universities, would be adversely affected by concentration of doctoral funding. This would include part-time, mature and UK-domiciled black, Asian and minority ethnic students.

> The capacity of universities to compete in the international postgraduate and undergraduate market would be seriously damaged by any policy to concentrate doctoral and research funding. There is a real risk that the UK will lose its competitive edge in the international marketplace with serious economic consequences for universities and the UK economy.

**Fees and funding**

> The funding routes to access postgraduate provision are complex and student support systems are weak. Further detailed research should be commissioned to assess the mechanisms and the merits of alternative funding and student support models with the aim of developing a system that increases access to and expands postgraduate provision.

> There is no case to divert funds from undergraduate teaching, student support or graduate repayments, for full-time first degrees in England, to fund postgraduate provision or student support. The most significant impact upon life-time earnings is the achievement of a first degree. This is particularly the case for students from non-traditional backgrounds and more generally for women who earn much less than men if they enter employment with the equivalent of A-levels / level 3 qualifications or less.

With a mismatch between funded student places and demand at undergraduate level, there is a real risk that UK-domiciled first-degree applicants will not get places to study at university. In addition, part-time students at undergraduate level have no access to maintenance or fee loans. As a result, Lord Browne’s review of fees and funding in England should not seek to transfer funding from undergraduate to postgraduate study.

The Value of Postgraduate Education

Postgraduate education produces major benefits for students, universities, business, the public and not-for-profit sector and for the wider UK economy and society (UK plc).

> For individual students, the benefits may last throughout their careers, with postgraduate qualifications providing entry to professions, enhancing employability but also providing new, higher level skills and employment prospects mid-career.

> Universities benefit from the supply and provision of the next generation of academics, by the creation of economic benefit, the generation of intellectual property and the development of partnerships with users (business, companies and the public and not-for-profit sectors) as well as through the establishment of international higher education partnerships with institutions in countries throughout the world.

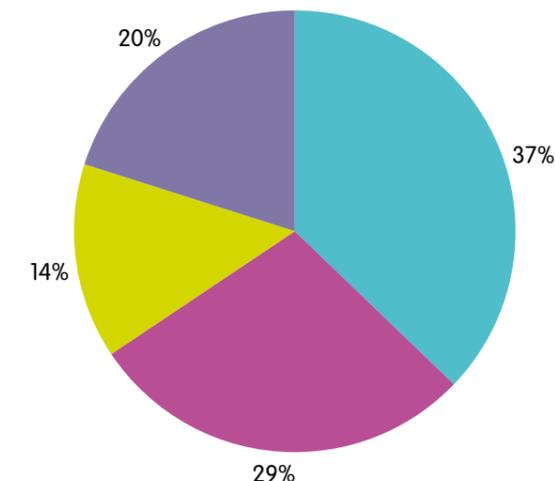
> Business benefits from postgraduate study, not only through the provision of skills and continuous professional development in the workplace, but also by the exchange of knowledge and research.

> Postgraduate education is increasingly important for the training and professional development required to meet new challenges and ensure the adoption of improved professional and working practices in the public and not-for-profit sectors.

> On a national scale, postgraduates contribute to strategic research and development and are the repository of higher level skills required for economic growth and societal improvement.

For their part, all universities will need to become increasingly responsive to the needs of business, the public sector and society at large in the development and design of postgraduate

Figure 1: University destination for all postgraduate students studying in the UK in 2007-08



Institutional category for Total Postgraduate students studying in UK in 2007-08

■ Modern ■ Russell ■ 1994 ■ Other

programmes. In the future, more flexible and innovative modes of delivery will be required to ensure that all stakeholders receive maximum benefit from postgraduate provision.

37% of all postgraduate provision in the UK (taught and research, UK-domiciled, EU and international) is delivered by modern universities – significantly more than any other part of the sector as illustrated in Figure 1. The scale, scope and economic and societal contributions of these universities to postgraduate provision have not always been acknowledged. Their potential to expand postgraduate opportunities in the future should be recognised.

<sup>1</sup> Annex 1 provides a breakdown of the institutional categories to which reference is made in the report. Modern universities are defined as those universities awarded university title and conferred with teaching and research degree awarding powers since 1992.

# The Value of Postgraduate Education

continued

## Students

The individual benefits accrued from a postgraduate degree are primarily an improvement in employability either through professional development or the acquisition of advanced 'softer skills' which can be employed effectively alongside the postgraduate's knowledge base. Given the cost implications of undergraduate and postgraduate study, the primary concern of many students when undertaking a postgraduate level qualification will be an improvement in future employment prospects. In addition, there are an increasing number of highly competitive sectors where a postgraduate qualification may confer a distinct advantage. Examples include law, the creative industries, the civil service and management professions. Mature students use postgraduate qualifications to improve their skills or refocus their careers, sometimes in entirely new professional areas and disciplines.

The Government's target of 50% of 18-30 year olds in higher education<sup>2</sup> has not yet been reached but there has been a significant increase in the number of people studying at undergraduate level. In the long run, this may dilute the 'graduate premium' in remuneration which students can expect to see over their lifetime (although there is no evidence of this as yet). Postgraduate qualifications are likely to be increasingly required to enhance financial rewards and update skills and some career paths already use postgraduate qualifications to differentiate between 'excellent' graduates.

Postgraduate students increasingly look for a return on their investment in the form of practical work experience so that they develop skills that will give them an advantage in their professional lives. There are an increasing number of professionally sponsored degrees and postgraduate qualifications in niche subjects which enable graduates of these courses to command a high premium in the employment market. Many of these practical but highly specialist courses are delivered by modern universities.

Modern universities have frequently taken the lead in initiatives to improve the employability skills of their students at all levels. This includes increased career-enhancing skills for doctoral students and early career researchers and the 'soft skills' that assist undergraduate and postgraduate students to succeed in the world of work<sup>3</sup>. In addition, modern universities often lead the way in providing postgraduate education aimed at supporting entrepreneurial thinking and activity. Teaching and learning is combined with applied research and business support programmes to give students a holistic understanding of the real challenges faced by entrepreneurs.

### Oyebisi Agboola, MBA Marketing, Coventry University

"It has always been my dream to build my own business empire. As a future entrepreneur I wanted to take a course that would equip me with the skills and the core competencies to manage an organisation in a competitive global business environment. Coventry University offered me a unique business course that exactly matched the skills I was looking for as a future business manager.

"The programme is very rigorous and there is so much information to assimilate. However, with the help of the lecturers, who are very supportive, I was able to quickly adapt to the studies. I was able to discover business skills within me that I previously didn't know existed. The course also gave me access to a professional internship which gave me the opportunity to apply all the theories I learnt in the class to a real business environment and also gave me valuable work experience. I had a wonderful supervisor who was a very good mentor and the programme has really helped to develop all of my business skills."

<sup>2</sup> Reaffirmed in *Higher Ambitions* BIS November 2009.

<sup>3</sup> Thrift, N. *Research Careers in the UK: A Review* pp. 26-28.

# "In 2007-08, modern universities delivered 53% of all continuous professional development."

In summary, postgraduate education allows individuals to undertake a career change, provides opportunities to broaden and deepen their knowledge base, promotes lifelong learning and facilitates movement from, for example, technical to managerial and strategic positions.

## Continuous Professional Development

The contribution of universities to employability in respect of postgraduate provision is reflected in statistics which assess the contribution of universities to continuous professional development (CPD). As illustrated in Figure 2, in 2007-8, modern universities delivered 53% of all CPD which represents a total of 1.76 million learner days<sup>4</sup> and equivalent to 40% of the total CPD income received by universities.

For modern universities, over half of all CPD income (52%) originates from the public and not-for-profit sectors and a large proportion (almost 30%) is direct from individuals. These universities deliver significantly more CPD provision on all counts (public and not-for-profit, for individuals, large business and SMEs) than universities in the Russell and 1994 Groups as demonstrated in Figure 3.

## Universities

Universities themselves are principal beneficiaries of postgraduate education which builds their knowledge base and provides a source of future academics.

As well as providing future staff potential, students undertaking postgraduate qualifications add significant value to universities and the academic communities of which they are part, taking responsibility for much practical application of their research or their research-informed teaching. Postgraduate taught and research students add value to the learning environment, encouraging thinking and challenging others. This creates new ideas and takes teaching and research in different and new directions.

<sup>4</sup> Source: Higher Education – Business and Community Interaction Survey 2007-08.

