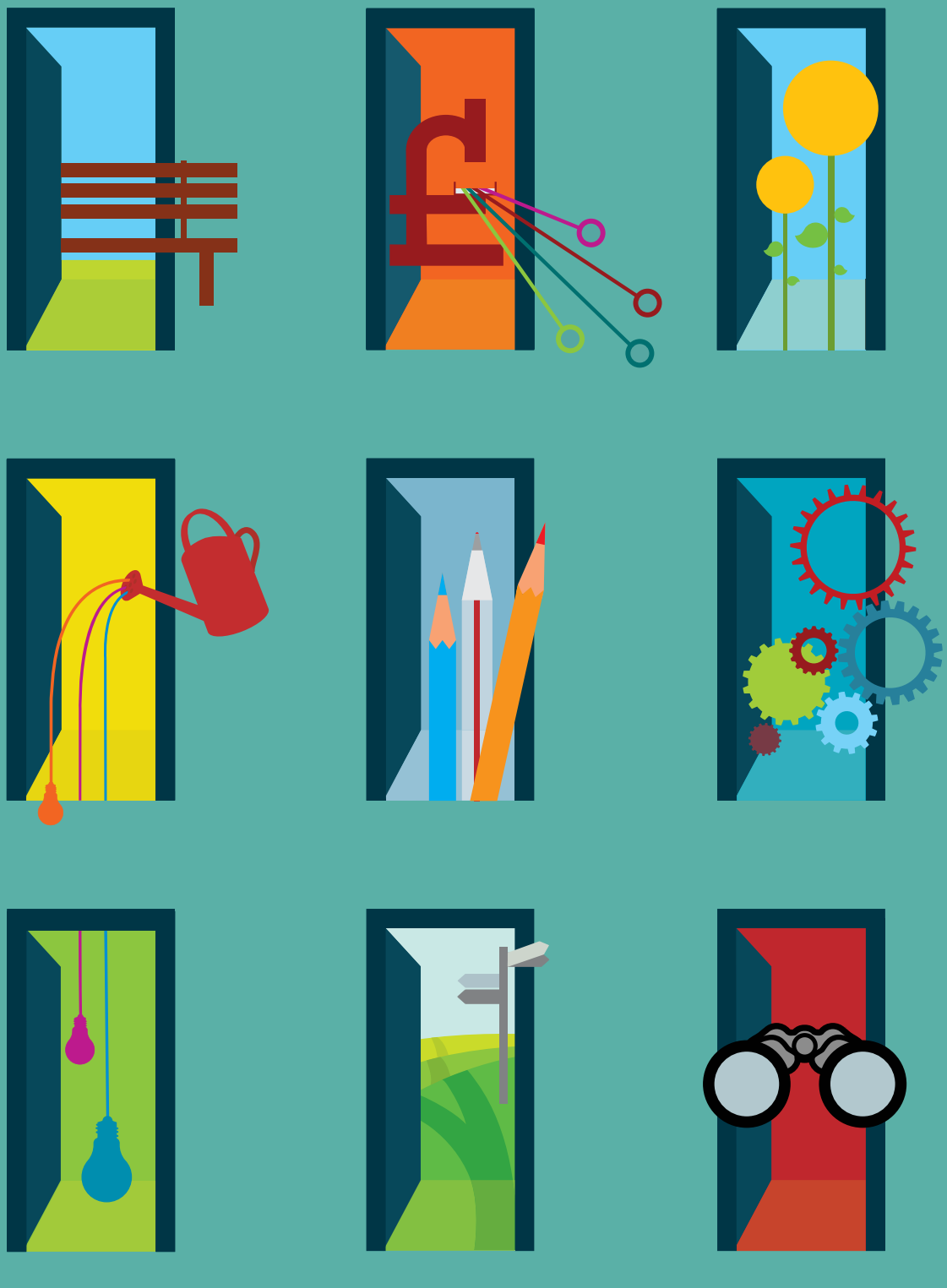
# Higher Education in England

## Achievements, challenges and prospects



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Foreword

# Higher Education in England

## Tim Melville-Ross

Higher education has become such a vast enterprise that it is easy to lose sight of the variety of roles universities and colleges now perform. While the growth in undergraduate numbers has given many more families first-hand experience of the higher education sector, the breadth of universities' research and the work they do with business and local communities have huge implications for the economy and society.

Over the past decade, not only has higher education in England doubled in size, but the image of the ivory tower has been banished for good. Among both students and staff, there are more women, more ethnic minorities and more from other sections of society that traditionally have been under-represented in universities. At the same time, much more has been expected of institutions in terms of their wider engagement locally, regionally, nationally and globally.

I saw this at first hand when I chaired the council of the University of Essex. But since taking over my current role at the Higher Education Funding Council for England, I have become aware of the full extent of the changes and am keen that they should be better known outside the academic community.

This report is intended to demonstrate to a wide audience the way universities and colleges have taken on new challenges and become central to the economic and social fabric of the nation. It also confirms that higher education in England has maintained – and in many areas enhanced – its international reputation. At this time of economic uncertainty, there is also welcome evidence that higher education can be an engine of recovery. Whether through provision of essential skills, the pursuit of discoveries that can help maintain our competitiveness, or through direct assistance to struggling companies, the higher education sector has much to offer. How many people realise that, as well as conducting large-scale research such as mapping the human genome, universities are running bus companies, providing arts and sports facilities for the public, and assisting small firms with business planning?

Whether in periods of plenty or in downturns, the central purpose of universities and colleges will always be the pursuit of excellence in teaching and research. And while they have an important place in supporting the economy, their role in building a just and vibrant society is just as important. Universities and colleges are at the forefront of cultural developments, and help to instil values in their graduates that make for healthy and socially active citizens.

University researchers have been responsible for breakthroughs in medicine that have saved countless lives, and they are at the cutting edge of the debate on climate change. They also offer advice and guidance on the full range of social policy, from policing to education, both locally and nationally.

In many areas, higher education institutions have become the largest employers and a focal point for the community. This report looks at the evidence about how successfully they have adapted to their new roles and what the prospects are for the future. The signs are that the sector will become still more diverse over the coming years, and play an even greater role in the life of the nation.

Tim Melville-Ross CBE, Chair of the Higher Education Funding Council for England.

Chapter 1

# The context for English higher education

Universities[1] in England have been transformed in recent years to an extent seldom recognised outside the academic world. They are no longer concerned, if they ever were, simply with three-year undergraduate degrees and narrowly focused research. Rather, they have moved to the centre stage of national life, intimately involved in changes in society and the economy. Over 20 years, universities have doubled in size and taken on new responsibilities, while maintaining an international reputation for teaching and research that attracts students from all parts of the world and places them second only to the US in major rankings.[2]

UK higher education (HE) leads the world in terms of research productivity: its academics produce 16 citations per US dollar, compared with 10 in the United States and four in Japan.[3] With 1 per cent of the global population, it produces 9 per cent of the world's scientific publications and 12 per cent of citations.[4] Universities are also one of the nation's biggest earners of foreign currency, bringing in more than £5.8 billion a year in tuition fees, transnational enterprises and other activities.[5]

The evolution of the elite higher education system of the post-war years into the much more diverse, multi-dimensional 21st century version has seen a broadening of the curriculum beyond traditional academic subjects and much greater engagement in all areas of public life. As an indication of this, the volume of media coverage involving higher education has increased fivefold in a decade.[6] Academics play an essential part in decision-making on health, crime, the environment and virtually every other field of policy, while universities have become leading agents of regeneration in cities and major players in regional strategies. Above all, they supply a growing proportion of the skilled workforce required by a knowledge economy and compete at the highest levels on 'blue skies' as well as more applied research.

## Helping in a recession

The reshaped higher education system is far better equipped than its predecessors to help business and

industry weather a recession. Not only does it foster the innovation that will be needed to accelerate recovery when it comes, but many institutions are already providing advice and support for companies suffering in the economic downturn. They are also enabling individuals to access tailored advice and re-training opportunities. Current developments will also foster strategic relationships between universities and business which will be resilient in the current economic turmoil and sustainable in the longer term.

In addition, capital projects are being maintained – and some brought forward – to help keep local economies moving, while income from overseas student fees and other international activities makes higher education a valuable export industry.

Over a ten-year period, the number of students at English higher education institutions (HEIs) has grown from fewer than 1.5 million to over 2 million.[7] At the same time, turnover has been growing at the rate of between 6 per cent and 9 per cent a year, with total income rising from £11 billion to well over £16 billion in the first five years of the century alone.[8] The amounts raised from sources other than government grants and Research Council contracts have increased, as universities have diversified their income streams. The higher education sector has adapted successfully to technological and social change – and often led it, for example in the development of eco-friendly buildings.

For many commentators, both inside and outside the sector, the question now is whether higher education can continue to satisfy such diverse demands at or around the current level of funding. The introduction of variable fees has boosted the sector's income without suppressing the demand for places, but the number of 18 year-olds will begin to decline from 2010; also competition for international students is intensifying.

Gordon Brown has acknowledged that universities are underfunded in comparison with their competitors in the US, where 2.6 per cent of national income is devoted to higher education compared with 1.1 per cent in the UK.[9] The last Comprehensive Spending Review promised real-terms increases of 2.2 per cent a year for the new Department for Innovation, Universities and Skills (DIUS) until 2010-11.[10]

A review of tuition fees, planned for this year, will guide the Government on the extent to which future increases should be drawn from graduates, rather than the state.

As in other parts of the world, recession will place new strains on the resources available from the state. But a global consensus has emerged, encouraged by bodies such as the Organisation for Economic Co-operation and Development (OECD), that a large and sophisticated higher education system is essential for successful industrialised nations. Indeed, this assertion has become so widely accepted that, despite continuing expansion, England has been overtaken by several countries in terms of graduation rates. The 2008 edition of the OECD's 'Education at a Glance survey' identified 11 countries (Australia, Denmark, Finland, Iceland, Ireland, Italy, the Netherlands, New Zealand, Norway, Poland and Sweden) where the proportion of people graduating at the normal age for each country exceeds the UK's 39 per cent. The report adds that current enrolment rates suggest that more countries will overtake the UK in the foreseeable future.[11]

That HEIs make a significant contribution to the economy is no longer in doubt, even allowing for the substantial investment by the state and the uncertainties surrounding public rates of return on higher education. With about 300,000 staff in England, universities are often the largest employers in the area; their students bring millions of pounds into the local economy, which can also benefit from research and knowledge transfer.

The OECD regularly rates the UK as one of the countries where the benefits of degree status to the individual are particularly high. In 'Education at a Glance 2008', graduates' average salary premium over qualified school-leavers was put at 59 per cent, with only the Czech Republic, Germany, Hungary, Ireland, Italy, Poland, Portugal and the US showing bigger advantages for graduates. Calculating public rates of return is more complicated, but OECD estimates continue to place the UK among the leading industrialised nations on this measure.

## Economic impact

Higher education's impact on cities and regions is even more easy to demonstrate. Areas without a university have become increasingly anxious to acquire one – whether a branch campus of an existing institution or (preferably) a university in its own right. Regional Development Agencies have invested heavily in higher education projects, such as the Combined Universities in Cornwall, the merged University of Manchester and the newly established University of Cumbria. Elsewhere, universities have been instrumental in the regeneration of city centres, often as the focal point of new cultural quarters, and the Government has also put universities at the heart of six 'science cities' created in partnership with their Regional Development Agencies.[12]

Business leaders, too, have sometimes been critical of higher education, for example in terms of graduates' inter-personal skills. There is no consensus among business organisations about the performance of English universities – those representing the bigger companies tend to be more satisfied than the smaller firms' organisations. Surveys by the Confederation of British Industry (CBI) have identified significant benefits for companies that collaborate with universities, and the most recent employer survey carried out by the Learning and Skills Council showed a 'steady upward trend in most areas of skills development'.[13]

The Lambert Review of 2003, commissioned by the Treasury, was less critical of universities than it was of companies, many of which had relocated their research and development activities outside the UK. However, the review found that university courses did not match the needs of employers in key areas, and confirmed that business often found it difficult to engage with universities. Four out of five companies had no interaction with university departments, for example.[14] Mr Lambert has noted a further improvement in relationships since his review was published. In his Foreword in the 'CBI/HEFCE/Universities UK report 'Stepping Higher'[15], he says: 'University and business collaboration has come a long way in the past decade, and especially the last five years.'

All the indicators in the UK higher education funding councils' annual survey of interaction with business and the community are rising, with collaborative research income growing particularly strongly and the number of spin-out companies increasing after a downturn at the start of the decade.[16] University spin-outs have been shown to enjoy faster growth and better survival rates than others, and an independent report by Library House drew favourable comparisons with the quality of companies spun out by US universities.[17]

Miles Templeman, Director General of the Institute of Directors, thinks that most firms have recognised a fundamental change in attitude in universities over the past decade, as they have become more business-friendly. There may be work to do with small and medium-sized enterprises, but even they are much more likely than in previous years to be engaged in some way with their local university.

Lord Sainsbury's 2007 review of science and innovation for the Treasury acknowledged the strength of UK universities' research and stressed the progress that had been made in knowledge transfer, where he reported a 'dramatic increase' in activity. He credited government schemes such as the Higher Education Innovation Fund (HEIF), which was established in 2001 to support knowledge transfer, with encouraging a 'major culture change within our universities, building capacity, increasing professionalism and making higher education institutions more valuable partners for business'. One of his recommendations was to make HEIF a permanent part of the university funding system.[18]

While knowledge transfer has become an increasingly important part of English universities' remit, their contribution to the economy still rests primarily on the skills of their graduates. The final Leitch Report on UK skills, (published December 2006) described the higher education system as 'excellent', but was in no doubt that many more graduates, from a wider range of backgrounds, were needed to make good the UK's skills deficit. Lord Leitch – like many before him – called for

# England remains the favourite destination of international students after the much larger US university system

greater engagement between universities and employers, with more degrees delivered in the workplace and more bespoke training offered to management and highly skilled workers. Expanding workplace learning, co-funded by employers, has become a top priority of the Government as it prepares for a downturn in the number of school-leavers and strives to meet the Leitch target of an increase from 29 per cent to 40 per cent of those of working age with Level 4 qualifications.[19] Universities have been sceptical about the likelihood of firms guaranteeing the long-term funding needed to invest heavily in such programmes, but some modern universities in particular have established strong portfolios of courses. The Higher Education Funding Council for England's (HEFCE's) initial target for allocating co-funded places was exceeded, although further progress during a recession may be more challenging.

Foundation degrees, which last two years when taken on a full-time basis, are the most popular workplace option. Designed in collaboration with employers and often taught in further education colleges, they were launched to provide a new type of vocational higher education, which the 2003 White Paper, 'The Future of Higher Education', identified as 'the major vehicle' of continued expansion.[20] More than 40,000 students started foundation degrees in 2007-08, an increase of 19 per cent on the previous year.[21]

This growth has to be seen in the context of a smaller but significant decline in enrolments on Higher National Diploma courses. But foundation degrees have contributed to a long-term switch in the balance of English higher education away from a purely academic, three-year model of undergraduate study to a more diverse system. The newer universities have long-established links to the professions and many of the pre-1992 universities have also launched more vocationally-focused courses, as career prospects have begun to play a larger role in applicants' choice of subject.