Figure 2: Total continuing professional development and education learner days delivered in 2007-08 by universities (excluding pre-registration funding by the NHS or TDA)

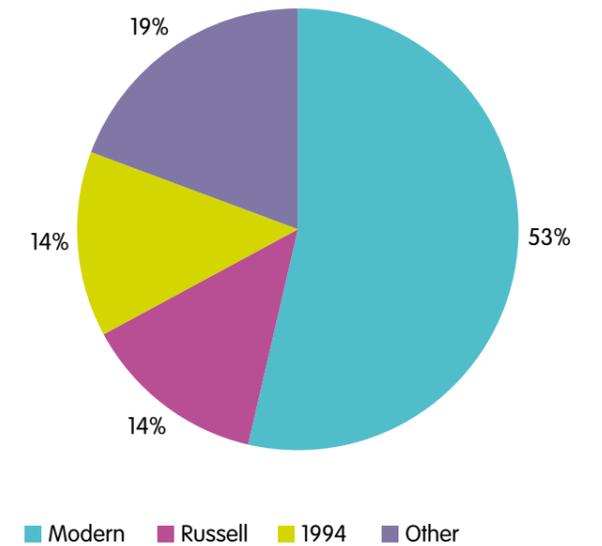
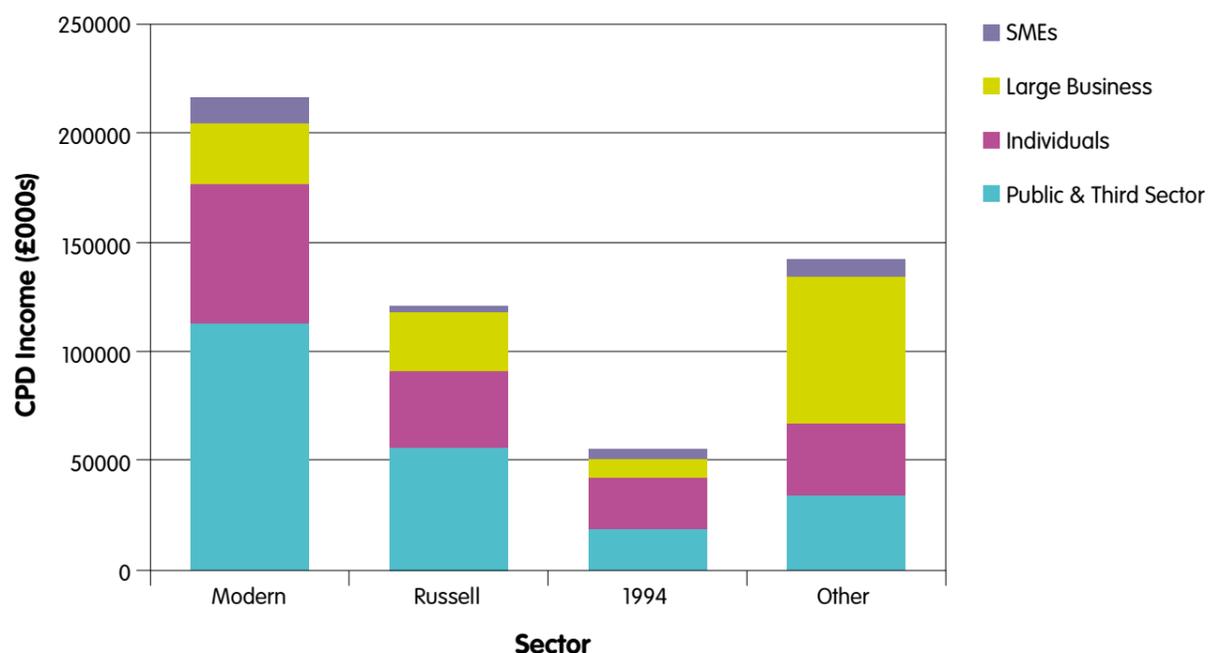


Figure 3: Continuing professional development and education income from business and community sectors in 2007-08 by universities



Value is also created when postgraduates do not continue immediately to a traditional academic career but return to postgraduate study having gained professional and business experience in the workplace. Increasingly modern universities harness expertise through the employment of lecturers and researchers who have opted for an industrial or professional career in advance of, or as well as, an academic career.

There is a critical need to grow postgraduate research numbers in the UK in order to counter the demographic 'time bomb' of an ageing population of academics in some disciplines in both the UK and USA. Without a strategy to address this, there will be serious implications for future retirement and replacement needs.<sup>5</sup>

### Promoting Postgraduate Provision

> Government should spearhead a strategy with universities, business, public sector bodies and student organisations to promote the value of postgraduate qualifications to individuals and employers. This should include examples of best practice, projects with employers and the promotion of one-stop shop websites and graduate school portals.

Business benefits from postgraduate education through the provision of advanced higher level skills and increased collaboration and exchange of knowledge and research.

### Skills

Postgraduates need to be equipped with the right skills, experience and knowledge to progress in employment and to get significant value from the investment in their education. Taught postgraduate students from modern universities often undertake courses with a strong vocational or professional focus. Many courses are professionally accredited and offer the knowledge and skills required to succeed in specific careers or professions. Similarly, research students in modern universities frequently benefit from the more applied and business-focused nature of the research projects and knowledge transfer activities of these universities.

However, business in the UK also needs to make good use of the experience and skills that postgraduates can offer. Many students in modern universities are sponsored by their employers to undertake postgraduate modules or courses as part of career development, initial training or re-training. However, not all employers know how to effectively deploy the higher level skills of postgraduates and they do not necessarily have a clear understanding of the difference between taught and research provisions. There is therefore a need to promote the benefits of postgraduate education more widely among employers of all kinds, including government departments.

### University of Abertay Dundee: Master of Professional Practice in Computer Games Development

The University of Abertay Dundee is a world leader in computer gaming and interactive media courses and has been at the forefront of games education and research for over twelve years.

In late 2008, a £3 million investment from the Scottish Government enabled Abertay to begin work on the UK's first university centre for excellence in computer games education based at a new Institute for Arts, Media and Computer Games. The flagship course of the Institute is an intensive twelve-month, cross-disciplinary postgraduate programme leading to the award of Master of Professional Practice (MProf) in Computer Games Development. The programme draws heavily on industry advice to ensure it produces postgraduates with the potential for immediate commercial impact. These postgraduates are vital to driving the future success of the computer games and interactive industries within Scotland and to prevent labour drain to cheaper labour markets, something that could have a very negative impact on UK employment and export values.

<sup>5</sup> See for example: RCUK Health of Disciplines Report 2007.

Most education systems outside of the English-speaking world value knowledge and learning but place less emphasis on creativity, independent thought and problem-solving. International students returning to their home country with UK postgraduate taught degrees are highly valued by businesses because of the new and more challenging skill sets which they acquire in the course of their studies.

Postgraduate taught provision is particularly important in providing continuous professional development for business. CPD courses tend not to be delivered in a standard masters format. Instead postgraduates are generally employed and study a postgraduate module – which is then built into an award over time. As illustrated earlier, such work-related postgraduate education is significant and is critical to future growth.

Flexibility of delivery of postgraduate provision is important for business. An increasing proportion of postgraduate course delivery is taking place in the workplace, with course material being developed to support real business challenges. Future postgraduate provision in the UK will need to be better able to respond to the needs of business and especially new and emerging industries.

Modern universities are frequently at the forefront of innovative curriculum developments in postgraduate research provision – developing professional and practice-based doctorates. There are also collaborations between universities including dual awards with institutions in other countries. For example, the University of Plymouth and three European universities, including the University of the Algarve, offer a joint doctorate

in water coastal management<sup>6</sup>. Manchester Metropolitan University offers a range of cotutelle programmes<sup>7</sup>. In addition to traditional doctorates, the development and delivery of professional doctorate qualifications using such innovative routes should be further explored in the future.

In general postgraduate provision is market driven. Modern universities, in particular, identify new courses to fulfil potential and actual demand from students and employers. However, there is a need to make it easier for universities to offer credit collecting masters degrees that can build on specialist modules from a number of individual universities. This is especially true in those new and emerging industries where highly specialist knowledge may be distributed across institutions. While examples of these types of programmes exist, they can be difficult to organise due to perceived quality assurance problems associated with joint awards.

### Employer-focused funding

> Research and funding council regimes should reward and encourage universities to develop postgraduate work placements and flexible provision that is suited to business and employers, (including small and medium size enterprises).

### Applied Research and Knowledge Exchange

It is well-known that modern universities have a track record in applied research and naturally engage with businesses as stakeholders in research and with research students. These universities are particularly well placed to engage with the global challenges of the 21st century.

<sup>6</sup> [www.plymouth.ac.uk/courses/postgraduate/taught/2893/Joint+European+Masters+in+Water+and+Coastal+Management](http://www.plymouth.ac.uk/courses/postgraduate/taught/2893/Joint+European+Masters+in+Water+and+Coastal+Management)

<sup>7</sup> Cotutelle programmes are research degrees jointly supervised by two institutions in different countries, within the EU, leading to the award of a doctorate from both institutions.

## “Future postgraduate provision in the UK will need to respond to the needs of business and especially new and emerging industries.”

### London South Bank University: EPSRC Industrial Case with Adande Registration – novel design and performance of domestic refrigerators

The UN has said that climate change is the biggest challenge to human development. The UK Government’s Climate Change Act committed the UK to reducing greenhouse gas emissions by at least 80% by 2050 – a figure that will need to be matched by all industrialised countries, according to the great majority of climate scientists, in order to prevent irreversible climate change.

Refrigeration contributes to greenhouse gas emissions through refrigerant release into the atmosphere and as a result of energy consumption. It is estimated that 15% of total worldwide energy consumption is due to refrigeration, freezing, chilling and from the refrigeration used in air conditioning.

London South Bank is undertaking research to develop a new energy-efficient domestic refrigerator. Its work is pioneering the use of novel technologies which can be produced in a cost efficient manner to meet market needs. Two novel components – phase change materials and heat pipes – have the potential for achieving significant energy savings when applied to domestic refrigerators.