# In many respects higher education represents one of England's success stories of recent years

Parallel changes in employment and higher education have seen HEIs catering particularly for the higher or more specialist technician-level posts that modern industrial processes demand and for the specialisms required in the creative industries, which attract young people in ever-increasing numbers. Whatever the extent of job substitution – where graduates take posts previously filled adequately by less-qualified workers – much of the expansion in higher education has taken place in response to developments in a post-industrial, services-dominated jobs market. The rise and subsequent decline of computer science courses around the time of the so-called 'dotcom boom' of the 1990s was one example. A more recent, if less dramatic example, is in the raft of degrees focusing on the design of computer games. But more important still has been the professionalisation of so many fields of employment: all-graduate entry is long-established for teachers, solicitors and others, and nurses and social workers have followed suit.

## Wealth creation

Successive governments have continued to stress higher education's role in the creation of wealth, both for the state and for the individual. There has been extensive debate about the size of the lifetime salary premium enjoyed by graduates, as well as more limited discussion of the role of the university and its claim on the public purse. Although the case for expansion – and increased funding – has generally been made on economic grounds, the social benefits are equally compelling. A string of surveys[22] have catalogued the advantages enjoyed by graduates, from good health to active citizenship. Extolling the intrinsic value of learning in one of his first major speeches as Secretary of State for Innovation, Universities and Skills, John Denham said: 'A highly educated society has a strength and resilience in a rapidly changing world that goes far deeper than the particular jobs that individuals are doing at any one time.'[23]

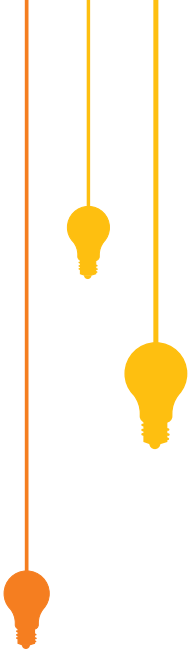
Critics suggested that the introduction of variable fees of up to £3,000 in 2006 would encourage a migration towards job-related courses as well as discouraging applications from students from poor families. Although it is too soon to discern long-term trends, it appears that, after a year of adjustment, patterns of application have been returning to normal. Most HEIs saw increases in 2007, when applications rose by 5.4 per cent, and theoretical subjects shared in the renaissance.[24] Science, technology, engineering and mathematics (STEM), which dominate the Government's list of strategically important subjects, also recruited well. Variable fees for full-time courses seem not to have acted as a further disincentive to working-class applicants, many of whom were eligible for financial support. Indeed, their share of places rose marginally in both 2007 and 2008.

However, the low level of financial support for part-time students continues to make affordability more of an issue for them. As Professor Christine King points out in her report to DIUS, changes will have to be made in the way resources for part-time students are allocated so they can continue to develop their skills throughout their working lives.[25]

## Internationalisation

England remains the favourite destination of international students after the much larger US university system.[26] The number of students coming from elsewhere in the EU (paying the same fees as British students) have been boosted by the accession countries, while growth in recruitment from further afield has exceeded the target set in the first Prime Minister's Initiative for 50,000 more international students by 2004-05.[27] Attracted by the English language and the intensity of undergraduate and masters courses, as well as the reputation of UK higher education, their (higher) fees have become an integral part of the economy of many HEIs. Many courses, especially in STEM subjects and particularly at postgraduate level, could not run without international students.

The high reputation of England's universities is confirmed in global rankings. Those published by Times Higher Education (THE/QS World University Rankings) and Shanghai Jiao Tong University (Academic Ranking of World Universities) both



place England second only to the US for the number of leading universities. In both rankings, Oxford and Cambridge appear in the top ten, while the THE/QS list includes 14 English universities among its top 100, compared with nine in the Shanghai ranking. Jan Figel, the EU Commissioner for Education, has predicted however that without much more generous funding, European universities could be overtaken by their Chinese and Indian counterparts within a decade.[28]

Certainly, higher education has become a truly global enterprise, with international collaboration now commonplace in research and HEIs recruiting a growing proportion of their staff from overseas universities.

The Bologna Agreement to create a European Higher Education Area by 2010[29] will increase the speed of change and create yet more competition as other nations expand the range of degree programmes taught in English.

While institutions are serving their own self-interest by looking beyond national borders, they are also contributing to development and international co-operation. The Water, Engineering and Development Centre at Loughborough University, for example, is a world-leading education, training, consultancy and research institute that specialises in improving water supply and sanitation in developing countries.

Enrolments at universities from within and outside the EU have continued to rise, with China and India sending the largest numbers, even though both countries are giving a high priority to expanding and improving their own higher education systems.[30] English universities are increasingly reliant on income from international students' fees[31] and are well-placed to maintain a strong market share with their relatively short undergraduate and masters courses, that also allow students to immerse themselves in the English language. But Sir Drummond Bone, former Vice-Chancellor of the University of Liverpool, warned in a 2008 review of internationalisation commissioned by DIUS that the most optimistic projections of overseas recruitment were no longer tenable; with the market 'far from stable', international activities are likely to become predominantly bilateral or multilateral.[32]

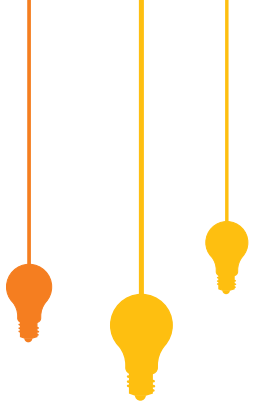
Opinion is divided about the most effective and responsible model for exporting higher education: whether through overseas campuses of English universities, franchising UK qualifications to be taught at local institutions, adding one or two years of study in England to an initial period in the student's home country, or simply by continuing to provide entire courses at English HEIs. Sir Colin Campbell, former Vice-Chancellor of the University of Nottingham (which has opened campuses in China and Malaysia), is highly critical of the quality of some franchising operations and believes that governments are beginning to question the value for money offered by many overseas courses. But not all 'offshore' campuses have been successful, and Sir Colin acknowledges that the model will continue to be unusual. In the short term, international recruitment to courses taught in England will continue to be the norm, as the reduced value of the pound counterbalances the impact of global recession to some extent. However, the longer-term trend is likely to be towards institutional partnerships and greater use of distance learning.

## Strength of the HE sector

This report examines HEIs' performance in a variety of contexts. It is clear that in many respects higher education represents one of England's success stories of recent years, with rising productivity and an enhanced international reputation. There are many reasons for this success, notably the high quality of academics working in England's universities. Two other factors that have added to the strength of the sector are its diversity and its unique form of governance. John Denham predicts that the sector will become even more diverse, although he stresses that the Government will not attempt to direct institutions, believing that autonomy is central to their record of success.

While famous names at the top of the university league tables attract most public attention, the variety of responsibilities vested in the modern higher education system require excellence at every level. Those at the cutting edge of relations with small and medium-sized enterprises tend to be found among the newer universities and colleges, for example. And some of the largest salary premiums enjoyed by graduates have been shown to be those from business-facing degrees at institutions that do not feature at the top of university league tables.[33]

While traditional systems of governance in universities can be frustratingly slow, the combination of public funding and institutional autonomy has proved to be a powerful one. Although England has only one 'private' university, the others have their freedom of action guaranteed by charter. English universities are now in the position of having a government department named partly after them and providing the lion's share of their funding, but not controlling them directly. This funding and governance model has echoes in the latest proposals for schools and hospitals, and which has encouraged successful innovation in higher education.



Notes

[1] General references in this publication to 'universities' refer to all publicly funded higher education institutions, including higher education colleges. Higher education courses are also delivered at many further education colleges.

[2] World University Rankings 2008 (www.timeshighereducation.co.uk) Shanghai Jiao Tong University rankings 2008 (www.arwu.org).

[3] 'Science & Innovation Investment Framework 2004 – 2014: Progress against Indicators'; Department for Business, Enterprise & Regulatory Reform, July 2006 (www.berr.gov.uk).

[4] 'Economic Impacts of Investment in Research & Innovation'; Department of Trade and Industry, July 2007; p.4 (www.berr.gov.uk).

[5] 'Global Value'; British Council report by Dr Pamela Lenton, University of Sheffield, September 2007 (www.britishcouncil.org).

[6] John O'Leary; Fourth Estate, May 2007.

[7] 'Patterns of Higher Education Institutions in the UK'; Universities UK; September 2008 (www.universitiesuk.ac.uk).

[8] Ibid.

[9] Olga Wojtas; 'Brown urges rise in spend on sector'; Times Higher Education Supplement, 9 June 2006.

[10] 'Comprehensive Spending Review 2007'; HM Treasury; (www.hm-treasury.gov.uk).

[11] 'Education at a Glance 2008'; OECD (www.oecd.org).

[12] 'The Race to the Top: A review of the Government's Science and Innovation Policies', p.139; HM Treasury (www.hm-treasury.gov.uk).

[13] 'National Employers Skills Survey 2007'; Learning and Skills Council, May 2008 (http://research.lsc.gov.uk).

[14] 'Lambert Review of Business-University Collaboration'; HM Treasury, December 2003 (www.hm-treasury.gov.uk).

[15] 'Stepping Higher', October 2008 (www.hefce.ac.uk).

[16] 'Higher education-business and community interaction survey'; July 2008 (www.hefce.ac.uk).

[17] 'Spinning out quality: University spin-out companies in the UK'; Library House; March 2007 (www.libraryhouse.net).

[18] 'The Race to the Top: A review of the Government's Science and Innovation Policies'.

[19] 'Prosperity for all in the global economy – world-class skills'; HM Treasury; December 2006 (www.hm-treasury.gov.uk).

[20] 'The future of higher education'; DfES, January 2003; Cm 5735. (www.dfes.gov.uk).

[21] 'Foundation degrees: key statistics 2001-02 to 2007-08'; HEFCE 2008/16 (www.hefce.ac.uk).

[22] For example, HEFCE 'The wider benefits of higher education' and 'Revisiting the benefits of higher education' (www.hefce.ac.uk).

[23] John Denham speech to Universities UK conference; Leicester; September 2007 (www.dius.gov.uk).

[24] 'Provisional final figures for 2007 entry'; UCAS.

[25] 'Part-Time Study in Higher Education'; May 2008, A report commissioned by John Denham, Secretary of State for Innovation, Universities and Skills.

[26] 'Student Pulse'; i-graduate, January 2008 (www.i-graduate.org).

[27] 'The Prime Minister's Initiative for International Education'; April 2006 (www.britishcouncil.org).

[28] Alexandra Blair; 'Asia threatens to knock British universities off the top table'; The Times, 21 May 2007.

[29] The Bologna Declaration on the European space for higher education, June 1999 (http://ec.europa.eu).

[30] 'Higher education student enrolments and qualifications obtained…2006-07'; Higher Education Statistics Agency, January 2008 (www.hesa.ac.uk).

[31] 'The Economic Costs and Benefits of International Students'; Higher Education Policy Institue, July 2007.

[32] Sir Drummond Bone; 'Internationalisation of HE: a ten-year view'; DIUS, November 2008 (www.dius.gov.uk).

[33] 'New study finds the average London South Bank University degree is worth over £185,000'; London South Bank press release referring to a study by PricewaterhouseCoopers (www.lsbu.ac.uk).

Commentary on

# The context for English higher education

David Eastwood

Work on 'Higher Education in England' began several months ago, in very different times. Looking back from the craggy precipice of world recession, the last decade looks like a golden age for higher education in England.

During the last 10 years there was an unprecedented, sustained increase in investment in the research base; a funded expansion in undergraduate numbers; an unparalled increase in full-fee-paying overseas students studying in English universities; and a new urgency and intimacy in higher education's engagement with business, the third sector, and rediscovered civic ambition.

Substantially autonomous universities, funded predominately through public funding administered by arm's-length bodies, demonstrated real responsiveness, flexibility, and efficiency, mirroring what was most appropriate from the private sector but sustaining the quintessential values of higher education and the space necessary for creative people to innovate and for students to develop and learn. This modernised higher education sector was widely envied and increasingly emulated, most notably in Europe. On almost all assessments UK higher education stood second only to the much more lavishly funded US higher education system. If English culture could bring itself to celebrate, it would have cherished and trumpeted what higher education had achieved.

But the English way is not euphoria. Funding had increased, but was still insufficient; participation had widened but needed to be wider yet; research was extensive and exciting, but its impact and cash return needed to be enhanced; the National Student Survey annually demonstrated remarkably high levels of student satisfaction, but the cry went up for more teaching and some decried an erosion of standards. Meanwhile, HEIs managed much on minimal margins, and the rate of increase in investment in HE lagged behind that in schools and the health service.

By the time recession hit last year, England had a higher education system that was more successful and more sustainable than perhaps it had ever been. More was not worse; productivity, creativity, and student satisfaction were all increasing; and, for those who had eyes to see, higher education demonstrated a model for combining autonomous institutions, government priorities, and enlightened investment of public funding.

Underpinning this success was what amounted to a new political economy of higher education. Institutions diversified income and borrowed intelligently, taking advantage of competitively-priced credit, while research charities and business invested unprecedented amounts in higher education's research and consultancy capacity. Overarching all this, and amongst much political controversy, Government forged a new model for students' finance.

A political economy where the funding of higher education was shared by the taxpayer, the student, business and other users of HE, and garnished by philanthropy, better reflected the pattern of benefit from higher education than a crude over-dependency on the tax-payer. What's more, it represented a funding settlement that could continue to evolve.

The economic downturn makes the evolution of the political economy of higher education simultaneously more challenging and more urgent. Operating margins in the sector are so tight that a reduction in investment in learning and teaching will inevitably erode the quality of student learning. This must not happen. Moreover, to

Professor David Eastwood is Chief Executive of the Higher Education Funding Council for England.

emerge powerfully and repositioned from the recession, the economy will need more highly skilled people, not fewer, and more knowledge and a greater capacity to generate knowledge, not an impoverishment of our research and knowledge transfer capacity.

Thus raising or removing the cap on student fees has an inescapable logic; partnerships with business, the third sector, and civil society need to be deepened; and none should see higher education as a free ride. Philanthropy will need to be enhanced. If this is to happen, universities must continue to develop their relationships with alumni, and do so in ways which offer an enduring relationship, and including offering opportunities for graduates to continue to access university services. Philanthropy implies subtle partnerships between those who give and the ways in which institutions use those gifts. With philanthropy, as with so much else in higher education funding, more extensive and enduring partnerships will emerge.

In the short term, too, higher education will be pivotal in helping Britain resist the worst ravages of recession. Higher education's first publication in and for the recession was entitled 'Standing Together'[1]. This was both a symbol and a statement of commitment. Through advice to business, creative support for small to medium-sized enterprises, short courses, reskilling, work-based learning, innovative and swift research solutions, and focused knowledge transfer, higher education is and will continue to partner with the private and voluntary sectors locally, regionally, nationally, and internationally. It would be naïve to suggest that this will of itself turn the tide of recession, but it will help prevent those high tides of recession from becoming a tidal wave of unnecessary economic destruction.

Put like this, the recession will offer opportunities to higher education to take stock, re-think, and reposition. We will see some reshaping of the sector, some new structures, and a refreshment and reassessment of what HEIs offer. With enlightened leadership, committed and creative staff, and an ever more diverse and eager student body, English higher education will not only ride out the recession, but lead the way to a better future.

[1]*Standing together*: *universities helping business through the downturn*, www.hefce.ac.uk/econsoc/standingtogether.pdf

Chapter 2

# The shape of the sector

The higher education system in England is larger and more diverse than at any time in its history. Numbers of students, staff and institutions have continued to grow, as has the public and private funding devoted to it.

A growing proportion of the students and staff now come from overseas, but the system itself is becoming more localised in terms of geographical spread. Branch campuses and new universities are reaching parts of England that previously had no higher education presence – and that trend is set to accelerate with the new 'University Challenge' programme.[1]

At the same time, interaction with business has been growing rapidly, with a 17 per cent increase in external income recorded in the latest Funding Council survey.[2] Total income from business and community sources exceeded £2.5 billion, with contract research for commercial partners showing the biggest growth.

## The higher education landscape

More than 130 universities and higher education colleges[3] are now supported by the Higher Education Funding Council for England (HEFCE). In addition, higher education courses are directly funded at around 125 further education colleges and there are a number of private institutions, nearly all of them in specialised fields such as law and finance.[4]

The institutional map of England has evolved over many centuries. Even the 21st century has seen substantial change, with 15 new universities established from colleges and the creation of a number of branch campuses since 2000. But it was in the 20th century that the current system took shape: in 1900 only four universities had charters, though several others had already begun life as institutes or university colleges. Prior to that, Oxford and Cambridge were among the first universities in the world, though England lagged behind other nations (including Scotland) in developing more.

Even at the end of the Second World War, fewer than a dozen chartered universities existed. And 10 years after the 1944 Education Act – which brought free secondary education and limited student support – there were only 82,000 full-time university students (about 3 per cent of 18 year-olds) and another 28,000 in teacher training colleges.[5] The appointment in 1961 of the Robbins Committee, and the adoption of its principle that higher education should be available to all those 'qualified by ability and attainment' signaled a dramatic shift in the scale of higher education. Robbins was ahead of his time in linking the provision of high-level skills with international competitiveness, albeit with the stipulation that graduates must be 'cultivated men and women'![6]

Since Robbins, the link between universities and economic success has been hotly debated, with continuing disagreement around whether higher education is the engine of economic prosperity, or a natural expectation in already prosperous societies. The 'plate glass' campus universities and eight colleges of advanced technology that were given university status in the 1960s constituted a first wave of expansion, with the Open University and the polytechnics following in their wake.

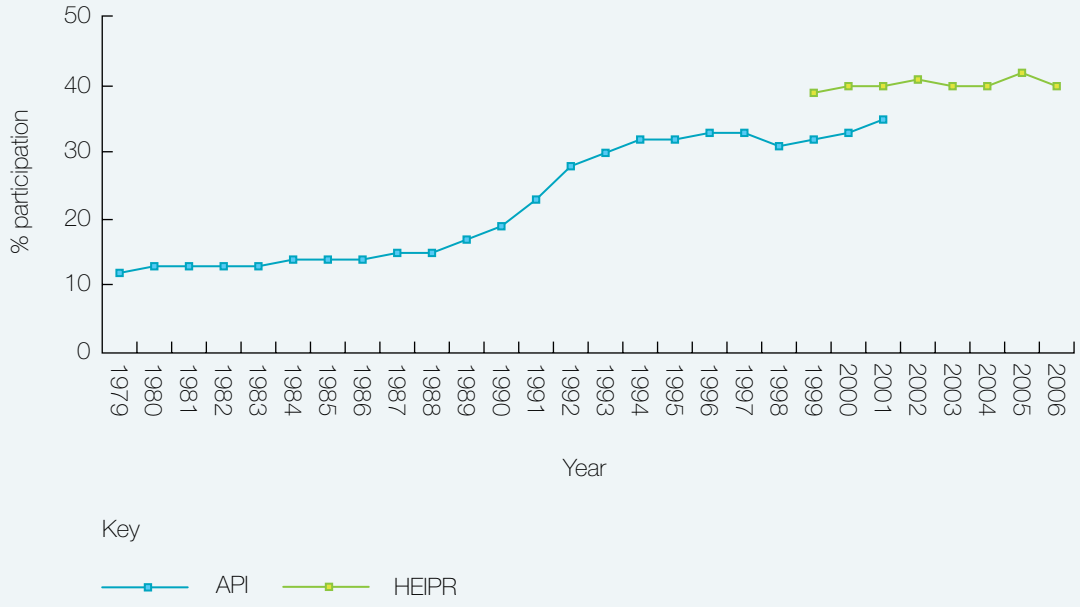
By 1985, the economic imperative was sufficiently established for a Green Paper on higher education to open with the following declaration: 'The Government believes that it is vital for our higher education to contribute more effectively to the improvement of the performance of the economy… The Government is particularly concerned by the evidence that the societies of our competitors are producing, and plan in the future to produce, more qualified scientists, engineers, technologists and technicians than the United Kingdom.'[7] Over the two subsequent decades of rapid growth, punctuated by periods of retrenchment usually prompted by economic downturn, this became successive governments' main yardstick for investment in the universities.

As efforts to widen participation in higher education have gathered pace, there has been more emphasis on providing study opportunities locally. Currently England is served by a network of over 800 locations for teaching undergraduates, when all the sites of higher and further education institutions are taken into consideration. Nevertheless, depending on where you are in the

country, there is a wide variation in the number of places available for local study: those in large conurbations have a wide choice, while some rural areas offer little higher education. HEFCE has been helping to tackle such 'cold spots' through institutional developments such as the opening of University Campus Suffolk at Ipswich by the Universities of East Anglia and Essex, and the establishment of the multi-campus University of Cumbria. This work continues with the New 'University Challenge' programme which aims to create up to 20 new centres of higher education provision where this would provide the greatest benefit.

The number of full-time students in HEIs has risen from below 600,000 to around 1.2 million over the last 20 years, and the size and number of universities has risen accordingly. Including part-timers, the number of students ranges from 176,000 at the Open University and almost 40,000 at the University of Manchester to fewer than 1,000 at the specialist performing arts colleges. In 1996-97, only two universities had more than 25,000 students; by 2006-07 there were 17.

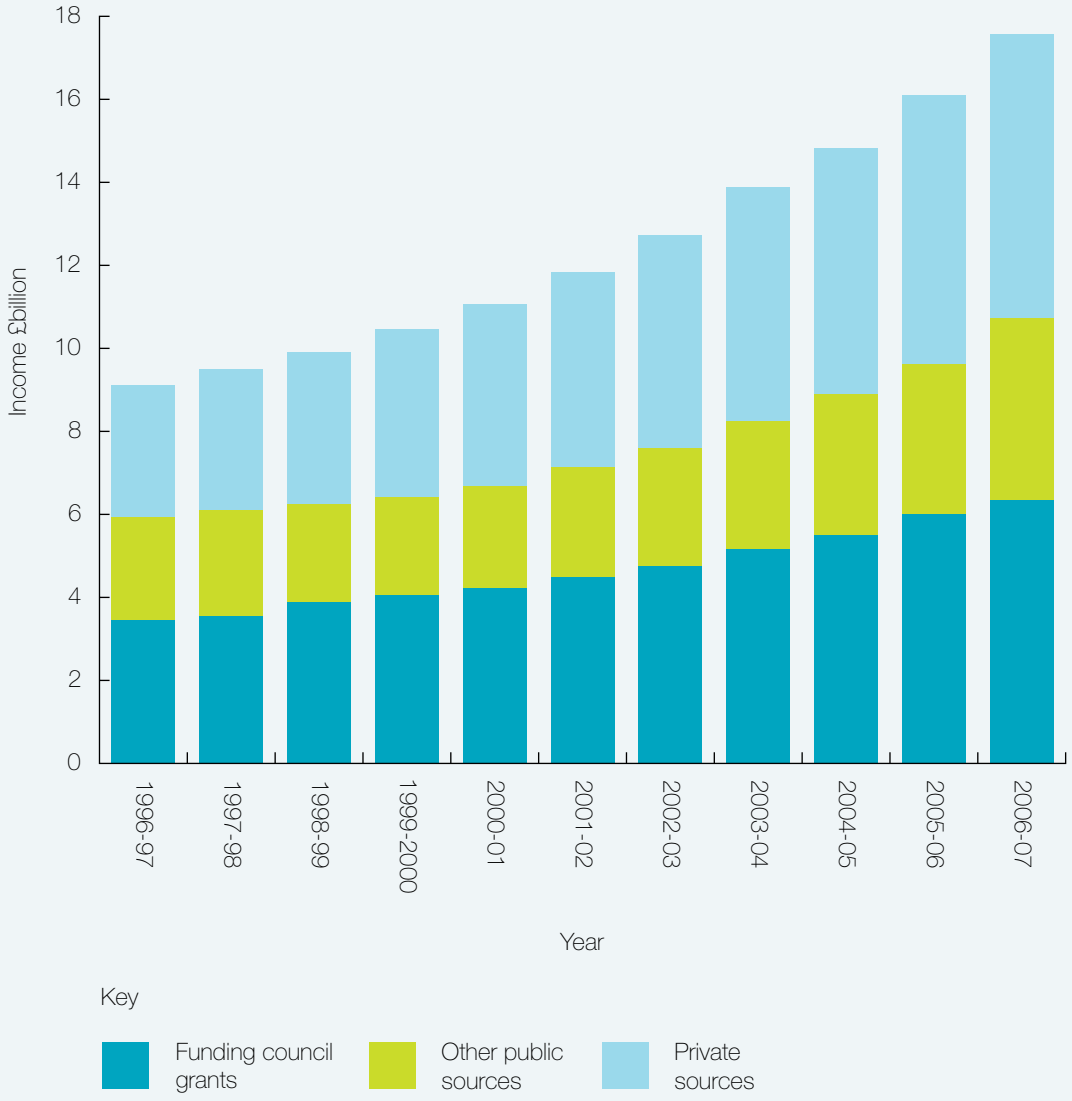
**Participation in HE in England by 18-19 year-olds (1979-2001) and 18-30 year-olds (1999-2006)**




Source: Age Participation Index (DfES Departmental report 2003) and Higher Education Initial Participation Rate (HEIPR, DIUS SFR 02/2008)
Note: The API was superseded in 2000 as the Government's principal measure of participation in higher education by the HEIPR

The sector's income has grown considerably in recent years, although institutional surpluses have remained small. Total income for those institutions funded by HEFCE rose from £9.5 billion in 1997-98 to over £17.5 billion in 2006-07. Some universities almost doubled their turnover during this period. Inevitably, growth has not been uniform.

**Funding for HEIs 1996-97 to 2006-07**




Source: HESA Finance record, HEFCE-funded HEIs
Note: Funding council grants includes funding from the TDA

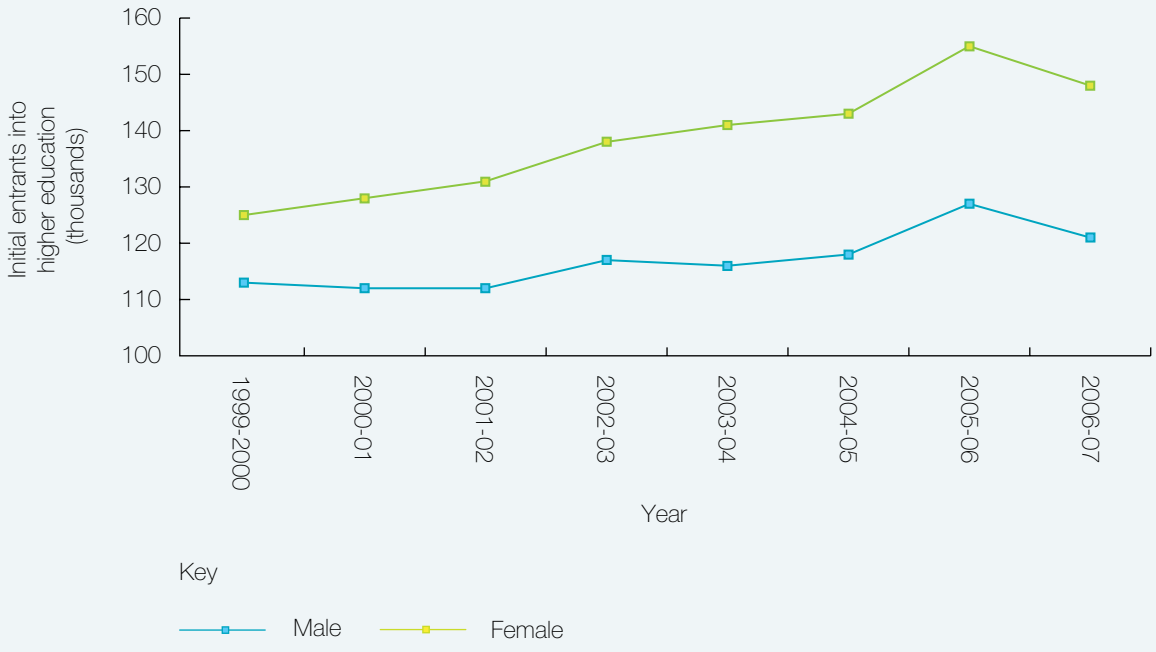
One visible sign of confidence has been the quantity and quality of building on university campuses. The insurance replacement value of the collective higher education estate is now £48 billion and the total area over 25 million $m^2$. Also, higher education has been at the forefront of moves to build more sustainable buildings, and the many large construction projects have attracted a number of architectural prizes. Newcastle University's striking Devonshire Building, which houses the Institute for Research in Environment and Sustainability, for example, has won a string of awards for its low-energy design, outperforming other 'best practice' buildings by 30 per cent.

Capital spending of all types topped £2.3 billion in 2006-07, bringing total borrowing close to £3.5 billion. Both figures are projected to rise over the remainder of the decade, against national trends of reduced lending and construction activity. Universities are using their premises more efficiently and deriving more income from them. The 2007 survey of higher education estates showed that income per square metre rose by almost a third between 2001-02 and 2005-06, while the amount of non-residential space per student had dropped by about 12 per cent over the same period.[8]

## Students

The much-enlarged student population has shifted from one that consisted predominantly of male school-leavers to a clear majority of women and a much higher proportion of mature entrants in less than a quarter of a century. In particular, sharp increases in female enrolments have been one of the main factors behind the expansion of higher education. Barely a quarter of places were filled by women in 1963 and not much more than a third by 1980. By the turn of the millennium, around 53 per cent of new entrants were female. By 2006-07 the percentage had risen to 55 per cent.