### University of Greenwich: Collaborative Research

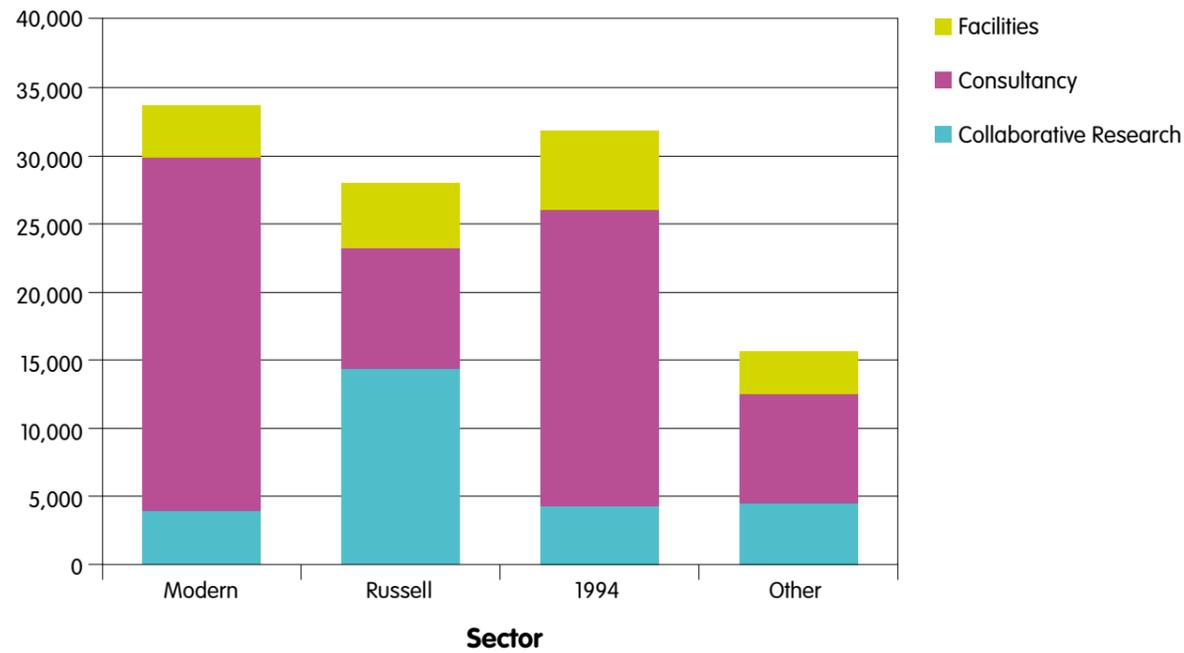
Over the four academic years to July 2009, 139 students graduated from the University of Greenwich with PhD degrees. Of these students, 27% worked on formal collaboration programmes with industry, business, or government organisations. PhD graduates were employed by organisations such as BAE Systems, Ford, Corus, GSK, Gillette, BNFL, Pfizer, AstraZeneca, Arup, Faber Maunsell (now part of AECOM), and Hughes (USA). Some examples of knowledge transfer from PhD projects include:

> A PhD graduate in science has taken her research into GSK and applied it to the area of dental hypersensitivity. The treatment developed in the programme is now undergoing clinical trials.

> Another science PhD graduate took his research into BP where it has been applied to enhancing oil recovery techniques used in the North Sea.

> An engineering student took the skills he acquired during his research at Greenwich to GSK to develop a company-wide approach for minimising product wastage resulting from poor powder handling and processing techniques prior to tableting operations. The company reorganised their central engineering department to accommodate this technology and the work was recognised in the Institute of Chemical Engineers’ 2006 Chemistry Innovation Awards.

Figure 4: The number of collaborative research, consultancy and facilities service contracts carried out by universities in 2007-08

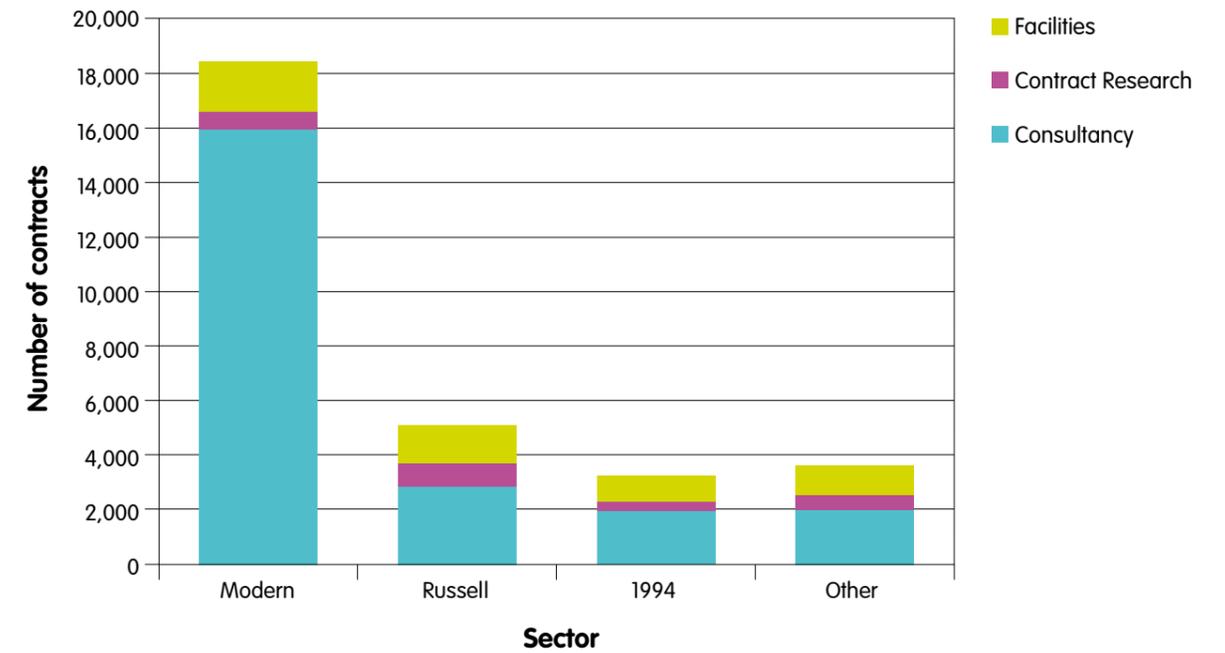


There are a range of programmes available for businesses to gain access to skills within universities, such as Knowledge Transfer Partnerships (KTPs) and Innovation Vouchers. KTPs are particularly effective in offering benefit to students at Masters, PhD and MBA level. Programmes can be vocational to fit the needs of a specific sector (e.g. NHS KTPs, KTPs in design).

The results of the higher education-business and community interaction survey (HE-BCI) for 2007-08 clearly show that modern universities play a significant role in supporting knowledge exchange between business, the community and the knowledge base offered by universities. In 2007-08, modern universities carried out nearly 34,000 contracts with SMEs, large organisations and public and third sector organisations, supporting knowledge exchange. As demonstrated in Figure 4, the majority of interactions (77%) were completed through consultancy contracts.

“Modern universities play an absolutely critical role in supporting knowledge exchange with SMEs and one that easily surpasses all other universities.”

Figure 5: The number of contracts with SMEs in 2007-08 for various interaction activities linked with universities

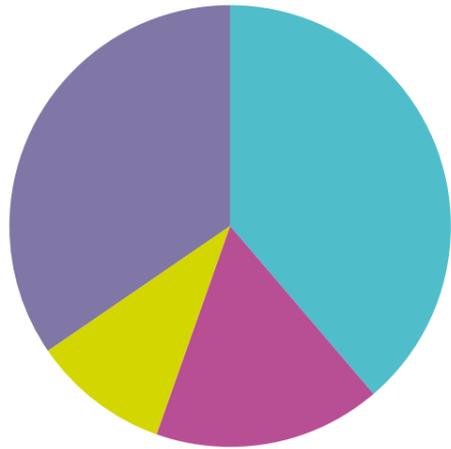


In particular, the HE-BCI data confirms that modern universities play an absolutely critical role in supporting knowledge exchange with SMEs and one that easily surpasses all other universities. Modern universities had over 60% (18,000) of the total contracts with SMEs in 2007-08. The majority of the contracts (87%) were in the provision of consultancy services to SMEs (Figure 5).

Modern universities are also key players in promoting the important link between postgraduate students and businesses facilitated by knowledge exchange mechanisms such as Knowledge Transfer Partnerships illustrated in Figure 6. As of September 2009, 44% (400 in total) of Knowledge Transfer Partnerships were being carried out with a modern university as the knowledge base partner<sup>8</sup>. Out of the 741 KTP Associates registered at the end of March 2008, 56% held a higher level (postgraduate) qualification. As of 2008, the mean age of an Associate was just under 29 years of age. The proportion of Associates from India, Pakistan and China, together, represented 17% of the total number of Associates at the end of 2007-08<sup>9</sup>.

<sup>8</sup> KTP Knowledge Base Partners Sept 2009.  
<sup>9</sup> KTP Annual Report 2007-08.

Figure 6: Number of ongoing Knowledge Transfer Programmes in universities as of September 2009



■ Modern ■ Russell ■ 1994 ■ Other

### Knowledge Transfer Partnerships

> The Technology Strategy Board should provide more timely responses to Knowledge Transfer Partnership applications: KTPs include postgraduate provision and facilitate the work which universities are undertaking to promote industry-sponsored qualifications and a more responsive service to business and employers.

### The Public & Not-for-Profit Sector

Postgraduate education has a wider benefit to the UK economy and to society. Through the provision of postgraduate trained professionals in key public sector fields, such as education and health, modern universities equip the public and not-for-profit sectors to meet the challenges of tomorrow in increasingly competitive and complex markets.

### Coventry University: Postgraduate Certificate in Management (Work-Based Learning) for Cornwall County Council

In May 2004 Cornwall County Council approached Coventry University to develop a Postgraduate Certificate in Management which would be delivered through work-based learning.

Coventry devised a specific programme for council employees in the Directorate of Children, Young People and Families (CYPF) and the Department of Adult Social Care (DASC). Staff from the local area run the programme, in addition to some flying faculty contributors from Coventry.

Having demonstrated the effectiveness of the certificate within the council, participation was extended to include colleagues from the wider social care sector, including the independent and voluntary sectors.

In 2008 a bespoke Postgraduate Diploma programme was launched and a Masters programme is now also offered. To date, circa 90 social workers from Cornwall County Council have been through the Postgraduate Certificate programme.

Healthcare postgraduate courses support CPD, allowing staff to ensure that their skills remain current. By 2013 prospective nurses in England will require a bachelor's level qualification<sup>10</sup> and all ongoing CPD will need to be at postgraduate level<sup>11</sup>. This already applies to those qualified in the Professions Allied to Medicine such as radiographers, physiotherapists, podiatrists and dieticians.

In education, teachers are required to obtain both a degree and qualified teacher status (QTS). QTS is achieved through successfully completing a teacher training course – either alongside an undergraduate degree or as a postgraduate qualification.<sup>12</sup>

### University of Central Lancashire: International Centre for Sign Languages and Deaf Studies (iSLanDS)

Learning with and through sign language is the aspiration of many deaf communities both in the UK and abroad. A particular problem for deaf children and adults has always been literacy acquisition. The University of Central Lancashire's international academic team, at the International Centre for Sign Languages and Deaf Studies (iSLanDS), is conducting world-class research and teaching in sign linguistics and deaf studies on a global scale including endangered sign languages, applied sign language linguistics, development of learning materials and online learning platforms.

New requirements in the social care and early years workforces will also require a response in terms of postgraduate qualifications.

In addition, there is an increasing move towards supporting and developing the skills and capacity of employees within the third sector. The charity Skills – Third Sector was set up in 2009 to address the findings of the National Council of Voluntary Organisation's (NCVO) 2007 Voluntary Sector Skills Survey which had found evidence of skills gaps and shortages across the sector.<sup>13</sup>

Skills – Third Sector is working on a Sector Qualification Strategy (SQS) for the voluntary sector with an action plan for its implementation currently in development.<sup>14</sup> The SQS concentrates on five key areas where the development of National Occupational Standards is of paramount importance fundraising, management of volunteers, trustees and governance, campaigning and development work. It also promotes additional cross-sectoral areas which are of strategic importance to the third sector such as management, leadership and planning, and the strategic use of IT.

<sup>13</sup> [www.skills-thirdsector.org.uk/research\\_policy/library/voluntary\\_sector\\_skills\\_survey/](http://www.skills-thirdsector.org.uk/research_policy/library/voluntary_sector_skills_survey/)

<sup>14</sup> [www.skills-thirdsector.org.uk/qualifications\\_training/sector\\_qualification\\_strategy/](http://www.skills-thirdsector.org.uk/qualifications_training/sector_qualification_strategy/)

“Modern universities are key suppliers of postgraduate qualifications and research in the public and not-for-profit sectors.”

### Social Care Reform

The Social Work taskforce recommended a number of changes centred on the training and career development of social workers.

These included:

> A reformed system of initial education and training for social workers which would culminate in a new supported and assessed first year in employment following completion of an undergraduate degree.

> The strengthening of the education system for social workers through more effective regulation and stronger local partnerships between universities and employers.

> Making better use of research and continued professional development to inform frontline practice including a national CPD framework for social workers and a new Masters in Social Work Practice.

> The development of a 'licence to practice' for social workers dependent on demonstration of continued professional development as well as competence. This will have scope for further development in specialised areas of the profession.

The Social Work taskforce recommendations build on the current requirements for social work – a profession which can be entered via an undergraduate route but which is increasingly entered via a postgraduate qualification.

They also reaffirm that post qualification CPD is as an essential part of a social worker's career progression. The emphasis on research informing frontline service provision is an important change as is the stress placed on local partnerships between universities and employers.

<sup>10</sup> This requirement is already in place in Scotland.

<sup>11</sup> [www.nhs.uk/nhs-careers/nhs.uk/nursing.shtml](http://www.nhs.uk/nhs-careers/nhs.uk/nursing.shtml)

<sup>12</sup> Source: Teaching and Development Agency for Schools.

The report found that there were limited qualifications available, at any level, in areas specifically aimed at the voluntary sector. As a result, the first priority outlined was the need for appropriate qualifications and training. At least 33% of workers in the sector are qualified to Bachelor's level or higher and there is significant scope for a suite of postgraduate level qualifications in the third sector field<sup>15</sup>.

Modern universities are key suppliers of postgraduate qualifications and research in the public and not-for-profit sectors. Their important role is likely to increase with the development of new demands and requirements in terms of professional practice and delivery which are of world-wide interest.

**University of Bedfordshire:  
Doctorates for the public sector**

The development and expansion of professional doctorates at the University of Bedfordshire is making a real impact on public sector development. These degrees give over one hundred students exposure to critical thinking and research skills development that they are then able to apply to their working lives in the public sector.

Each student takes on a research topic that directly relates to their employment. By having a very strong practical focus the students are equipped with skills and knowledge that can be applied in the work place and which assists them in planning the application of substantial public funds. The education they receive contributes to the provision of efficient and effective public services.

**Professionally-focused  
Postgraduate Studentships**

> The research councils should adopt positive policies to promote professionally-focused and employer-focused postgraduate studentships, including in new curriculum areas and new markets in the private and public sectors.

<sup>15</sup> www.skills-thirdsector.org.uk//research\_policy/library/voluntary\_sector\_skills\_survey

The UK is currently highly competitive in the international postgraduate market and UK universities attract a significant market share of international postgraduate students. However, there is a risk that this market will be increasingly squeezed over the coming decade with competition from institutions and countries which are investing and developing excellence in higher education. Universities will need to provide flexible, transnational delivery models, as well as leading teaching and research across the board if the UK is to retain its competitive edge.

International postgraduate research student numbers have been growing at a rate of 4% per year and, as of July 2008, the UK had 15% of the global market for postgraduate research students<sup>16</sup>.

In 2007-08, modern universities supported 30% of the total number of international postgraduate students from 118 countries<sup>17</sup> as illustrated in Figure 7. The main home countries of postgraduate students studying at modern universities were India (18%), China (9%), Nigeria (7%) and Pakistan (5%). Other notable countries included Ireland, Greece, France and Germany. This is a high level of productivity and rate of return given the relatively modest levels of quality-related research funding received by these universities.

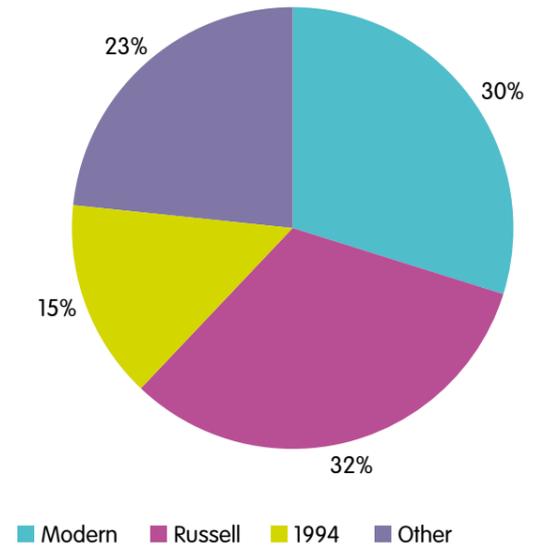
In 2007-8, 36.5% of international postgraduate taught students and 9.5 % of doctoral international studied at modern universities as illustrated in Figures 8 and 9. This delivery is critical to the UK's international competitiveness and the attractiveness of the UK as a destination of choice. Modern universities play a crucial role in extending the subject and discipline range of programmes and research studentships available to international students.

Modern universities are also pioneering flexible, transnational modes of course delivery which allow students to access the expertise of the host

<sup>16</sup> Kemp, N. et al *The UK's Competitive Advantage: The Market for International Research Students* (July 2008) p.1. www.international.ac.uk/our\_research\_and\_publications/index.cfm

<sup>17</sup> Source: HESA 2007-2008 data.

**Figure 7: University destination of international postgraduate students studying in the UK in 2007-08**



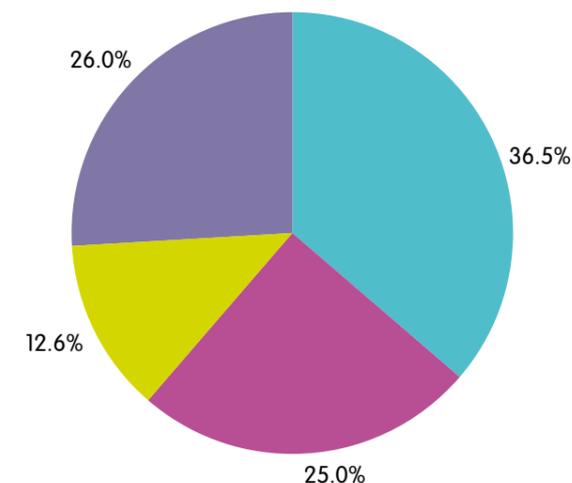
university from their home country via blended learning, flying faculty, validations and franchised delivery of taught postgraduate courses. Such flexible learning extends the international reach and competitiveness of UK universities. In 2007-08, there were more than 60,000 students studying for a postgraduate UK qualification outside of the UK<sup>18</sup>. The majority of these students (97%) were studying on taught masters programmes. These innovative modes of delivery have enabled the UK to retain its international market share<sup>19</sup>.

The scale and scope of the contribution of modern universities to these markets should be recognised and promoted by all government departments.

<sup>18</sup> Ibid.

<sup>19</sup> *Universities and international higher education partnerships: making a difference*, million+ Jan 2009, provides further analysis about the role of modern universities in the international market.

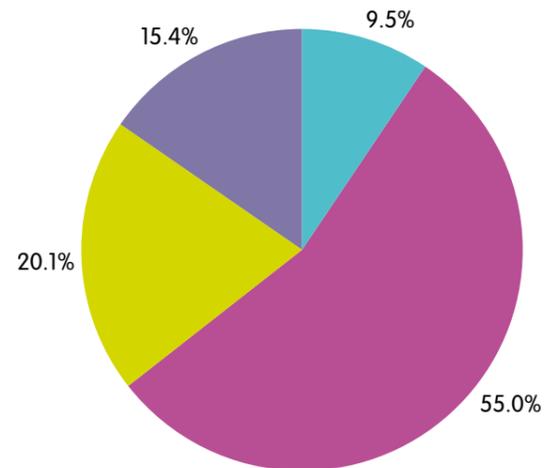
Figure 8: University destination of international taught postgraduate students studying in the UK in 2007-08



Institutional category for international taught postgraduate students studying in the UK in 2007-08

■ Modern ■ Russell ■ 1994 ■ Other

Figure 9: University destination of international postgraduate research students studying in the UK in 2007-08



Institutional category for international research postgraduate students studying in the UK in 2007-08

■ Modern ■ Russell ■ 1994 ■ Other

### The University of Sunderland: Communication, Cultural and Media Studies

The University of Sunderland has achieved the best result in the north of England for world-leading and internationally excellent research in Communication, Cultural and Media Studies. As well as having strong international links with universities such as the Communication University of China, Sunderland has a high research output. This includes textbooks and monographs used in teaching media practice and theory all across the world, and the joint

editorship of *Convergence*, a leading media technology journal. The University's world-leading research has also been key in supporting the North-East's resurgence in the creative industries. For example, the CRUMB (the Curatorial Resource for Upstart Media Bliss) has contributed to curating new media art not only at the BALTIC Centre for Contemporary Art in the UK but also at the Banff New Media Institute in Canada and the San Francisco Museum of Modern Art.