**Entrants into HE by gender, 1999-2000 to 2006-07**




Source: Higher Education Initial Participation Rate (HEIPR, DIUS SFR 02/2008)

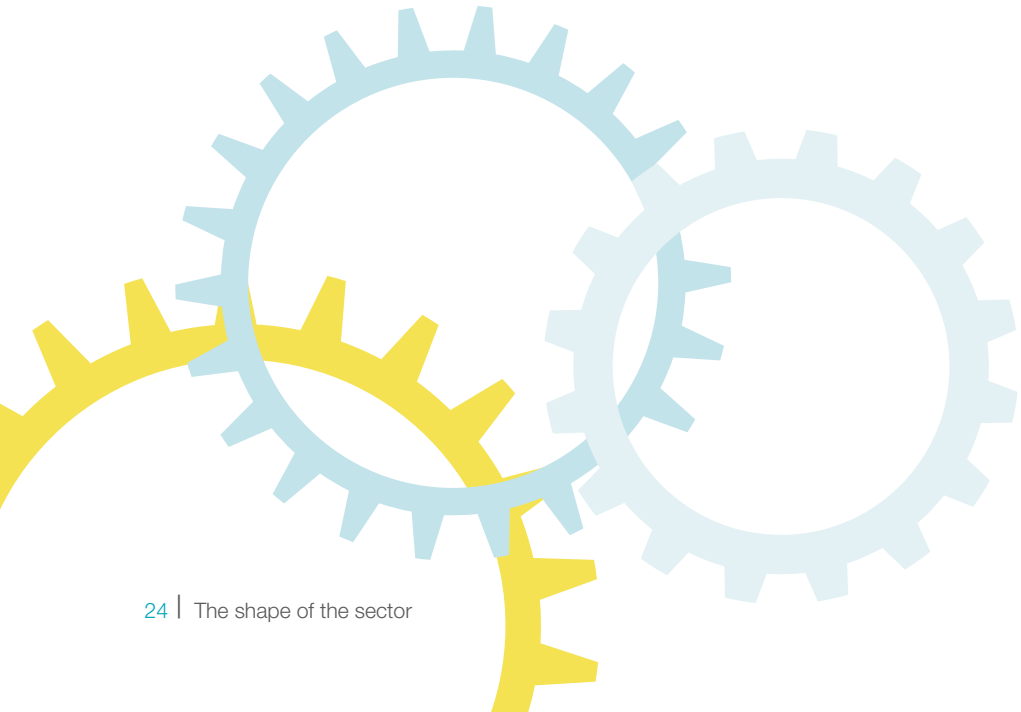
In 2006-07 the Government's estimate of participation in higher education by the age of 30 stood at 40 per cent – two percentage points down on the previous year, but far in excess of the rate in earlier decades.[9] Exact comparisons cannot be made before and after 2000, however, because before that date participation was measured at the age of 18 and did not register the growing numbers of mature students. The overall rate masks a growing disparity between the sexes: 47 per cent of women now experience higher education by the age of 30 – up from 43 per cent in seven years – while the equivalent figure for men has remained static at 38 per cent.

The benefits for women have been considerable. Their historic under-representation in higher education has been reversed and female graduates enjoy a bigger salary premium over school-leavers than do men, although they continue to be paid less on average than men for equivalent work and to take a smaller share of places in the most lucrative graduate schemes.[10]

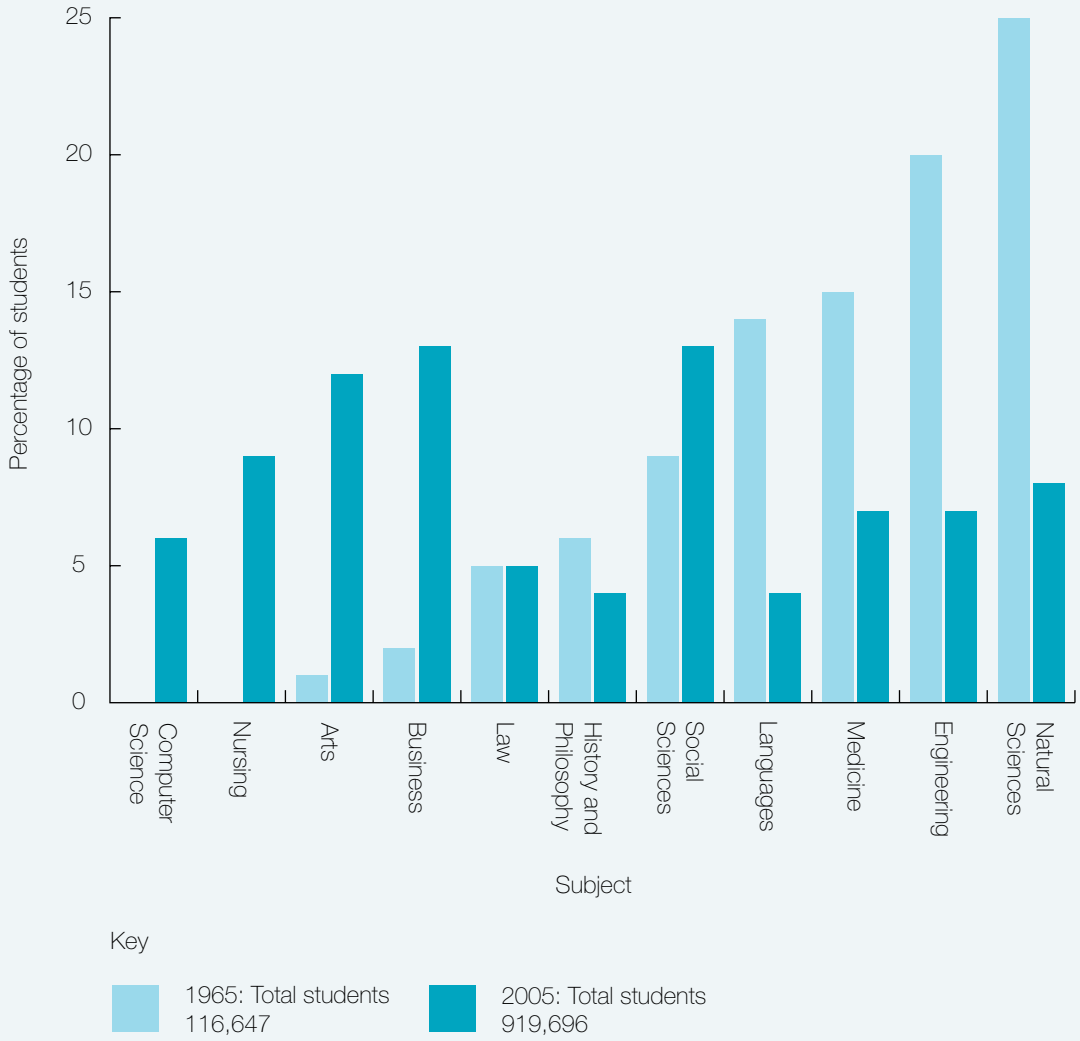
Part of the explanation for the longer-term increase in the presence of women in higher education lies in the changing nature of higher education courses. The switch to a graduate profession in nursing, for example, has added more than 90,000 places in a decade across the UK in a subject where nearly 90 per cent of the students are female. However, the main driver of growth in student numbers has been rising examination performance and increased staying-on rates in secondary education, both of which have been achieved largely through the successes of female students.[11]

There has been gradual progress towards the Government's target of 50 per cent participation in higher education by the age of 30, although this mark will not be reached by 2010, as was originally intended.

The introduction of top-up fees appears to have boosted the popularity of a variety of job-related degrees, with some specialist vocational courses proving particularly attractive. And strong recruitment across the board has also reversed the initial decline in some traditional humanities and social sciences. Business-facing institutions, in particular, continue to make frequent additions to their portfolio of courses to exploit niches in the recruitment market.



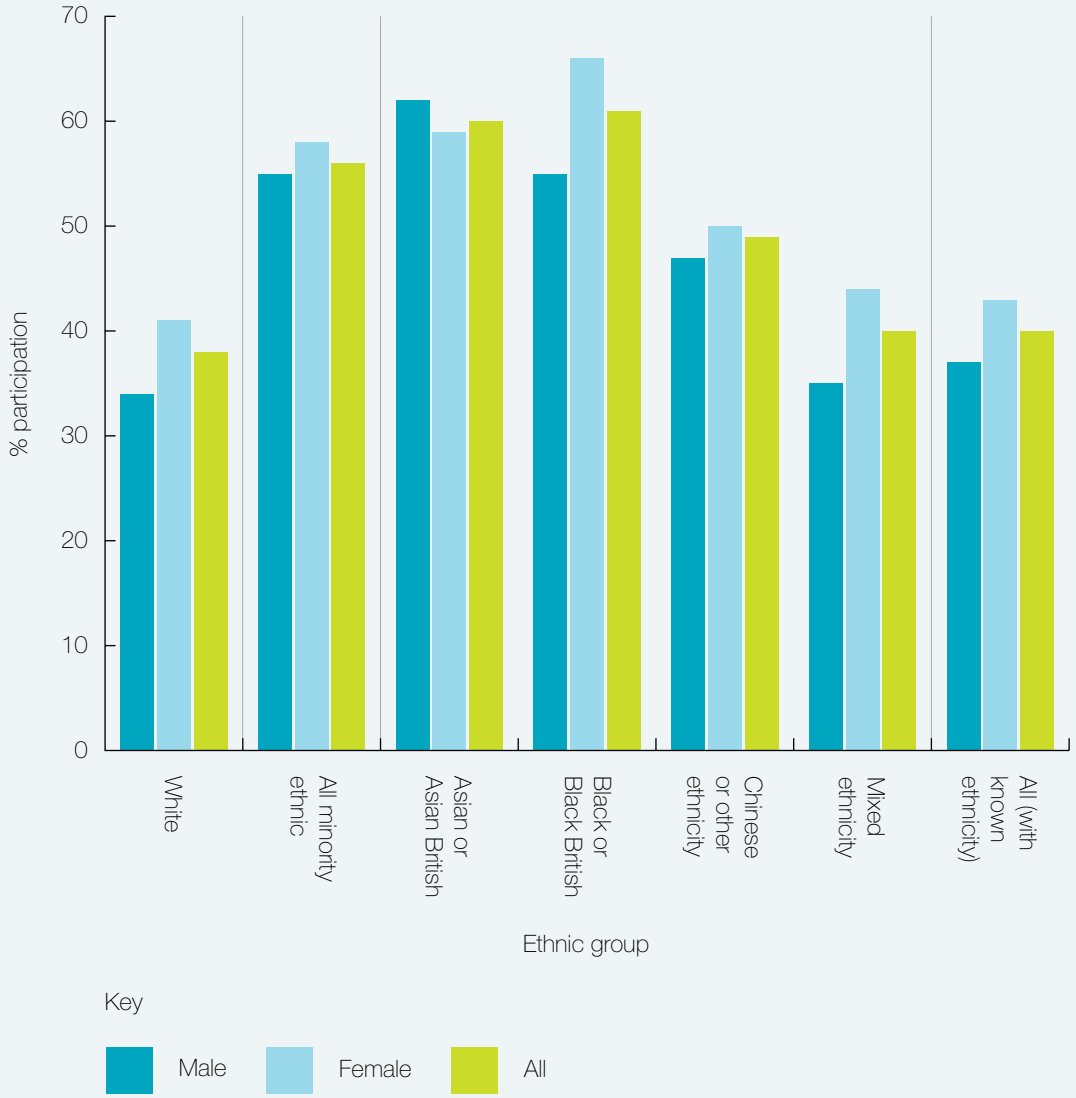
**Enrolments in main subject areas 1965 and 2005**




Source: 2005-06 HESA student record and Statistics of Education 1965 Part 3
Notes: The 2005 data include Nursing and Computer Science, which did not feature in the 1965 data. Education, architecture and agriculture have been excluded

Another significant change in the student population has been the change in the ethnic mix. Minority groups – particularly Asians – are well represented in higher education in relation to their numbers in the general population. Especially at postgraduate level, a significant proportion of UK-domiciled students (one in six on taught masters programmes) has an ethnic minority background. When this is considered alongside the large numbers of international students, it shows the cosmopolitan character of higher education in England.

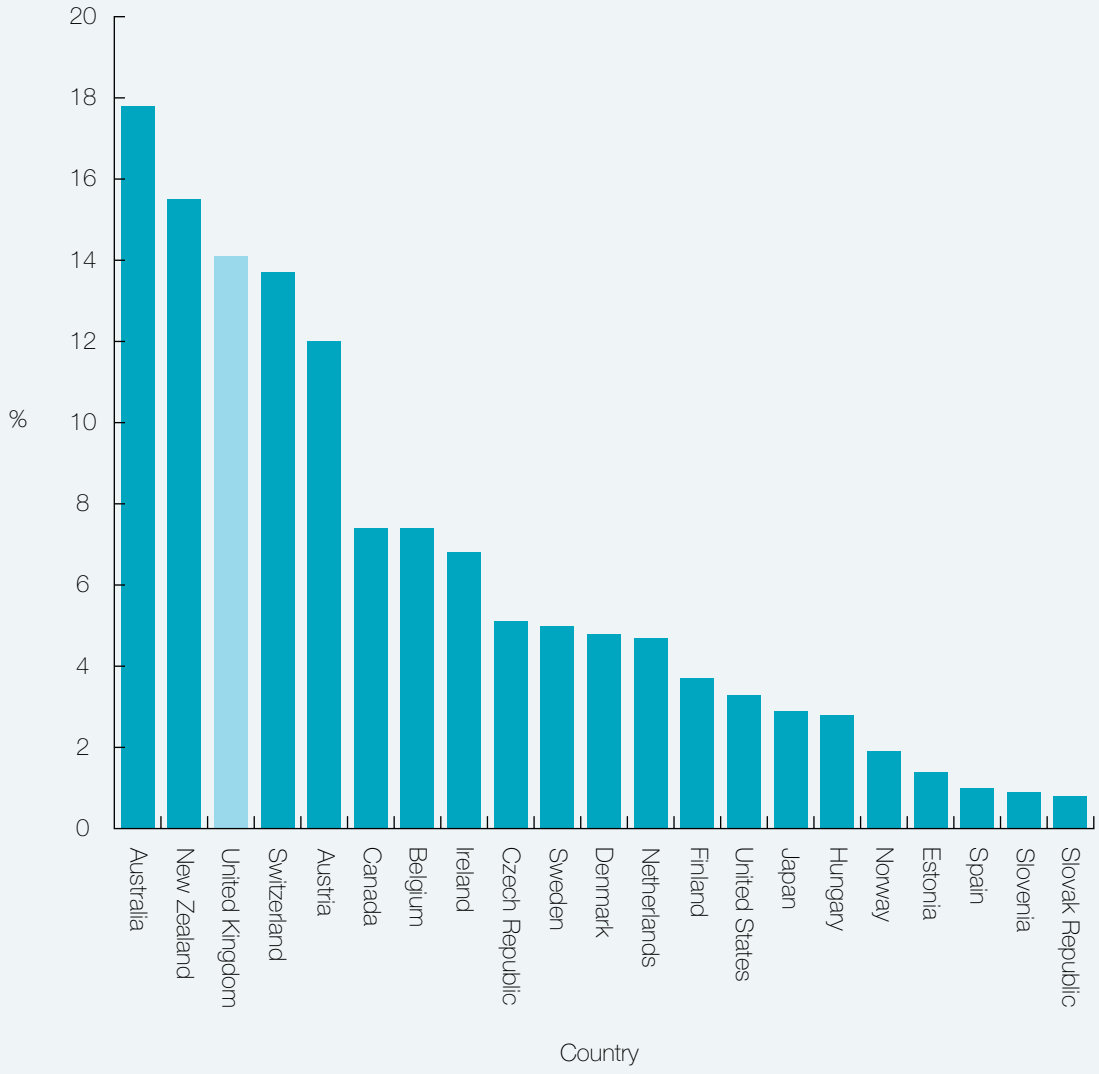
**Participation in HE in England by ethnicity (2001-02)**




Source: Why the difference? A closer look at Higher Education Minority Ethnic Students and Graduates Department for Education and Skills, H Connor, C Tyers, T Modood and J Hillage, Research Report RR552, 2004

International recruitment, both from other EU countries and further afield, has been growing consistently and is projected to increase by 5 per cent a year for the rest of the decade. The number of postgraduates from other countries has almost doubled since 1996-97, topping 150,000 in 2006-07, while the number of undergraduates has risen from 98,000 to nearly 140,000. Only the US attracts more. However, the global recession may have a negative impact on this source of students.