**“Modern universities deliver almost 10% of the doctoral provision for international students and 30% of the total international postgraduate market.”**

### Promoting modern universities

> BIS and the relevant departments in the devolved administrations should promote a better understanding within government of the role of modern universities in the postgraduate international market. Modern universities deliver 37% of all UK postgraduate provision, almost 10% of the doctoral provision for international students and 30% of the total international postgraduate market and they should be included in trade missions and in other initiatives promoted by UKTI and relevant departments e.g. DfID.

### University of Greenwich: International Student Growth

The University of Greenwich has developed a suite of one year masters programmes in Science and Engineering which are becoming increasingly popular with overseas students – especially those from the Indian sub continent. The year students spend in the UK gives them experience which builds on their undergraduate qualification. This is especially true in terms of practical hands-on learning of advanced experimental techniques and experience, using state of the art instrumentation. The track record of the School of Science, in working on collaborative research projects with multinational companies such as Pfizer and GSK, gives the School both credibility and profile to attract overseas students.

A pro-active marketing campaign, highlighting successful PhD completions and outputs (publications, conference presentations) from its research programmes, and collaborative support at international recruitment fairs has led to substantial growth in overseas postgraduate numbers. Between 2007/08 and 2009/10 the number of overseas masters students in the School of Science grew by a factor of three. The University is now the largest provider of education in Pharmaceutical Science in the UK.

In an increasingly tough marketplace, the UK faces stiff competition from many countries for postgraduate international students – both taught and research. The US is one of the UK's main competitors for postgraduate research students, having circa 40% of the global market share<sup>20</sup>. While the US experienced recruitment difficulties in the post 9/11 years, recent international drives are succeeding and total international student recruitment by the US grew by 10% in 2008<sup>21</sup>.

India and China are the largest 'sending' countries for international students. Over the last seven years, the number of students leaving these countries to pursue education abroad has increased more than three times. However the leakage rate (the ratio between students studying abroad and home enrolments) is dropping in China and has been forecast to decrease as a result of China's improved investment in higher education. Higher Education enrolments in China increased from 6.4% in 1999 to reach 24% in 2008.

However, internationally, a postgraduate degree from a UK university does continue to offer a strong competitive advantage. In some international markets, there is a postgraduate 'premium' where graduates automatically command a higher salary because they have graduated with a degree from the UK.

In the future, both taught and research postgraduate courses will need to deliver the skills, knowledge and attitudes required by SMEs and by national and international organisations. This can be achieved by postgraduate students being taught by staff whose teaching is informed by either excellent research or by exposure to current and leading edge thinking based on knowledge transfer activities, engagement with current practice and recent or updated business and employer experience.

<sup>20</sup> Kemp et al *The UK's Competitive Advantage* (2008) p.2.

<sup>21</sup> Ibid.

The UK Higher Education 'global brand' is based on quality, diversity and reputation. In order to ensure that UK universities remain attractive to postgraduate students, it is essential that nothing is done to disrupt the UK brand by creating any notion of a two-tier university system. The UK and its graduates benefit enormously from universities being focused on teaching, research and knowledge transfer as integral and integrated activities. Any attempt to falsely divide these activities or promote a policy of concentrating doctoral provision or research will inevitably undermine the capacity of UK universities to trade in the international market at both postgraduate and undergraduate level. This would be particularly damaging and place the UK's universities at a disadvantage in a period when an increasing number of EU, US, Asian and Commonwealth universities are expanding postgraduate provision and in some cases, increasingly offering courses taught in English.

Finally, the recruitment of international postgraduate students in all universities should be supported by appropriate visa policies. The operation of the postgraduate market needs to be better understood by the Home Office and the UK Border Agency (UKBA) and its agents which often rely on traditional assumptions in respect of course start dates and display insufficient knowledge of the scope and flexibility of provision offered, especially, by modern universities.

### UKBA and the Home Office

> UKBA and the Home Office must develop an improved understanding of the operation of the postgraduate international market including the flexible start dates offered by modern universities. The role and economic value of modern universities in developing higher education partnerships in countries of strategic importance to the UK could be undermined if the UKBA, the Home Office and universities are unable to forge a close and responsive working relationship.

Maintaining and increasing the proportion of UK-domiciled students is vitally important to UK plc and to the devolved administrations. Many taught postgraduate courses in the UK are dominated by international students and there is an obvious need to protect the value and promote the worth of a UK-taught postgraduate education to UK-domiciled students and employers. More positive strategies could be promoted to raise awareness of postgraduate routes e.g. in schools and through research careers days at undergraduate level which would allow universities to compete with the large graduate employers, widening career opportunities<sup>22</sup>.

Recent recruitment statistics show the number of domiciled doctoral researchers has been static over the last five years.<sup>23</sup> This lack of growth may lead to higher-level skills shortages in key disciplines, including science, technology, engineering and mathematics but also in other areas vital to the economy of the future such as the newer creative industries.

It is also imperative that the UK is seen as an attractive base for UK-domiciled students to develop a career in research. Research Council block grant schemes have concentrated funding in a small number of universities, often focused on research and postgraduate provision in traditional disciplines where professionally focused postgraduate courses are less common. Schemes often assume critical mass and favour institutions with higher levels of research funding to the detriment of other institutions. This has the effect of both reducing opportunities for students and the funding available for innovation in postgraduate provision in new subject areas vital to the economy.

Increased concentration of research funding, the concentration of students in regional hubs and concentration of doctoral funding will not encourage an increase in the number of UK-domiciled students. In fact these policies are likely to undermine the potential diversity of the UK's own postgraduate profile (taught and doctoral).

### The Research Councils

> Research council block grant schemes should be reviewed. The current policy perpetuates the concentration of funding in a small number of universities where the focus is often on traditional disciplines and on courses without a professional or employer-focus. Schemes often assume critical mass and favour institutions with higher levels of research funding to the detriment of other institutions. This has the effect of reducing opportunities for students, universities and employers. A fairer share of this funding should be used to support innovation in postgraduate provision in new subject areas and in emerging markets vital for the economy.

> Unless there are specific requirements for capital intensive facilities (which are funded by the research councils), models of geographic concentration for post-graduate provision are out-moded, undermine the participation of under-represented groups and the subject mix available at postgraduate level and fail to take account of the new technologies used by all researchers and research groups to collaborate on a global basis.

<sup>22</sup> Thrift *Research Careers in the UK* pp. 13-15.

<sup>23</sup> Artess, J et al (2008) *Higher degrees: postgraduate study in the UK 2000/01 to 2005/06*, pp17-18, Tables 1.11a and 1.13.

There is no optimal number of postgraduate taught students in the UK as it is primarily an open and competitive market and the laws of supply and demand determine the numbers of students undertaking each course. Overseas recruitment brings large numbers of talented individuals to the UK to train, retrain or specialise through postgraduate courses. However many universities now depend on overseas student fees to subsidise the running of specialist postgraduate courses which would close if they depended on UK-domiciled students. While universities are being encouraged to diversify their funding sources, postgraduate provision should be funded in universities throughout the sector to ensure that the UK retains its position as a global leader for excellent research and teaching and also that the home postgraduate market is expanded.

At a national level, research into key strategic areas is often fermented at postgraduate level and goes on to inform public policy and improve the UK's competitiveness in the global arena. The Leitch Review<sup>24</sup> argued that researchers are a fundamental element of the skills supply required for the UK to maintain a leading position in the global economy. Modern universities are perhaps better placed than traditional research intensive institutions to respond to the challenges set by policy makers, for example through employer engagement and new modes of delivery such as professional masters, sandwich degrees and Knowledge Transfer Partnerships.

The age profile of the academic workforce is also increasing. Over 30% of academic staff were over 51 in 2007-08 – an increase of 3% on the previous year<sup>25</sup>. There is an urgent need to address the demography of the academic workforce in terms of age but also to develop academic staff

through postgraduate routes in new disciplines and subject areas which are likely to be of key importance to the economy and to society in the future. The current approach to this ageing academic profile stands in sharp contrast to that in Australia which faces similar problems but where the Australian Government is funding the development of academic staff with postgraduate qualifications in all universities.

If the UK is to rebuild its economy in new and sustainable ways, expansion of the number of UK-domiciled doctoral students is essential. There needs to be more (and not less) postgraduate research opportunities in the UK to counter the growing ambitions of countries such as China and India, Brazil and Russia. These countries are rapidly expanding their research base and their numbers of doctoral students by developing a highly marketable postgraduate 'offer' which is likely to appeal to an emerging internationalised postgraduate student, or 'globalised' employee, looking to gain competitive advantage by having studied and lived in other countries.

### New Targets for Expansion

> New targets should be set to increase the number and diversity of UK-domiciled postgraduate students and the role of modern universities in achieving those targets should be recognised and incentivised.

> A new and more representative generation of academics is needed to renew the UK's academic workforce. In addition to incentivising the recruitment of UK-domiciled students, there is a particular requirement to develop academic staff through postgraduate routes in new disciplines. This includes the newer creative industries and other areas likely to be of key importance to the economy and society in the future.

**“A new and more representative generation of academics is needed to renew the UK's academic workforce.”**

### University of Central Lancashire: Developing the academics of the future

**Jaz Pearson, Prize-winning (2008 National Astronomy Meeting) PhD student specialising in Solar Astrophysics**  
After completing his BSc (Hons) in Mathematics at UCLan, Jaz decided to remain in Preston because UCLan offered the opportunity to work with European Space Agency and NASA solar satellite missions. Jaz took up an STFC funded studentship and has modeled mathematically detailed observations from the Solar and Heliospheric Observatory. This work has increased the understanding of how the outer atmosphere of the Sun is heated by the star's dynamic magnetic field. Jaz's ambition is to be a qualified, full-time theoretical researcher in astronomy.

**Marco Pinna, Postdoctoral research fellow, Bioinformatics, Biophysics and Self-Organising Systems Group**  
After studying for his undergraduate degree at Cagliari University (Sardinia), Marco started his PhD at UCLan in 2005. Marco received an EPSRC CASE studentship in collaboration with

an international scientific software company Accelrys Ltd, which has their headquarters in San Diego and a UK development site in Cambridge.

During his PhD, Marco developed a computer programme, which performs fast simulations of nano-structures formed by polymeric macromolecules called block copolymers. His results were published in seven papers in international journals, and he presented at conferences in the USA, Japan, Germany, Spain and the Netherlands.

After receiving his PhD in November 2009, Marco chose to remain as a research associate in the same group on a 3.5 years EU project involving partners from Germany, the Netherlands and Israel. He hopes to further develop his computer programme and develop applications for experiments in nano-engineering. If successful he could help to create memory devices that are both cheap and very small.

<sup>24</sup> The Leitch Review, final report: *Prosperity for all in the global economy – world class skills*, December 2006.

<sup>25</sup> ECU Equality in HE Statistical Report 2009.

## The demography of postgraduate participation in the UK

Currently, relatively little monitoring of the diversity of the postgraduate student cohort is undertaken. This makes it difficult to identify, let alone tackle, the barriers to postgraduate study that are faced or perceived to exist by under-represented groups.

### Part-time

Modern universities supported 37% of the total postgraduate student population in 2007-08, (compared to Russell Group and 1994 Group universities, which supported 28% and 14% of the total postgraduate student population, respectively). Out of that figure, modern universities supported almost half (48%) of the total part-time postgraduate student population.

### Mature students

The availability of alternative models of postgraduate provision at modern universities and the strong support for continuing professional development clearly contribute towards the widening participation agenda. Modern universities support 76% of all postgraduate students considered as mature (aged 25 years or more) with 37% of those students being over 35 years of age (compared to 23% at Russell Group and 30% at 1994 Group universities). In addition, modern universities have a high proportion of female postgraduate students (57% female to 43% male in 2007-08).

### Ethnicity

There is very little information available on the relationship between access to postgraduate study and ethnicity. The standard measure for higher education participation used in England is the Higher Education Initial Participation Rate (HEIPR) but it is not currently disaggregated by ethnicity. Research<sup>26</sup> has found that students from minority ethnic backgrounds are under-represented among research and teacher-training students, but less so on masters degrees. Substantial differences between minority ethnic groups were found (South Asian groups were under-represented among postgraduate students across both taught and research programmes) and patterns of participation were linked with subject of study, institutional location and prior attainment.

A large difference in minority ethnic postgraduate numbers was found between different institutions which could be only partly explained by geographical location e.g. institutions with the lowest proportion of minority ethnic postgraduates being located away from cities with large minority ethnic populations.

Modern universities play a very significant role in ensuring opportunities at postgraduate level for black, Asian and minority ethnic (BAME) students. In the academic year 2008/09, 38.3% of postgraduates studied at modern universities and 38.1% of all minority ethnic students studied at these universities – a strong reflection of the widening participation admission strategies promoted by these universities. In comparison, the Russell and the 1994 Groups supported 25.1% and 24.7% of the overall postgraduate market respectively, but only 21.4% (each) of minority ethnic postgraduates<sup>27</sup>.

## “The scale of the contribution of modern universities to postgraduate provision for black, Asian and minority ethnic students is highly significant.”

Modern universities retain their consistently high level of ethnic minority participation when figures are split into taught and research courses. In 2008/09, 42.2% of postgraduates on taught courses studied at modern universities and 41.4% of all minority ethnic students on these courses studied at these institutions. In the same year 20.2% of postgraduate research students studied at modern universities of whom 16.4% were from minority ethnic backgrounds<sup>28</sup>.

The scale of the contribution of modern universities to postgraduate provision for BAME students is therefore highly significant. Perhaps the most revealing statistic is that of all new UK-domiciled minority ethnic students entering university between 2007 and 2009, 40.6% chose a modern university. This would suggest that the strong record of modern universities in attracting students from minority ethnic backgrounds is being sustained<sup>29</sup>.

Modern universities provide an attractive mix of flexibility, accessibility and innovation. Combined with a firm commitment to widening participation, they appeal to and attract the broadest spectrum of the UK population and have student bodies which reflect a similar diversity. For this appeal to be maintained and strengthened, government must set out a strategy that encourages and supports postgraduate study across all universities. Any policy to concentrate doctoral study in just a handful of universities would have the obvious consequence of limiting opportunities for doctoral study to a smaller and much less representative section of the UK population.

### A more representative postgraduate profile

> Robust equality impact assessments should be applied to postgraduate funding regimes to ensure that they promote fairness and opportunities across all the potential postgraduate student population. The impact of research council and funding council regimes on the diversity of the postgraduate student profile should be fully assessed and urgently adjusted as required.

### Participation

> Best practice in universities which are most successful in achieving more socially inclusive UK postgraduate student profiles should be promoted. Research should be commissioned to identify the barriers to entry into postgraduate study for UK-domiciled students who are currently under-represented in the student profile.

> Part-time, flexible and accessible postgraduate provision which meets the needs of students as well as employers is critical to future expansion and should be incentivised by research and funding council funding regimes.

<sup>26</sup> *Are Ethnic Minorities Under-represented in UK Postgraduate Study?* Paul Wakeling, Higher Education Quarterly, Volume 63, No. 1, January 2009, pp 86–111.

<sup>27</sup> million+ analysis of HESA statistics: breakdown of postgraduate students by ethnicity, level of study, UK-domicile and institutional grouping from 2007/08 – 2008/09.

<sup>28</sup> Ibid.  
<sup>29</sup> Ibid.

The cost of postgraduate study is potentially a barrier to participation, particularly to students from lower socio-economic groups or with care commitments. Research council allocation of funding for masters and doctoral study, via block grants and doctoral training centres, is concentrated in some universities and acts as a potential deterrent to students whose personal circumstances prevent them from re-locating or travelling long distances.

There are likely to be a wide variety of reasons why individuals choose or are deterred from studying at postgraduate level. These include interest in a subject area, the need to change career direction, enhance employment prospects or add qualifications which are likely to assist with promotion to more senior positions, availability of employer-funding or funding from another source. However, the most common reasons for people being deterred from postgraduate study are likely to be cost, lack of financial support and lack of local course provision and time constraints.

Postgraduate provision (taught and research) suffers from a lack of consistent funding and support routes. In the recently published report *Unleashing Aspiration: The Final Report of the Panel on Fair Access to the Professions*<sup>30</sup> the panel identified that postgraduate degrees are information gateways for accessing many professional careers including those in the law, creative industries, the civil service and management. However, as these courses are substantially more expensive than undergraduate degrees, they act as a barrier to fair access to the professions. Whilst professional and career development loans are one option, there is a urgent need to investigate and develop clearer, transparent and fairer systems of financial support for postgraduate learners.

### Funding of Postgraduate Taught Provision

In England, the funding of postgraduate taught provision is split between funding from the Higher Education Funding Council for England (Hefce) and student fees. The current model of Hefce funding is problematic for most universities. The split methodology deployed means that students recruited in one year are paid for in the next financial year, when they complete their masters course. Effectively, universities are funding the cost of the provision in the year the student enrolls. In addition, the current Hefce funding mechanism only partially supports the cost of the provision. This is especially the case for Band D courses where the funding assumptions effectively remove most of the income. There is currently a 25% premium for offering postgraduate courses which last at least 45 weeks. This makes it more cost effective to claim band D funding. However, the net result is that there is no incentive for a university to devise accelerated taught masters courses as they risk losing Hefce funding. Consequently, these assumptions act to incentivise the recruitment of overseas students whose fees cover the actual cost of the provision.

There are few bursary or studentship schemes for taught postgraduate courses. Those that exist have complex rules and are usually many times over-subscribed. Most potential full-time students are left with little option but to self-fund by borrowing from parents, partners, banks or to take out a career development loan. Employers are increasingly reluctant to fund students to undertake full-time study. For part-time students, the funding options are even more limited. In most cases the only support for part-time students is employer funding or, potentially, a fee discount from the university.

### Funding of Postgraduate Research Degrees

The funding of postgraduate research degrees is even more complex with funding coming from a variety of sources including quality-related research funding and student fees, research council studentships and project grants, charitable research grant funding,

university endowment income and other gifts. A range of complex distribution methods are also deployed. Some of these require universities to bid for funding on a competitive basis for individual or companion grant studentships which are awarded on a case by case basis. Other routes provide the funding over an extended period as a block grant.

In addition to the routes available to taught postgraduate students there are university studentships, research council studentships and companion studentships to grants, CASE<sup>31</sup>, doctoral training centres, endowed or gifted studentships, employer research grants or sponsored studentships and charity research grant studentships. Each of these comes with their own rules, regulations, maintenance grants, fee payment methods and student entitlements to everything from holiday and maternity leave, printing and photocopying, to support and conference fees. Some of the scholarships are advertised and awarded by the university, others directly by the funder, whilst others are awarded by the university but ratified by the funder. Sometimes the student has to apply directly to the funder and sometimes their potential supervisor has to apply.