**International students as a percentage of all tertiary enrolment by country (2005)**

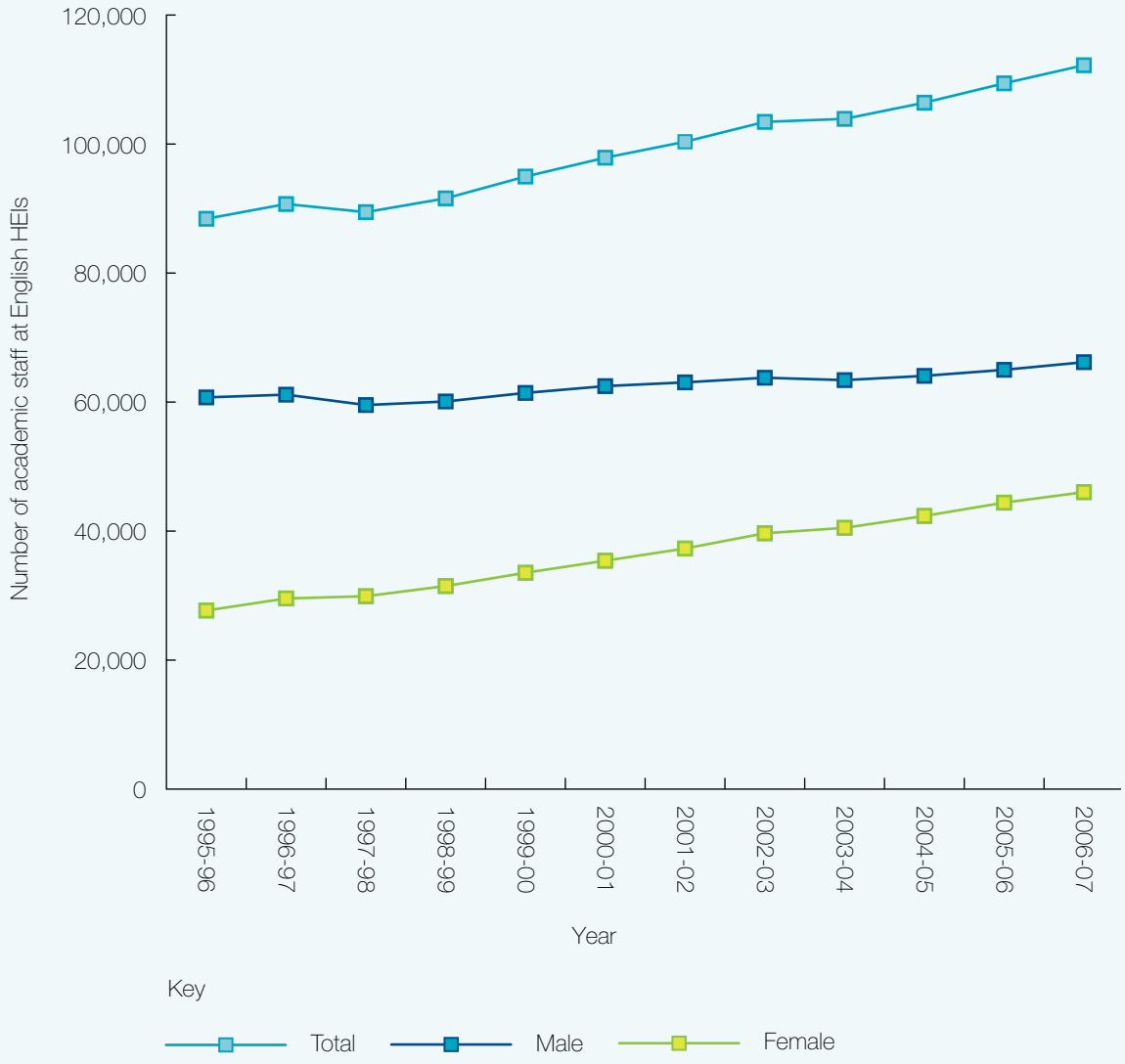



Source: 'Education at a Glance', OECD 2008. See Annex 3 for notes (www.oecd.org/edu/eag2008)

## Staff

There has also been increasing ethnic and national diversity in academic staff. Among permanent academics, 6 per cent were UK citizens from an ethnic minority background in 2006-07 and 16 per cent had come from overseas. The number of staff from overseas has risen from little more than 4,000 in 1996-97 to around 11,000 in 2006-07. Mathematical sciences and (more obviously) languages have led the way, with more than one in five permanent academics from overseas now in those fields, but computer science, engineering and the social sciences are all close to this mark too.[12]

**Academic staff at English HEIs, by gender 1995-96 to 2006-07**




Source: HEFCE 2008/26 (Pop B*) Staff with academic roles at English HEIs

The gender balance has altered with more women academic staff, although the increased proportion of female academics is more marked among lecturers and researchers than in more senior positions. While nearly half of all lecturers are women, following a 48 per cent increase in their numbers in the decade up to 2006-07, fewer than one professor in five is female. There are, predictably, differences according to subject area: nearly 60 per cent of academics in education are female, compared with only 14 per cent in engineering.

The overall number of academics and support staff has grown consistently over the past decade. There was a 9 per cent increase in numbers of staff at English HEIs between 2003-04 and 2006-07, bringing the total to 300,000. The same period saw increases in the proportion of staff employed on permanent contracts, taking the proportion to 70 per cent in the case of academics.

Salary levels have been the subject of controversy in higher education throughout much of the period of expansion, as the responsibilities of staff have grown. However, recent trends have been positive: median salary levels increased by 13 per cent for academics and by 16 per cent for professional and support staff in the three years up to 2006-07. By the end of that period, the median salary for academics was £41,000, ranging from the professorial average of £62,000 to £37,000 for lecturers. For professional and support staff, the median was £21,000.

Notes

1 A new 'University Challenge': unlocking Britain's talent; DIUS, February 2008 (www.dius.gov.uk).

2 Higher Education-Business and Community Interaction Survey 2006-07; UK funding councils, July 2008 (www.hefce.ac.uk).

3 HEFCE supports higher education in England with increased funding of £7.5 billion', HEFCE Press Release, March 2008 (www.hefce.ac.uk).

4 Examples include: The College of Law, and BPP Law School.

5 Robert Stevens; 'University to Uni', p.12; Politico's 2005.

6 Committee on Higher Education; Higher Education; Cmnd 2154 (1963).

7 Department of Education and Science, 'Development of higher education into the 1990s', HMSO, London, Green Paper Cmnd 9524 (1985).

8 'Performance in higher education estates: EMS annual report 2007'; HEFCE, November 2008 (www.hefce.ac.uk).

9 'Participation rates in higher education: academic years 1999/2000 to 2006/2007 (Provisional)'; DIUS, March 2008 (www.dcsf.gov.uk).

10 Association of Graduate Recruiters 'AGR Winter Survey 2008' (www.agr.org.uk).

11 'Gender gaps in higher education participation'; DIUS, June 2008 (www.dius.gov.uk).

12 'Staff employed at HEFCE-funded HEIs: update. Trends and profiles'; HEFCE, July 2008 (www.hefce.ac.uk).

Commentary on

# The shape of the sector

David Watson

Five important questions arise from this account of sustained (recent and projected) growth and diversification.

## 1. As UK higher education has grown, has it changed in any significant ways?

As UK higher education has marched through the stages of increased participation pegged out by Martin Trow – from 'elite' through 'mass' to 'universal' (revised upwards by Trow to 50 per cent of each age cohort) – have we created a genuinely 'mass' system, or as Peter Scott memorably termed it, a 'crowded elite system'?

The answer is yes and no. UK HE has always supported lifelong learning more than several of the systems with which it is regularly compared (the US is the exception). Fewer than half of all students are on full-time first degrees and the fastest rate of growth is in taught postgraduate courses. We have the oldest average age of students across the European Union, and the highest proportion of part-timers. Meanwhile, new fields of study have been added to the system through a combination of supply-pull (especially in health) and demand-push (like media studies).

In so far as mass higher education in the UK has been a success, this is very significantly down to our students. The policy framework has contributed (often uneasily), the institutions and their staff have coped remarkably with the consequences of unfunded expansion, but on the key indicators – of matriculation, of retention of graduation, and of postgraduate employment – the responsibility is theirs. This generation of students works extraordinarily hard (academically as well as to support their living and life-styles); it cares as strongly as any of its predecessors about issues of justice and fairness (although is much more likely to express these values in terms of environmental sustainability and global responsibility than through party politics); and it knows that the world does not owe it a living (as many felt that it did when only around 10 per cent of each age cohort had a higher education).

They have also moulded the system in striking ways. This is partly about choice of subjects. Student choice is also about mode of study, where the sectoral super-tanker has to deal with rapid growth in demand for part-time undergraduate and full-time postgraduate courses. Finally, it is about choice of institutions. 'Hard to reach' groups remain concentrated in one particular part of the sector, and despite the concerns to get more well-qualified non-standard students into our so-called 'top' universities, their choices are not necessarily irrational.

There are also pedagogical implications. We have plenty of nostalgic and ideologically loaded analyses of what new and graduating students can't do; there's precious little account taken of what today's screenagers can do, that many of their predecessors and at least some of their teachers can't. Most of this has to do with ICT and with the learning styles of what Jason Frand memorably calls 'the information-age mind-set'.

Students certainly know that credentialism counts: it is one of the prices of a larger, fairer system. But they also know that they are not in the business of simply purchasing a degree. Look at all of the evidence from student surveys. What do they want the 'new' fee income spent on? More and better library and computing resources, and staff development in support of teaching. What do they most value in the teaching relationship? Old-fashioned formative feedback on how they are doing.

Sir David Watson is Professor of Higher Education Management, Institute of Education, University of London.

## 2. Is it more local, or more international?

How have we handled the Russian Doll (or 'onion skin') question of service simultaneously to the neighbourhood, the sub-region (which may be a city), the region (officially and unofficially defined), the nation, the international region (like Europe) and the global enterprise of higher education?

No higher education institution can prosper these days without a strategy for civic and community engagement. Meanwhile, at the other end of the scale, a quiet revolution has been the arrival of the international campus, with now a majority of UK universities receiving students from more than 100 hundred countries and a substantial proportion of staff from overseas.

## 3. Is it 'different,' especially as a result of the successive redefinitions of what a university is?

Here the reforms of 1988 are probably of much more significance than those of 1992: the former recognised the end of the 'binary' line; the latter simply changed a lot of sign-posts and letterheads. In this process, higher education did not so much expand as come properly to recognise approximately half of its existing clientele. The 'new university' sector in fact tapped a historically rich vein of locally relevant, largely vocational and professional post-compulsory education.

The rediscovery of 'craft' as a metaphor for sophisticated learning – as in the work of Richard Sennett, and especially in the context of higher level and softer 'skills' – is symptomatic of the importance of this stream. What the British post-binary experience has shown is not so much 'academic drift' by former polytechnic-style institutions as reverse drift by many of the traditional institutions.

## 4. Is it fairer?

At its heart widening participation is an issue of social justice. The iron law seems to be that if you want higher education to be fairer, you have to allow it to expand. As you allow it to expand, you also have to consider the position of those who do not participate. Our main challenge is not so much where the small number of high-achieving students from disadvantaged backgrounds end up in the system as getting more young people to the starting gate.

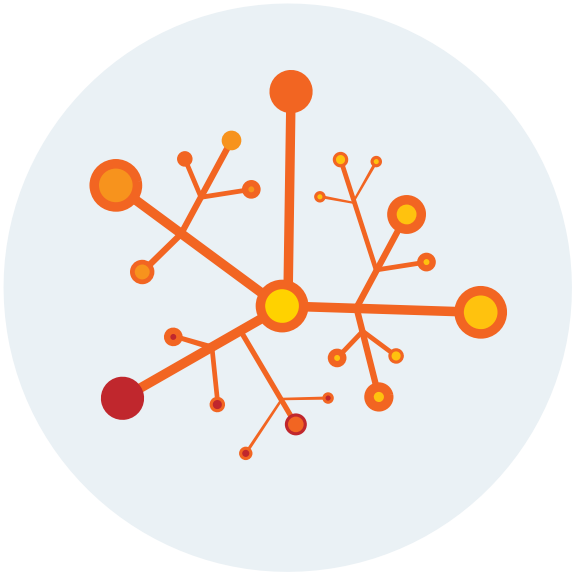
The more successful that national systems are in growing participation and achievement, the greater will be the gap between those who stay on a ladder of educational attainment and those who drop off. In the UK we have solid longitudinal data about the positive effects of participation – not only on the economic status of the individual beneficiary but also on their health and happiness, and their democratic engagement and tolerance; to say nothing of the life chances of their children.

## 5. And – most difficult of all – is it any better: at serving the needs of its various stakeholders, from students to society?

My personal answer is an unequivocal yes, although there is still much to be done.

Chapter 3

# Research, innovation and wealth creation



The age of the knowledge economy has made universities a priority for investment all around the world. Higher education brings social benefits that are valued by governments and the public. However, current levels of financial support from the state and private sources depend on the perceived economic impact of universities and colleges. This is derived from the advanced skills acquired by graduates and from the growing volume of knowledge transfer as well as, most visibly, from research.

It is not possible to calculate with any degree of precision the wealth generated by universities: lead times are too long and causality too uncertain. How much credit can a university take for the profits attributable to one of its graduates in the City, or even for a product developed from the germ of an idea by one of its academics? But there is no question that the UK economy relies increasingly on graduates and on the ingenuity of scientists and other researchers. Britain's trade surplus in the knowledge industries has been estimated at up to 3.4 per cent of gross domestic product (GDP) – the highest in the world.

The diversity of the modern higher education system offers employers an expanded pool of graduates with a variety of subject-specific, generic and transferable, or vocationally oriented skills – although areas of shortage have still required funding council intervention. Action to boost recruitment in the economically crucial subjects of mathematics and the sciences through HEFCE's £350-million Strategically Important and Vulnerable Subjects programme has produced encouraging results. The OECD notes that the UK as a whole produces a higher proportion of science graduates and more entrants to vocational tertiary education than most industrialised nations.[1]

## The knowledge economy

Lord Sainsbury's review of science and innovation showed the growing importance of the knowledge economy, and universities' role within it. Over the decade ending in 2002, the share of knowledge-

intensive services and high-technology manufacturing in total value added in the UK economy grew by over 12.5 per cent. This compared with less than 10 per cent in France and less than 5 per cent in the US.[2] Lord Sainsbury said at the publication of his review that 25 years ago it would not have been possible to imagine the UK as a global leader in science and innovation, but this was now an attainable goal.

In 2006, the UK ranked second in the world to the US in its share of academic publications (9 per cent) and citations (12 per cent). The UK also produces a high proportion of the world's most influential papers relative to its share of all publications, accounting for over 13 per cent of the most cited 1 per cent of papers. Importantly, too, there is a more consistent performance across the range of research disciplines than in most other countries, the UK ranking second in the world in seven of the ten main disciplines.[3]

The Government's ten-year science strategy, announced in 2004,[4] plans for public and private investment in research and development to reach 2.5 per cent of GDP by 2014. Independent annual reviews of the process have concluded that satisfactory progress is being made, although Ian Pearson, the former Science Minister, conceded that this remains a 'challenging goal'.[5]

Total income for research at English universities rose by more than 40 per cent between 2000-01 and 2004-05[6] and growth has continued since then, with charities such as the Wellcome Trust playing an important role. As the largest of the independent funders, Wellcome supports UK biomedical research to the tune of over £600 million a year and has committed to increases over the next five years.