Many good quality UK and EU students are lost to research simply because they are unable to wait for six months for their potential supervisor to find and apply for studentships. Universities can also find themselves in the situation where a prolific grant-funded research team have more studentships than they can fill while a worthwhile new area, which is viewed by external funders as too risky to fund, has none.

A postgraduate strategy for the UK, that seeks to expand excellence, innovation and opportunity, should deliver research funding for world-leading and internationally excellent research in all UK universities to ensure their research students are supported in a globally connected world wherever they are studying.

**“Postgraduate provision suffers from a lack of consistent funding and support routes.”**

Many areas and disciplines can be linked via the internet and accessed remotely. Concentration on the creation of hubs fails to recognise the reality of a globally connected world. A research student connected to the internet is just as likely to be sharing ideas with a colleague in the USA, Europe or China as talking to the student at the next desk. Video conferencing and virtual on-line seminars give every research student direct access to world leading researchers in almost every discipline. Open access and self-archiving subject repositories increasingly give free access to pre-prints of articles and manuscripts.

The capacity of universities to compete for research council and other research contracts is partly determined by access to quality-related research funding made available by the funding councils and based on the outcome of the research assessment exercise (RAE). In RAE 2008 world-leading and internationally excellent research was found in 150 higher education institutions in the UK<sup>32</sup>. As a result, 2009-10 funding council settlements funded research excellence wherever it was found.

### Research Concentration

> The policy of the Department of Business, Innovation and Skills which requires the funding council for England to support greater levels of concentration in high level STEM from 2010-11 should be set aside. The policy will promote protectionism rather than value for money, reduce funding for world-leading and internationally excellent research in new areas and reduce the capacity of universities to compete for research council awards linked with postgraduate provision; it will also undermine the innovation and flexibility which should be the hallmarks of research funding and postgraduate provision in the UK.

<sup>30</sup> [www.cabinetoffice.gov.uk/media/227105/fair-access-summary.pdf](http://www.cabinetoffice.gov.uk/media/227105/fair-access-summary.pdf)

<sup>31</sup> Cooperative Awards in Science and Engineering.

<sup>32</sup> The full results of the 2008 Research Assessment Exercise are available at: [www.rae.ac.uk/results](http://www.rae.ac.uk/results)

### Postgraduate Doctoral Funding

- > There should be no further concentration of funding for postgraduate doctoral degrees and proposals to concentrate doctoral funding according to intensity of institutional research funding or through regional doctoral centres should be set aside.
- > Measurements of research intensity and arguments for critical mass, in all but the most capital intensive subject areas, fail to take account of economic impact, value for money or subject mix (which would be reduced by concentration).
- > Excellence in doctoral provision is dependent on the quality of supervision, can be equally well achieved in small research groups and is not related to intensity of research funding.
- > Pound for pound, universities which have received less quality-related research funding are more productive in terms of postgraduate taught and doctoral provision than universities which have historically been beneficiaries of significant amounts of research funding.
- > Participation of students who are already under-represented in the overall UK postgraduate student profile group, but who are much better represented in the postgraduate population of modern universities, would be adversely affected by concentration of doctoral funding. This would include part-time, mature and UK-domiciled black, Asian and minority ethnic students.
- > The capacity of universities to compete in the international postgraduate and undergraduate market would be seriously damaged by any policy to concentrate doctoral and research funding. There is a real risk that the UK will lose its competitive edge in the international marketplace with serious economic consequences for universities and the UK economy.

To deliver high quality support provision for a research degree, universities require a consistent source of funding and a regular supply of studentships. Larger traditional institutions, long the beneficiaries of preferential funding through the research councils and quality-related funding allocations, have typically been better placed to gain advantage in the number of research degrees offered. However, high quality support provision is not dependent on critical mass. While typically modern universities get less quality-related and research council funding and therefore have fewer doctoral students, they consistently demonstrate higher levels of productivity. As RAE 2008 demonstrated, high quality research and supervision are not dependent on large research groups.

### Middlesex University: Biomedical Science "A doctoral research training-led success"

Prior to 2008, Middlesex had not entered an RAE submission in any biological or medical related unit of assessment. However, its 2008 submission 'Professions Allied to Medicine' was rated 35<sup>th</sup> of the 70 UK University submissions.

Biomedical Science began at Middlesex University in 2004 with an initial HEFCE grant for £750,000. Within five years this initial funding had grown to £14million in total infrastructure investment. Four MScs in Biomedical Sciences are now offered and in 2010 there were 25 PhD students. Funding from the EPSRC, the EU and from cancer charities, supports 11 post-doctoral scientists.

With doctoral training central to the sustainability of the faculty, BIS proposals to concentrate doctoral funding on a handful of universities would threaten the further development of this highly successful STEM department.

## "Lord Browne's review of fees and funding in England should not seek to transfer funding from undergraduate to postgraduate provision."

Modern universities, with their more socially inclusive and diverse undergraduate and postgraduate student profiles, offer a wealth of potential opportunity to diversify and widen participation in UK postgraduate doctoral provision, including in emerging market areas. However, this potential is only likely to be fully realised with a change of funding regimes.

### Student Support

Many potential postgraduate students wrongly assume that there is a loan scheme similar to that available to full-time undergraduates in England and administered by the Student Loans Company (SLC). Once they find that there is not, and that there is a significant repayment risk if they cannot find a job, they may lose interest unless they have access to other sources of funding.

A new strategy for postgraduate provision in the UK needs to clearly set out a single scheme for funding all full-time and part-time UK postgraduate students. BIS and the devolved governments should cost and review options to provide this.

However, proposals to divert teaching funding, undergraduate student support or graduate contributions from first degrees to fund postgraduate provision in England would be entirely inappropriate and misplaced<sup>33</sup>. There was a mismatch between demand and undergraduate funded numbers in 2009 and universities in England are being fined for over-recruitment in 2009-10. Part-time first degree students in England still have to pay fees upfront and are not eligible for loans for fees or maintenance.

Moreover, no detailed research has been commissioned to investigate the mechanisms and the costs by which improved postgraduate support could be made available. As a result, there is no case at the present time to switch funding from undergraduate student support or to amend graduate contributions in order to create a new support system for postgraduate qualifications.

<sup>33</sup> The Independent Review of Higher Education Funding and Student Finance (in English institutions), chaired by Lord Browne and due to report in Autumn 2010, has been asked to consider financial support for postgraduate students.

### Fees and funding

- > The funding routes to access postgraduate provision are complex and student support systems are weak. Further detailed research should be commissioned to assess the mechanisms and the merits of alternative funding and student support models with the aim of developing a system that increases access to and expands postgraduate provision.
- > There is no case to divert funds from undergraduate teaching, student support or graduate repayments, for full-time first degrees in England, to fund postgraduate provision or student support. The most significant impact upon life-time earnings is the achievement of a first degree. This is particularly the case for students from non-traditional backgrounds and more generally for women who earn much less than men if they enter employment with the equivalent of A-levels / level 3 qualifications or less.

With a mismatch between funded student places and demand at undergraduate level, there is a real risk that UK-domiciled first-degree applicants will not get places to study at university. In addition, part-time students at undergraduate level have no access to maintenance or fee loans. As a result, Lord Browne's review of fees and funding in England should not seek to transfer funding from undergraduate to postgraduate provision.

### Coventry University: Anmar Haider, MA in Global Media & Communications

“The Masters in Global Media and Communications at Coventry offered interconnected spheres of study in one package that complemented the degree I already had. I wanted to learn more about the role communications played in political campaigns. I also wanted to learn more about how and why nations throughout the world operated in different international arenas such as the United Nations.”

Despite meaning a move of thousands of miles from his home in Jordon, Ammar believes: “It was worth it. Coventry’s diversity proved it to be the perfect city to learn more about international communications. The globalised student community at Coventry gave me firsthand experience of different cultures. It was my global village and the learning was a 24-hour job. It took place in the classroom and while I was out with my student friends – all with different nationalities, from Mexico to India.”

After graduation in 2001, Ammar found employment with the Jordanian Foreign Service and believes that his Coventry experience gave him the edge over other applicants. “I had many different portfolios within my service at the Foreign Ministry, and often I found myself reverting to something I did or read at Coventry. Holding a British Postgraduate degree boosted my career.” He also credits the MA with his move back to the UK to work in the Jordanian Embassy in London as the Press Attaché and he is now the Director of the Jordan Information Bureau. “My choice of University has influenced my life ever since. The experience is one of the richest in my life.”

The postgraduate student experience is different to that of the undergraduate and it is vitally important that both decision-makers and universities understand this. Specialist knowledge and close relationships with leading academics are key but universities also need to be sympathetic to the needs of part time, distance-learning and work-based students. Providing a high quality, flexible experience is paramount, as is practical experience that equips the postgraduate effectively for their future career whether in employment or in continued education. One of the most negative aspects of the student experience is the complex and inadequate funding system in terms of fees and student support previously described.

The requirements of students at postgraduate level differ from those at undergraduate level. Often a postgraduate qualification is a career choice and many students study alongside their regular job. Some postgraduates undertake distance learning programmes and need to make the most of any time they actually spend on campus. In addition, these students need to be able to access all the resources for their studies from home or work. As a result, universities provide study resources online and on-campus. This needs to include regular interaction with academics and industry professionals and study space ‘after hours’.

Social activities and community are important for some postgraduate students. This is particularly true for international postgraduates. However, social activities may not be the first priority for part-time or industry-based postgraduates but a shared space – for example a university graduate centre – or the offer of shared activities (which can include both social and study elements) can create a sense of community and reduce the risk of isolation.

All students want access to high-quality teaching and research, particularly in specialist or strategic subject areas. Modern universities

have shown themselves to be able to adapt their provision to changing external requirements, offering niche and specialist provision not available elsewhere. Following the logic of RAE 2008, excellence in research terms (and therefore suitability to supervise students at masters and doctoral level) is to be found in universities across the sector in a diverse range of subject areas.

Other benchmarking exercises undertaken by professional bodies as well as research councils have confirmed the spread and diversity of this excellence when measured in global terms. This is why focusing postgraduate doctorate provision in a smaller number of large centres increases the risk that this specialist provision will not be supplied, leaving students with reduced subject choice and (literally) no university at which they feel able to study.

Flexible modes of delivery are important to increase take up of postgraduate opportunities. Often, a traditional full-time study route is not a viable option for many students. Modern universities have a strong record of delivering successful and innovative programmes.

### University of Bolton: PhDs by publication and practice

The University of Bolton offers a work-based PhD by publication, aimed at research professionals outside academia and a similar PhD by practice, an industrially focused programme that offers benefits to both students and employers. The university has achieved significant success by using this latter delivery mode with industrially-based materials scientists and engineers, supported by the university’s Institute for Materials Research. Another flexible provision but in a different field is the University’s inquiry-based masters programme in Regeneration and Sustainable Communities, which has been developed in conjunction with Bolton MBC’s Housing Department, and which is specifically aimed at stimulating social enterprise.

“Often, a traditional full-time study route is not a viable option for many students.”

### Kingston University: MSc Professional Engineering

Kingston University has developed an MSc in Professional Engineering, in conjunction with the Engineering Council UK (ECUK). The MSc is a work-based learning route and provides the academic qualifications and professional development needed for registration as a Chartered Engineer. The course, typically lasting two to three years, develops a well-defined schedule of activities and meets a strategically significant development need for the student’s employer. The programme allows students to acquire professional competences alongside the MSc – without the need to take time off work. The flexibility of the programme allows it to be adapted to almost any work situation, industry or location.

### University of Central Lancashire: MSc Biomedical Science

The part-time MSc in Biomedical Science offered by UCLan is designed for practicing Biomedical Scientists (principally from NHS pathology laboratories). It offers a flexible route to develop their understanding of their chosen laboratory discipline but is also a means to learn more about other pathology disciplines so that they can offer a more integrated service in the diagnosis, treatment and monitoring of disease.

Each student carries out a 60 credit research project pertinent to their pathology discipline. The process of deciding upon the research topic is carried out in conjunction with the student’s manager and is subject to NHS Ethical Approval. Projects are undertaken within the hospital laboratories.

## Conclusions

Modern universities have offered a wealth of postgraduate opportunities for many years. Prior to the Further and Higher Education Act 1992 there had been considerable amounts of postgraduate teaching and research undertaken at Polytechnic institutions in, for example, professional areas such as engineering, town planning, and architecture. Doctoral students have been present within the fabric of these institutions for over 35 years, producing consistently excellent research to meet the needs of a changing society and economy.

These universities are now clearly associated with curriculum innovation in new markets and areas such as communications, media, digital technology and business and administration as well as in the development of employer-facing courses including sandwich degrees, professional doctorates and practice-based postgraduate qualifications. In line with their undergraduate profiles, these universities have been more responsive than many older institutions in their admissions policies and have created many more postgraduate opportunities for students from non-traditional backgrounds and for black, Asian and minority ethnic students and those wishing to study at postgraduate and doctoral level as mature students or on a part-time basis. These universities are also key players in the UK's success in the international postgraduate market.

*A Postgraduate Strategy for Britain* highlights the key areas where changes to the UK's current postgraduate provision would expand excellence and innovation and ensure that the UK and its universities meet the economic and societal challenges of the future. In particular, the opportunity to undertake postgraduate study needs to be expanded and to be more fairly available to all those who are qualified and want or need to gain a postgraduate qualification.

## Annex 1 Institutional Groupings

For the purposes of modelling postgraduate provision in the UK, across the entire university system, institutions have been split into four groups. The institutions included in each group are listed below.

Modern (post-92)			
Bishop Grosseteste University College, Lincoln Buckinghamshire New University Chester University Canterbury Christ Church University York St John University Edge Hill University Winchester University Liverpool Hope University University of the Arts, London Bedfordshire University Northampton University Newman University College Roehampton University Southampton Solent University University of Cumbria Worcester University	Anglia Ruskin University Bath Spa University Bolton University Bournemouth University Brighton University Birmingham City University The University of Central Lancashire Gloucestershire University Coventry University Derby University The University of East London Greenwich University Hertfordshire University Huddersfield University Lincoln University Kingston University Leeds Metropolitan University	Liverpool John Moores University Manchester Metropolitan University Middlesex University De Montfort University The University of Northumbria at Newcastle Nottingham Trent University Oxford Brookes University Plymouth University Portsmouth University Sheffield Hallam University London South Bank University Staffordshire University Sunderland University Teesside University Thames Valley University The University of the West of England	Chichester University Westminster University Wolverhampton University The University of Wales, Newport Glyndr University University of Wales Institute, Cardiff Glamorgan University Swansea Metropolitan University The University of Abertay Dundee Queen Margaret University, Edinburgh The Robert Gordon University The University of the West of Scotland Glasgow Caledonian University Edinburgh Napier University London Metropolitan University
1994			
Bath University Durham University East Anglia, The University of Essex University Exeter University Lancaster University	Leicester University Birkbeck College Goldsmiths College Institute of Education Queen Mary and Westfield College	Royal Holloway and Bedford New College The School of Oriental and African Studies Loughborough University Reading University	Surrey University Sussex University York University St Andrews University
Russell Group			
Birmingham University Bristol University Cambridge University Leeds University Liverpool, The University of	Imperial College of Science, Technology and Medicine King's College London London School of Economics and Political Science University College London	Newcastle-upon-Tyne University Nottingham University Oxford University Sheffield University Southampton University Warwick University	Edinburgh University Glasgow University Cardiff University The Queen's University of Belfast Manchester University
Other			
Aston University Bradford University Brunel University The City University Hull University Keele University Kent University London Business School London School of Hygiene and Tropical Medicine The Royal Veterinary College St George's Hospital Medical School The School of Pharmacy University of London (Institutes and activities) Salford University Strathclyde University Aberdeen University	Heriot-Watt University Dundee University Stirling University The University of Scottish Agricultural College Wales, Lampeter Aberystwyth University Bangor University Swansea University Ulster University The Institute of Cancer Research Norwich University College of the Arts Stranmillis University College St Mary's University College Royal Agricultural College UHI Millennium Institute The Arts Institute at Bournemouth Conservatoire for Dance and Drama	University College Birmingham Courtauld Institute of Art Buckingham University Heythrop College University for the Creative Arts Leeds College of Music Guildhall School of Music and Drama The Liverpool Institute for Performing Arts University Campus, Suffolk The Open University Cranfield University Royal College of Art Central School of Speech and Drama University College Plymouth St Mark and St John	Dartington College of Arts University College Falmouth Harper Adams University College Ravensbourne College of Design and Communication Rose Bruford College Royal Academy of Music Royal College of Music Royal Northern College of Music St Mary's University College, Twickenham Leeds Trinity and All Saints Trinity Laban Trinity College, Carmarthen Edinburgh College of Art Glasgow School of Art The Royal Scottish Academy of Music and Drama

## Annex 2

### List of Doctoral Studentships

#### Examples of doctoral studentships in modern universities

The following list acts as a sample (and is not meant to be exhaustive) of doctoral research opportunities in modern universities.

Accessible Transport & Public Realm  
Allied Health Professions  
Anthropology  
Architecture  
Art & Design  
Arts & Play Therapies  
Astrophysics  
Bioinformatics  
Biology  
Biomedical Science  
Biophysics  
Built & Natural environment  
Business, including Administration, Management & Marketing  
Child Psychoanalytic Psychotherapy  
Children's Literature  
Classics  
Cognitive Behaviour Therapy  
Communicable Diseases  
Communications & Media Studies  
Computer Gaming Technology  
Computing & IT  
Construction & Manufacturing  
Counselling Psychology  
Creative Writing  
Cultural Planning & Regeneration  
Cultural Studies  
Dance  
Density & Mixed Use Development  
Design, Media & Arts  
Drama, Theatre & Performance Studies  
Ecology  
Economics  
Education & Learning  
Emergent Computing  
Engine Emissions  
Engineering  
Engineering & Mathematics  
Engineering, Product Design & Textiles specialisms  
English Language & Linguistics  
English Literature  
Entrepreneurship & Enterprise  
Environment & Sustainability  
Film & Television studies  
Forensic Psychology  
Forensics  
French  
Geography  
Health & Community  
Health Psychology  
Health Sciences  
History

History of Art & Design  
History, International Affairs & Politics  
Hospitality  
Human Sciences  
Information Management  
Information Security  
Language Testing & Assessment  
Law  
Leadership in Children's & Young People's Services  
Learning Disability  
Leather Technology  
Leisure & Sport  
Linguistics  
Literature  
Local Economic Development & Ethnic Minority Enterprise  
Midwifery & Women's Health  
Modern Languages  
Neurobiology  
Nursing  
Nutrition  
Occupational Psychology  
Passive Safety of Vehicles  
Performance Studies  
Personnel & Development  
Philosophy  
Policing, Security & Community Safety  
Politics  
Professional Studies Advancing Practice  
Psychology  
Psychotherapy & Counselling  
Public Health & Clinical Sciences  
Science, Forensics and Law  
Social Informatics  
Social Policy & Administration  
Social Sciences  
Social Work  
Sociology  
Spanish  
Sport, Health & Exercise Sciences  
Sport, Leisure & Culture  
Sport, Tourism & the Outdoors  
Systematic Practice  
Technology  
Television studies  
Theatre studies  
Theology & Religious Studies  
Translation  
Youth Homelessness  
Youth Justice



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