At the 2008 annual conference of Universities UK (UUK), John Denham noted: 'The dual-support system is the foundation of the UK's excellent international standing in research – something that can only be more important in the future.'[7] Via this system Research Councils target funding at national priorities, funding projects, researchers and providing access to excellent national and international research facilities. This is complemented by the second component of dual support: the funding councils, who provide money for the blue skies research and the basic infrastructure needs – the salaries of permanent academic staff, and the costs of premises and central computing. This element of dual support, allocated by HEFCE, provides flexible capacity for universities to respond strategically to the external environment. Other sources of funding can then build on these foundations, promoting the stability to invest in people, new areas of research and long-term projects. Dr John Hood, Vice-Chancellor of the University of Oxford, sees dual support as one of the strengths of a system which has enhanced its reputation in recent years. 'The top 20 universities do well in international rankings and can attract the best staff,' he says. 'The whole system has momentum now.'

The results of the 2008 Research Assessment Exercise (RAE) shows that all universities are engaged in more applied research than ever before, but often it is blue skies research that brings the greatest long-term benefits. English universities' reputation for supporting theoretical research also attracts and retains world-class academics. Sir Tim Berners-Lee, the inventor of the World Wide Web, for example, still works in the sector and has a chair at the University of Southampton, where he is now working on the Semantic Web.

The impact of this reputation is also clear from the number of young researchers attracted to English higher education from overseas. Almost half of all postgraduate research students are from outside the UK, the proportion topping 60 per cent in engineering and some science subjects. The first awards to young researchers by the European Research Council also confirmed the strength of English universities. While German, French and Italian researchers won the most grants, almost one in five of the projects will be based in England – by far the highest proportion.

Recent studies have also suggested that the number of highly cited researchers entering the country exceeds the total leaving. However, the 2008 analysis of research careers by Professor Nigel Thrift, Vice-Chancellor of the

University of Warwick, cautioned against complacency on the prospects for a brain drain.[8] A review (one of a series on higher education issues for DIUS) carried out at his own university showed that while only 25 per cent of a sample of leading researchers took their first degree in the US, 87 per cent obtained their PhD there.[9] Competing nations such as Canada, Japan and the US have set up programmes to retain PhD graduates.

In the same set of contributions to DIUS, Professor Paul Wellings, Vice-Chancellor of Lancaster University, explored links between PhD training and the commercial application of research in his report on intellectual property and research benefits. He noted that 34 English universities, which produced three-quarters of the country's PhD graduates between 2002 and 2006, also created 78 per cent of the patents registered by HEIs. Over the same period, 29 universities produced fewer than 100 PhD graduates each and the median for all universities was only 281.[10]

## Importance of selectivity

Selectivity in the funding of research has been one of the Government's guiding principles, although there are highly rated departments in many universities. Sir Richard Sykes, former Rector of Imperial College London, is one of many observers who have associated the policy with considerable improvements in the standard of research at English universities. 'Selectivity through peer review had been the envy of the world,' he says. 'We now have a handful of universities that can compete with any in the world and a number of others that have a strong national profile.'

Sir Keith O'Nions, the former Director General of Science and Innovation, believes that the Research Assessment Exercise has been particularly successful in helping to sustain blue skies research, which he sees as essential for long-term prosperity. 'The key discoveries of the modern world are all rooted in theoretical research. It takes a 50-year horizon, which is obviously difficult, but we have to strike a balance between what people call pure and applied research.'

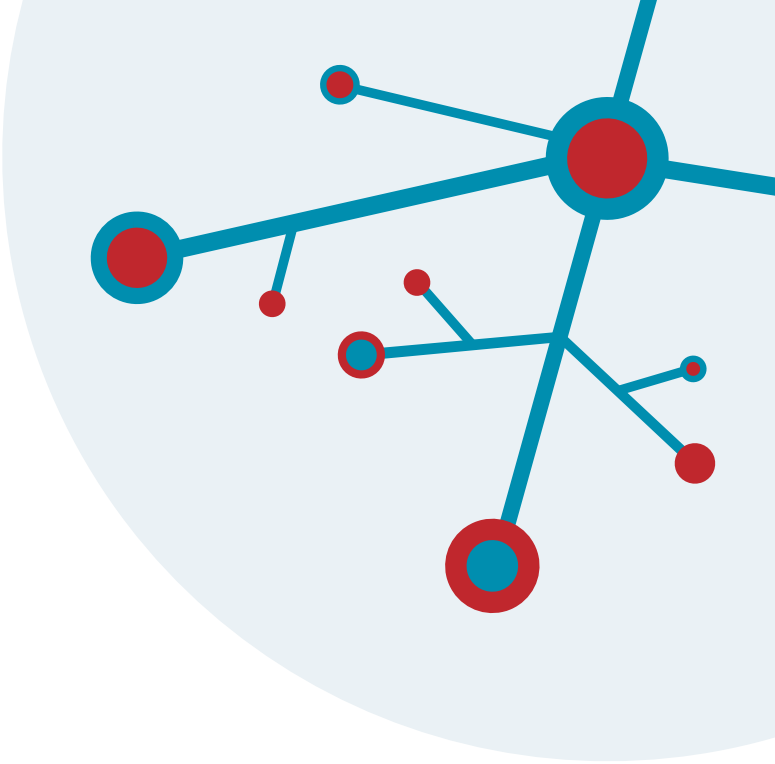
However, Sir Richard Sykes considers the divisions between pure and applied research a distraction. 'They are one and the same thing, integral parts of each other,' he says. 'At Imperial we have some great research and we also have Innovations, which employs 50 people to bring ideas to market and is now worth £300 million.'

By bracketing universities with innovation and skills in its reorganisation of departments, the Government underlined its faith in further and higher education as an economic force. UUK puts the total output generated by its members at over £45 billion[11] – more than the pharmaceutical or aircraft industries – and this takes no account of the achievements of graduates later in their careers.

More systematic attempts are being made by DIUS to quantify the economic impact of research, although initial estimates are necessarily approximate. The returns on grants totalling £49 million awarded by the Engineering and Physical Sciences Research Council for basic research in polymer science, for example, have been put at more than £200 million.[12] But, a decade after the initial research, the commercial potential of some materials in markets such as aerospace and mobile communications is still emerging.

One area where the success of these polymer research grants is apparent is research at the University of Cambridge on light-emitting diodes, which has led to two spin-off companies and several joint ventures with major international companies. One of the companies was valued at $125 million in 2007, while the other has merged with Sumitomo Chemicals, in a transaction valued at $285 million. Other ventures at the 23 main recipients of these grants between 1992 and 1996 are in areas that will continue to grow in value.

The growing number of spin-off companies emerging from universities is one sign of more business-minded



attitudes in higher education. In 2006-07, there were more than 700 with spin-offs with some HEI ownership older than three years, an increase of 10 per cent.[13] Library House has compared English universities' spin-offs favourably with those in the US. A number of universities also have successful science parks, which have proved a magnet for technology companies in particular. Individual parks, like the University of Warwick's, have become a model for innovation, while the concentration of knowledge-intensive companies in the so-called Silicon Fen area around Cambridge demonstrates the power of research universities to attract investment.

Other universities are working directly with industrial partners from the outset. The University of Sunderland, for example, overcame initial scepticism about the ability of higher education researchers to meet the needs of a big car manufacturer to build a lasting relationship with Nissan. The university now leads a consortium involving all five north-east universities in dealing with the region's automotive industry, and hosts the thriving Institute of Automotive and Manufacturing Advanced Practice. The relationship has produced benefits in teaching and graduate employment, as well as in research and staff development.

The Sainsbury Review noted a 'dramatic increase' in knowledge transfer activities of all types. The Higher Education Innovation Fund (HEIF), which will reach £150 million a year as proposed in the 2008 Innovation White Paper, has enabled many projects to get off the ground, allowing successful activities to become self-sustaining. Universities have struggled to cope with the uncertainties surrounding business contracts, but are quickly adapting.

Indeed, universities are driving such a hard bargain in commercial negotiations that they are sometimes accused of overvaluing their intellectual property (IP). An independent report to the DIUS Funders' Forum[15] found that negotiations between universities and companies could take up to 18 months, partly because both sides overemphasise the importance

of IP in product development. Both the report and the Lambert Review of 2003[16] found that universities could not expect large financial returns from their research, even if some discoveries eventually led to lucrative commercial successes. The Higher Education-Business and Community Interaction survey for 2006-07 put the total value to the UK higher education sector of collaborative and contract research at £1.45 billion, compared with a little over £40 million from IP alone.[17]

While a limited number of universities can claim to be world leaders in research, all are invaluable to their local economies. Often as the largest employer in the area, many have become the focal point of regeneration, as well as taking a leading role in regional development. The Combined Universities in Cornwall and the merger which produced the new University of Manchester were both examples of projects driven by regional considerations and with support from Regional Development Agencies. The Manchester merger was considered vital to the economy of the north-west of England for the valuable new research it would attract, while the Combined Universities in Cornwall project was designed to produce the skills necessary to regenerate one of the poorest counties in England.

## Business-facing universities

A growing number of universities now describe themselves as 'business-facing' institutions. Hertfordshire is one example, where teaching and research are geared to the needs of the local economy. There, two-thirds of undergraduates undertake work experience, and staff are encouraged to run businesses relevant to their subject. The university places a high priority on applied research, and its commercial turnover is bigger than its grant from HEFCE.

Professor Tim Wilson, Hertfordshire's Vice-Chancellor, believes that differentiation among universities is important. 'Everyone is keen on diversity, but I think there should be more explicit differences of mission. There has been pressure for all universities to engage in every agenda, but we are not trying to be Cambridge. We are about high-level skills and innovation to serve our region.'

Brighton is another university that puts partnership with business and the professions at the heart of its mission. The ProfitNet programme involves staff in business planning for 500 small and medium-sized enterprises in the region, and the university is helping to regenerate the economically depressed area of Hastings through offering relevant courses.

The skills agenda has become increasingly important for universities of all types, particularly during the current downturn in graduate employment. One recent survey found that the top 100 graduate employers had cut their planned recruitment for 2009 by 17 per cent.[18] However, the latest long-term projections published by the UK Commission for Education and Skills foresee a return to recent patterns of growth in the demand for graduates after a slowdown lasting two to three years. The Working Futures 2007-2017 report found evidence of some growth in demand for low-skilled workers in service industries, but the most rapid increases were expected to be in managerial posts and in areas such as the caring services and professional occupations, where most recruits will be graduates.[19]

Even during the downturn, job prospects for graduates have been shown to be better than for other young people. The 2008 Labour Force Survey put graduate unemployment at around 3 per cent, compared with 8 per cent for non-graduates under 30 and 20 per cent for those with no formal qualifications.[20] Many economists believe that the post-recession employment market will be even more polarised and that, particularly in view of the scarce employment opportunities available to young people in the immediate future, the private rate of return on degrees begun in 2009 and 2010 may be considerable.

Notes

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[18] 'The Graduate Market in 2009'; High Fliers Research, January 2009 (www.highfliers.co.uk).

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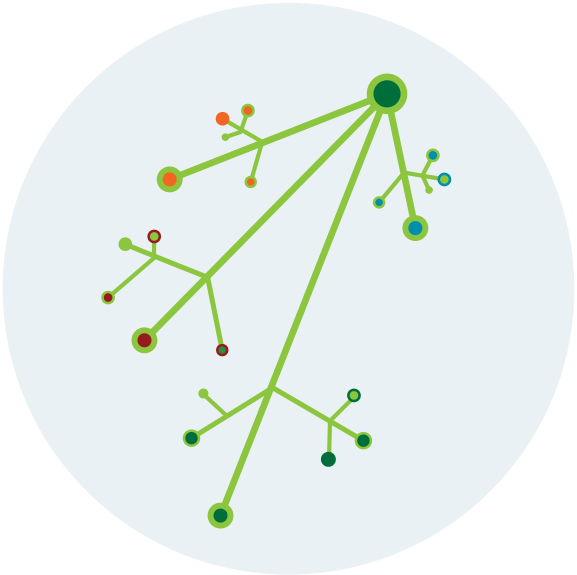


Commentary on

# Research, innovation and wealth creation

Marjorie Scardino

The ‘knowledge economy’ has undoubtedly raised the value of higher education to individuals and to countries. The urge for both to invest in it is powerful. But we have to be careful how we measure the return on that investment. We’ll surely limit our horizons if we assume the only important measures are objective financial ones and if we assess higher education only in terms of traditional, business-focused ‘wealth creation’ – as Chapter 3 implies. There are other measures of ‘value’, even in a highly competitive, rapidly globalising world.

The way to measure the return on any investment is to calculate what you’ve put in, what you’ve done with it, and what you’ve had out. For business, both the inputs and the outputs can be assigned a numerical value, usually financial.

But even in business those financial measures are inadequate: they cannot begin to assess the impact of a product or service on an individual or a society. And education is not a business. It’s a right; it’s an obligation of government to its citizens; it’s essential to growth and economic and political self-determination – for a country or a person. Its contribution is larger than financial – it is the success of students, and the contribution they go on to make to their communities.

A ‘good’ education may be crucial to a good job; it may make a student with a bright idea into a star entrepreneur. But we should expect even more from it than that. We should expect it to provide every student with the mental tools that heighten the pure joy of a story, a perfectly honed mathematical proof, a lesson of history. We should expect it to provide the essentials of citizenship; to help develop character, wisdom, generosity; to equip people with the enquiring minds and the practical, modern skills to go on learning all their lives.

John Henry Newman caught this exactly about a century and a half ago in ‘The Idea of a University’, one of the most crucial examinations of the value of higher education ever written. He said: ‘The bodily eye, the organ for apprehending material objects, is provided by nature; the eye of the mind, of which the object is truth, is the work of discipline and habit.’ That is the work of education.

Newman believed that the cultivation of the intellect for its own sake, and across a broad landscape, was the very purpose of a university. In our post-industrial, knowledge-based world, a brain developed broadly is as crucial to working success as a strong body was in a world that relied on brawn-power.

Think what feats the disciplined and developed mind can accomplish, for instance, in raw, fundamental research, often with no obvious commercial purpose. In ‘The Double Helix’, I don’t think Watson and Crick ever mentioned wealth creation as their purpose. But their exposition of DNA – worked out in an ordinary university laboratory – initiated a bio-technology industry which is even now still in the infancy of its potential.

Next year is the 200th anniversary of the birth of Charles Darwin. He, too, understood that true, life-changing scholarship involves both the bodily eye and the eye of the mind. For him, the eye of the mind made sense of the mass of physical evidence collected, if you like, by the bodily eye, and the combination changed our view of science.

I heartily agree with the argument in this chapter that theoretical research and its applications are ways to value a world-class university. But I don’t see those as the achievements of an effort to generate wealth; I see

Dame Marjorie Scardino is Chief Executive of Pearson.

them as the measurable results of that 'work of discipline and habit', because that's the context in which they were undertaken.

So, too, is the impact of a higher education degree on a graduate's future a measurable result. In the UK, the economic benefit of earning a degree amounts over a working lifetime to an extra £160,000, compared to a person with two or more A-levels, a difference of up to 25 per cent. University graduates are also more likely to be employed, and to return to the workforce following jobless periods. Statistics in the US show a similar 'graduate premium'.

Of course, there's a corollary to that – another objective way to measure the value of higher education not mentioned in the chapter: its price in the market. You could argue that what students are willing to pay for their education in tuition and other fees is the purest, free-market measure of the value of education. But, again, this would reflect their perception of the lifetime benefit of their education; and that perception would have many subjective variables.

In Britain the criticism has been that too much emphasis has been on the 'eye of the mind' and not enough on applications, products and new engines of wealth creation. The US, we worry, seems to have a much better record. Maybe that's true. Perhaps right now in Britain we should concentrate more on universities as centres of wealth creation, and our universities, like businesses, should 'focus' on equipping students for lives of physical wealth creation themselves.

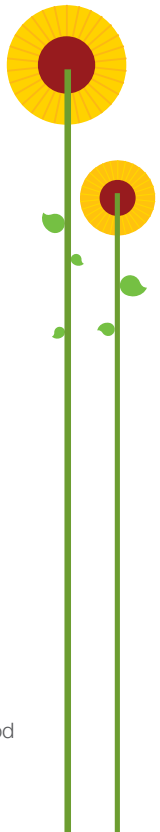
Maybe so. But in the long term my money is still on Newman's idea of a university. It is the breadth of knowledge, and a society's ability to make it universally available and universally effective that will in the long run always underpin, and reinforce, our ability as a society truly to create the kind of wealth which is both measurable and without price.

Chapter 4

# Contribution to the public good

Universities have always been judged as much by their contribution to society as to the economy – indeed, many would still see this as their fundamental purpose. Although much more difficult to measure than economic benefit, there are numerous areas in which higher education can be seen to be working directly for the public good. Traditionally these have involved: educating the next generation of leaders, addressing important social issues, making scientific discoveries and acting as guardians of culture.

To this list have been added new responsibilities, particularly at the local and regional level, many of which have both social and economic aims. They often involve regeneration or further development of local communities, whole cities and even regions, spreading academic influence far beyond the confines of the university to an extent that was inconceivable even a decade ago. More generally, higher education is expected to contribute to social mobility through the opportunities offered to students of all backgrounds, and to social harmony through the personal development that flows from the student experience. Learning for its own sake may be motivation enough for many students, but the university experience can be shown to have a civilising influence that confers benefits beyond the knowledge that is transmitted.



HEIs have extended their sphere of influence into activities far beyond teaching and research. Among other public amenities, universities run museums and galleries, arts and sports centres, bus companies, health and legal clinics, as well as sponsoring a growing number of academy schools. Universities are often the most influential public institutions in their area – not just as the largest employer but also as drivers of innovation, centres of cultural life, and business activity. HEFCE, with the Wellcome Foundation and Research Councils UK, is encouraging yet more interaction with the public through the new Beacons of Public Engagement programme, which are addressing a variety of themes, initially at six regional centres.[1]

## Educating the next generation

Universities' main impact on society remains through the personal development of their graduates, who are, as a group, the most active citizens and the most productive members of the modern knowledge society. It may not be possible to establish a causal link, but research invariably shows graduates as the most likely to take positions of responsibility in civil society, the least likely to commit crimes and the main participants in voluntary and political activities. Graduates also display more positive attitudes towards racial diversity and equal opportunities, and their children benefit from greater parental involvement in their education.[2] DIUS funds a research centre at the University of London's Institute of Education that is focused entirely on the wider benefits of learning. Such benefits include, in the case of graduates, less likelihood of suffering from depression and even a lower risk of being assaulted. A 2003 study for HEFCE found a range of advantages, including lower levels of obesity and a general sense of well being that was higher than for people at lower qualification levels.[3]

Such trends bring economic benefits for the state through reduced spending on services such as healthcare and law enforcement. However, the social impact is more difficult to quantify, despite being more significant for the country. With higher education in England still dominated by the middle classes, whose numbers have grown rapidly with changes in the employment market, there can be no certainty about whether education or class is the real driving force in each case. For example, comparatively low levels of smoking – one of the factors behind graduates' good health record – can be observed throughout the middle classes. And the likelihood of a graduate becoming a magistrate may be influenced as much by his or her employment and financial circumstances as by an undergraduate education.

Certainly, many significant changes in society over the last 50 years have been influenced, if not driven, by the expansion of higher education. It is important to note that, more recently, its high rate of growth is partly attributable to advances in secondary education. Increased staying-on rates in sixth-forms and colleges in the years since the introduction of the GCSE, coupled with the increased demand for graduates in the labour market, have significantly contributed to the rise in demand for higher education.

The fast growth of higher education has been mirrored in many other parts of the world, and, in England at least, predictions of widespread graduate unemployment have so far proved wide of the mark. At all points in their careers, graduates remain much more likely than less-qualified adults to be in work, and the unemployment rate six months after graduation continues to hover around 7 per cent.[4] Neither has there been any apparent reduction in the graduate salary premium since participation rates passed 30 per cent for school-leavers and 40 per cent by the age of 30.[5] Rather, concerns are now being expressed about the prospects of those without higher education qualifications if Ministers encourage HEIs to continue to recruit more students.

Long accustomed to training the traditional professions – such as doctors, engineers, lawyers and clerics – universities have now assumed responsibility for a far wider range of occupations. Other branches of the health service and key parts of the welfare services, such as social work, have become all-graduate professions, contributing substantially to the expansion of higher education. Edge Hill University, one of England's newest universities, for example, trains 4,000 health and social care professionals each year, and 85 per cent of its courses have professional accreditation. Throughout the UK, enrolments in subjects allied to medicine have doubled in ten years, adding more than 100,000 students to the higher education system. Nursing has been the biggest single driver of this change, but smaller subjects such as nutrition and medical technology have grown significantly.[6]

## Addressing social mobility

Equal access to higher education, and the chance of social mobility it offers, remains an aspiration rather than reality at present. Those least likely to enter HE are those in families on low incomes, in lower status occupational groups and disadvantaged neighbourhoods. Research studies have found the most advantaged fifth of children to be four or five times more likely to enter higher education than the least advantaged. Young people from higher status occupational backgrounds are around twice as likely to go to university as those from lower status occupational backgrounds. But in recent years there are strong indications of increases in young participation from disadvantaged groups. A recent report from the National Audit Office noted a rise of 4.5 percentage points in participation in HE in deprived areas (as measured by the Indices of Multiple Deprivation) between 1998 and 2006-07 compared with a rise of 1.8 from the least deprived areas. This means that the chances of young people going into HE are increasing around eight times faster in the most deprived 20 per cent of areas than the least deprived 20 per cent of areas. In addition, research by DIUS, 'Full-time Young Participation by Social Class', shows a narrowing of the participation gap by 6.1 percentage points between 2002-03 and 2006-07. These are positive trends, but the gap in participation between the higher and lower socio-economic groups remains significant.

The HE sector has long been engaged in tackling this inequality of access to HE, and Ministers have made the broadening of intakes one of their top priorities for a number of years. Individual HEIs have developed strategies to deliver activities to raise the aspirations and attainment of young people. Many such interventions focus on early secondary and in some cases late primary education, and deliver programmes which recognise the need for multiple, progressive activities with young people over a sustained period of time. Nationwide programmes such as Aimhigher – which supports HE summer schools, mentoring, campus visits and subject enrichment to attract young people from under-represented groups – have helped to spread effective practice. Every HEI in the UK already has partnerships with schools and colleges in their regions and nationally and sometimes internationally, according to research by Professor Steve Smith, Vice-Chancellor of the University of Exeter. He believes that every secondary school in England now has contact with at least one HEI. A quarter of universities have outreach activities involving primary schools, since experience has shown that aspirations have to be raised at an early age if higher education is to become a realistic expectation in areas of low participation.

Progress in widening participation in recent years has been achieved against a background of considerable change, including the introduction of variable fees. The impact of introducing variable fees has been cushioned by the provision of bursaries totalling around £300 million per year. The threshold for eligibility for such government grants is an income of up to £50,000 to receive at least partial support. Recent research based on tracking school pupils[7] finds that GCSE attainment is an important factor in determining entry to higher education. The figures demonstrate that substantial progress in widening participation rests on raising achievement for disadvantaged pupils in secondary education, particularly in comprehensive schools with low staying-on rates at the age of 16. In building on and strengthening relationships with schools and colleges, HEIs can and do play a key role in helping raise expectations and attainment. Such relationships also help institutions determine what measures to develop to ensure that their own provision and support meet the needs of a diverse student body.

Much media debate centres on fair access to highly selective universities, rather than participation in higher education as a whole. At all but a handful of institutions, pressure on places is restricted to certain subjects, such as law, psychology, medicine, English and some social sciences. Research by the Sutton Trust shows that a third of the places at Oxford and Cambridge

# Universities have become more proactive in addressing social concerns

go to candidates from just 100 (mainly independent) schools,[8] and institutional Performance Indicators[9] confirm that there are fewer disadvantaged entrants at such highly selective institutions than the mix of entry requirements and subjects offered would lead us to expect. Although admissions staff in HEIs look for potential as well as achievement when assessing candidates, competition for places at some institutions is so intense that some highly qualified applicants will always miss out on their first choice.

To aid selection, the A-level qualification is being reformed to add an A* grade. There are also reforms to the admissions system to allow those who achieve better results than expected to have second thoughts and make a more ambitious application. Whether these reforms will have a positive impact on widening participation and fair access is unknown; the National Council for Educational Excellence has recommended that A* grades are monitored over the first few years.

It is clearly important that appropriately qualified students are able to access any institution and are confident to do so, regardless of their background and social status. Better information, advice and guidance is key to ensuring that young people make the choices at 14 and 16 that will equip them with the appropriate qualifications (whether GCSEs, A-levels, a Diploma or other qualification) to gain entry to the course and institution that best meets their needs and career aspirations

## Scientific discoveries and stimulating debate

There is frequent debate about the utility of some university research. But there are numerous examples of breakthroughs that have helped to transform society. From cancer research to climate change modelling and forensic science, HEIs have been at the centre of most of the ground-breaking discoveries achieved in the UK. Scientists from English universities have been intimately involved in the work of the Inter-governmental Panel on Climate Change, for example, which won the 2007 Nobel Peace Prize.

As well as making discoveries, academics play a key role in stimulating debate on issues of national and international importance. At the University of East Anglia, for example, the Tyndall Centre brings together scientists, economists, engineers and social scientists to work on sustainable responses to climate change. The centre has been at the forefront of efforts to assess the likely impact of climate change and to engage business leaders, politicians and the public in debate on policy choices.

Medical research produces the best-documented benefits to society, with advances such as the mapping of the human genome capturing headlines around the world. Universities in England have continued to lead in key fields such as stem cell research. But there have been groundbreaking discoveries in a wide variety of disciplines, with direct social implications. At the University of Leicester, for example, a breakthrough in DNA fingerprinting has led to the conviction of thousands of criminals and the acquittal of many people who had been wrongly convicted. Sir Alec Jeffreys and his team in the Department of Genetics have been refining the techniques and conducting related research for more than 20 years, winning international acclaim for their work and commercialising the results. Magnetic resonance imaging (MRI) is another important field in which English scientists played a crucial role. Sir Peter Mansfield of the University of Nottingham was one of the joint winners of the 2003 Nobel Prize in Physiology or Medicine for discoveries in this field.

## Regenerating local communities

The rapid expansion of higher education opportunities has provided the most visible extension of universities' contribution to society. In spite of the issues over the

'studentification' of residential areas, there has been no let-up in the demand for branch campuses or new institutions from towns that currently lack higher education.

The experience of Lincoln, which had no university until 1996, illustrates why this demand exists. The city now plays host to 8,000 students and the university runs an arts centre and a community centre, as well as playing a central role in strategic planning. The county library is to be based on campus and there have been large attendances at the university's public lectures, as well as at music events run by the students' union. The university works with local schools and has been involved in the establishment of an academy in nearby Sleaford. Its importance to the area was further confirmed by recent research showing that the university is responsible for two-thirds of economic growth in the Greater Lincoln area.

Universities have become more proactive in addressing social concerns in their locality. The University of Brighton, for example, used a charitable donation to establish its Community University Partnership Programme. This has involved academics and students in a variety of programmes, such as the use of sport to re-engage socially excluded young people, research on homelessness and domestic violence, and the organisation of several art projects. Among the university's other initiatives are the University Centre Hastings, a partnership with five other higher and further education institutions which is playing an important role in the regeneration of the town, and a scheme to help 500 small and medium-sized enterprises with business planning.

Sir Peter Scott, Vice-Chancellor of Kingston University, sees such interventions as evidence of the power of 'clever cities', a term coined by the American economist Richard Florida for the impact of clusters of economic and cultural entrepreneurs attracted by universities.[10] The influence of mass higher education produces a 'graduate culture' that permeates urban areas, as the general population and not just elites acquire the values and experience associated with degree-level study.[11]

## A growing sub-culture

The exponential growth of networking sites such as Facebook, which was restricted initially to graduates of a small number of high-prestige universities, suggests the establishment of a powerful sub-culture. Although not entirely heterogeneous in background, young (and not so young) graduates share sufficiently common lifestyles to forge valuable and enviable bonds. At the same time, the spread of graduates into new areas of employment has brought more non-graduates into contact with this culture.

This may be especially valuable in time of recession, when social tensions often come to the surface. While most attention will focus on economic imperatives and higher education's contribution to recovery, the ability of universities to instil civic values in a growing pool of graduates and to highlight social trends through their research will also be important.

In the longer term, the New Opportunities White Paper has reaffirmed the Government's faith in higher education as a key driver of social mobility.[12] In his Foreword to the document, the Prime Minister says: 'we will give more support and encouragement to young people from families with no experience of higher education, ensuring they have the kind of mentoring and advice that their peers can expect.'

Notes

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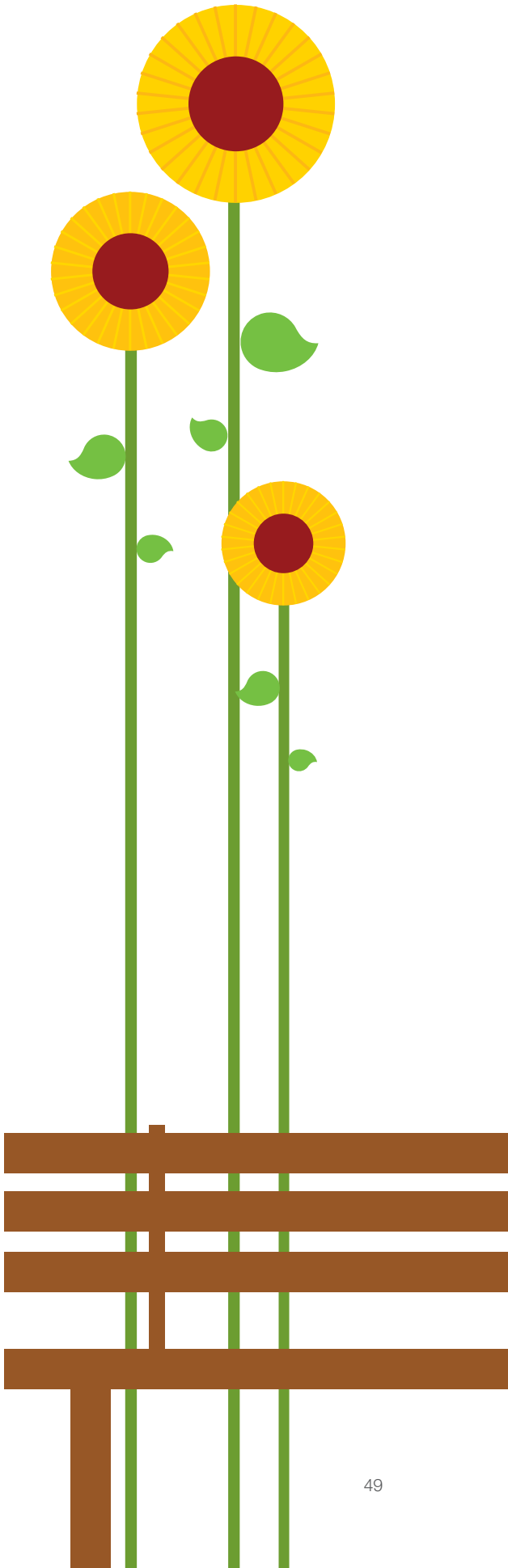


Commentary on

# Contribution to the public good

Nancy Rothwell

Universities are increasingly required to demonstrate the social and economic benefits of their activities, whether in terms of the percentage of students they recruit from disadvantaged backgrounds, or through the number of jobs created, spin-out companies formed or patents filed.

A useful measure of the value of HE is the view of key stakeholders. Here the commercial sector clearly values the research and training undertaken by universities, but wants more effective partnerships, with further dialogue on the skills needs of industry and better recognition of complementary skills and facilities. Government, too, is urging universities to work more closely with the commercial sector to translate their discoveries into clear public benefit. This is apparent in some of the government funding streams for research, which are proving highly effective in bringing academics together with their counterparts in companies. But some feel that any move towards more applied research will undermine the great strengths of British universities in fundamental discovery and adding to knowledge. A senior colleague from the pharmaceutical industry recently acknowledged recent initiatives to support joint working, but urged against 'turning excellent Universities into second rate companies'. A great value of HE institutions is that they can undertake risky projects often without obvious application or commercial benefit.

The British public must be the key stakeholders, either as graduates or because they have aspirations for their children to enter HE and contribute financially to many of the activities of universities. This chapter recognises the importance of interaction with local communities, the advances in recent initiatives and some of the problems caused by 'studentification' of significant parts of our towns and cities, many of which now have more than one university.

Participation in HE has increased dramatically and widening participation has diversified the population of graduates. But here there is much still to do. Many universities, not least my own in Manchester, are located in large cities with areas of poor education and social deprivation. Like most civic universities, we are adjacent to districts where most local people would have little knowledge of what the university does. Most local schools send few if any children to university.

An important new initiative here is HEFCE's 'Beacons for Public Engagement'. These centres, distributed across the UK, often bring together several HEIs with other local organisations. The Manchester Beacon comprises the Universities of Manchester and Salford, Manchester Metropolitan University and the Manchester Museum of Science and Industry. Its primary target audience is the

Professor Dame Nancy Rothwell is Deputy President and Deputy Vice-Chancellor at the University of Manchester.

less privileged communities of the region, with whom there is an open dialogue. The Beacon is complemented by the universities' public venues and initiatives such as the Manchester Leadership Programme. This voluntary, but accredited course requires students to undertake at least 80 hours of community work. More than 800 students have completed the course, which is now oversubscribed, and it is obvious that the students benefit from the breadth of experience as much as those communities they help.

The value of UK HE resides in international excellence in teaching and research, in discovery and in learning. Universities are cosmopolitan organisations which are tolerant of different race, religion and views. But while we have much to celebrate, more work is needed before the less privileged groups of society can talk with pride of 'their university' and what it does for them.

Chapter 5

# The student experience

The student experience has changed substantially as higher education has expanded – indeed, if there ever was one dominant experience, those days passed with the growing diversity of the university world. Mature students now outnumber school-leavers on many campuses, part-time study and distance and online learning have become commonplace activities, and growing numbers of full-time students take term-time jobs. Higher education also takes place in further education colleges and the workplace.

## Learning and teaching

A number of universities are looking systematically at their learning and teaching provision. The University of Manchester, for example, has launched a review of undergraduate education, while the University of the West of England has looked at the whole student journey – underpinned by a partnership with students – from before they arrive, welcoming them on arrival and, finally, equipping them for employment through its graduate development programme.

Both the range of subjects and types of course available in English HEIs are much wider than in any previous era. While vocational degrees date back to the beginnings of the higher education system, courses have become more tightly focused on specific employment fields. The computer games industry, for example, has spawned a raft of highly successful degrees, often with direct involvement of companies from the sector. The extent to which choice of course follows market trends is demonstrated by shifts in recruitment over the past five years; general computer science courses, for example, have dipped after sharp rises in the 1990s.

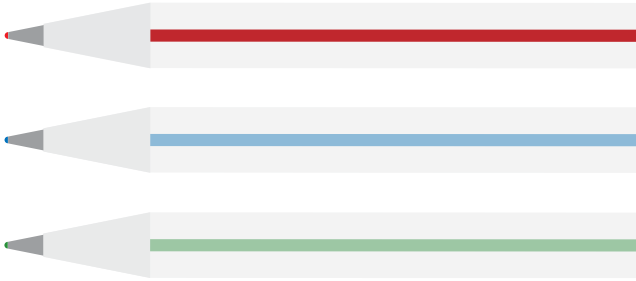
While three-year full-time degrees remain the most popular format, the English system has become more diverse in this respect. In engineering and related subjects, four-year degrees leading to a masters qualification are among the most sought-after courses in the discipline. Meanwhile, foundation degrees, introduced in 2003, have revived interest in two-year qualifications, with more than 40,000 students joining courses in 2007-08 in addition to some 8,000 starting Higher National Diplomas. Some students are using the foundation degree qualification as a stepping stone to an honours degree, others see it as an end in itself.

Postgraduate numbers have continued to rise, despite fears that increased student debt might depress participation. Although strong overseas recruitment has been responsible for the bulk of recent growth, UK enrolments have increased by 7 per cent in the last four years. Nevertheless, the number of international postgraduates exceeded the total from the UK for the first time in 2006-07.[1]

Inevitably, universities have become more impersonal with size, but the range of facilities has increased and more attention is given to teaching and learning techniques. Information and communication technologies play an ever-increasing role. The parents of the current generation of students are sometimes surprised at the extent to which the higher education experience has changed, but satisfaction levels remain high. More than four out of five final-year undergraduates responding to the National Student Survey (NSS) are satisfied with their experience, and only in the areas of assessment and feedback have approval ratings fallen below 70 per cent.[2]

Vice-chancellors have conceded that they cannot replicate the level of personal attention accorded to students in the elite system of the 1960s and before,[3] but there have been advances in teaching techniques and more attention has been paid to student services in recent years. The funding councils' own surveys have shown more university property to be in good repair and space being used more efficiently. University campuses in England still do not compare favourably with the leading American equivalents, but the volume of new building is one of the most striking contrasts with the position ten years ago.

The Higher Education Academy was established in 2004 to raise the professional standing of all staff in higher education. There are now 20,000 fellows of the academy and around 200 accredited programmes in teaching for academics. At institutional level, promotion on the basis of teaching excellence has become more common and there have been significant advances in course



delivery. Virtual learning environments have been tailored to the needs of a more diverse student population, as HEIs have recognised the need for greater flexibility to accommodate full- and part-time students with a range of other commitments.

Another move to address the perception that teaching is less prestigious than research is the establishment of a network of 74 Centres for Excellence in Teaching and Learning which disseminate best practice across most areas of higher education. Student participation is also being introduced in audits carried out by the Quality Assurance Agency for Higher Education. But Professor Paul Ramsden, Chief Executive of the Higher Education Academy, warned in his 2008 review of teaching and the student experience, for DIUS, that the 'intimate pedagogical relationship' for which English higher education is well known internationally might be vulnerable in an era of tighter resourcing in universities.[4]

All types of institution have fared well in the initial rounds of the NSS, but those of medium size – often campus universities – have done particularly well. Professor Shirley Pearce, Vice-Chancellor of Loughborough University, which has had some of the highest satisfaction rates in all four years of the survey, believes that the tight-knit campus community encourages mutual respect among staff and students. There is a close relationship between the administration and the students' union, and strong student representation at departmental level. Professor Pearce says: 'There is a long tradition here of caring about the quality of teaching, and students know that they are listened to.'

Partly in response to the NSS and partly to anticipate new demands from students paying top-up fees, universities have become more engaged with their students' unions and many have created 'one-stop shops' bringing together student services. An analysis of national provision by Dr Annie Grant, Director of Student Services at the University of East Anglia, found that while still less well resourced and powerful than in the US, services in the UK had improved and had become more comprehensive. Parents, as well as students, were demanding information and scrutinising procedures as never before.[5]

## Meeting different students' needs

Dame Sandra Burslem, the former Vice-Chancellor of Manchester Metropolitan University, saw her own institution and others adapt to new types of student. 'It is important to make sure that people get the support they need, especially in the first year, when they can sink unless they have the right help and encouragement,' she says. 'You have to take account of students' other lives and put as much as you can online because they might not be able to attend everything if they have to take a job.' Dame Sandra encouraged the accreditation of extra-curricular activities, whether voluntary or paid, as further recognition of the changing student experience.

Research by Professor Claire Callender, of Birkbeck, University of London, suggests that more than half of all full-time students now have term-time jobs, which form a growing share of their total income and occupy increasing amounts of time. She believes that inequalities among students are being overlooked in the drive to increase recruitment. A sample of 1,000 students at six universities revealed that students were employed for up to 15 hours a week on average, with more than a quarter doing at least 20 hours. The study, which was undertaken before top-up fees removed the requirement for 'up-front' payments, found that the propensity to take term-time jobs was linked to students' financial circumstances, and the impact on final degree classifications was significant.[6]

In a separate study, Professor Callender surveyed part-time students, whose experience of higher education is, inevitably, very different to full-timers'. Less than a quarter of those in her research were eligible for government grants. And while just over a third received financial support from their employers, these tended to be the wealthiest students who were in full-time jobs. Most chose to study part-time because they could not afford to give up work to take a full-time course. Although nearly three-quarters believed that their course represented good value for money, a shortage of time and financial problems were obstacles for most of the respondents.[7]

There has been growing support for more equal treatment of full- and part-time students. Richard Lambert, Secretary General of the Confederation of British Industry, for example, questioned the contrast in student support and course funding at a time when the distinction between full- and part-time study was being blurred by term-time employment.[8] Lord Dearing is another who has been critical of the disparity, arguing that further incentives will be needed for part-time study if the targets set in the Leitch Review are to be met.[9]

## Student expectations

The switch from 'up-front' payment to fees which can be deferred and the provision of grants and bursaries should have improved students' financial position. However, indebtedness still appears to have increased, and the prospect of substantial debts on graduation is causing concern among many students.

Wes Streeting, President of the National Union of Students (NUS), believes that the fees policy has encouraged a more utilitarian approach to higher education. 'Students have become more demanding both in terms of facilities and courses because so many see university simply as an essential route to success in the workplace,' he says. 'They expect more because they are paying more, and universities are marketing themselves so aggressively that they sometimes can't deliver everything they promise in prospectuses.'

International students are important not just for financial reasons, but because their presence enriches universities both socially and culturally. They are also powerful advocates for the UK and for their university on their return to often influential positions in their home country.

The establishment of a National Student Forum[10] and the appointment of a Minister with special responsibility for students are two further indications of greater attention being paid to students' views. The 'student juries', whose views will inform debate at the national forum, have been concerned mainly with practical issues such as contact hours and library access. Contact hours have become a particularly sensitive area in the arts and social sciences, with parents as well as students lobbying for more lectures and seminars.

Research by the Higher Education Policy Institute (HEPI) suggests that students in English universities typically receive about 14 hours of tuition a week – more than many others – but that their total workload is less than that in seven countries covered by a Euro Student survey.[11] The findings have been disputed and Bahram Bekhradnia, HEPI's Director, has conceded that the two surveys were not directly comparable. But he comments: 'It may well be that the quality of contact in England is superior because teaching often takes place in small groups, but the findings are consistent with other pan-European research.'

Facilities on English campuses have improved in recent years. 24-hour access to well-equipped libraries has become commonplace, and both academic and leisure facilities have been renewed and expanded in most institutions. Sports facilities have shown particular improvement, in response to student demand, and the higher education sector boasts a number of prize-winning developments.

Students were strongly represented in the 2008 Olympic and Paralympic teams, and universities will be central to preparations for the next Games in London. Of the 600 training facilities chosen for sportsmen and women in advance of the 2012 Olympics, more than 50 are at HEIs. Brunel University has been nominated for a dozen different sports, from archery to wrestling, and the number of sports scholarships available nationally is growing from a total of about 1,500 in the search for medal contenders.

International students are important not just for financial reasons, but because their presence enriches universities both socially and culturally.

Notes

[1] 'Higher education student enrolments and qualifications…2006-07'; HESA Statistical First Release 117, January 2008 (www.hesa.ac.uk).

[2] 'The National Student Survey 2006' (www.hefce.ac.uk).

[3] Alexandra Frean; The Times, 13 September 2007.

[4] P Ramsden; 'Teaching and the student experience'; DIUS, November 2008 (www.dius.gov.uk).

[5] A Grant; 'Student services in the UK – a brief overview'. From K. J. Osfield and Associates (eds) 'The Internationalization of Student Affairs and Services in Higher Education: An Emerging Global Perspective'; Washington: NASPA (in print).

[6] C Callender; 'The impact of term-time employment on higher education students' academic attainment and achievement', Journal of Education Policy, Vol 23, Issue 4, pp 359-377, 2008.

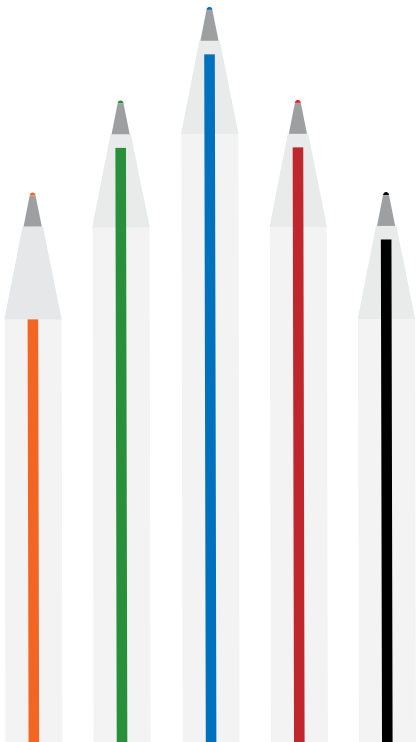
[7] C Callender, D Wilkinson and K Mackinon; 'Part-time students and part-time study in higher education in the UK', UUK, November 2006 (www.universitiesuk.ac.uk).

[8] 'Higher education from a business perspective'; inaugural UUK annual lecture, December 2007 (www.universitiesuk.ac.uk).

[9] R Dearing; 'Funding higher education: 1997, 2006 and preparing for 2009', June 2007.

[10] www.dius.gov.uk/policy

[11] T Sastry and B Bekhradnia; 'The Academic Experience of Students in English Universities (2007 report)', HEPI, September 2007 (www.hepi.ac.uk).



Commentary on

# The student experience

Wes Streeting

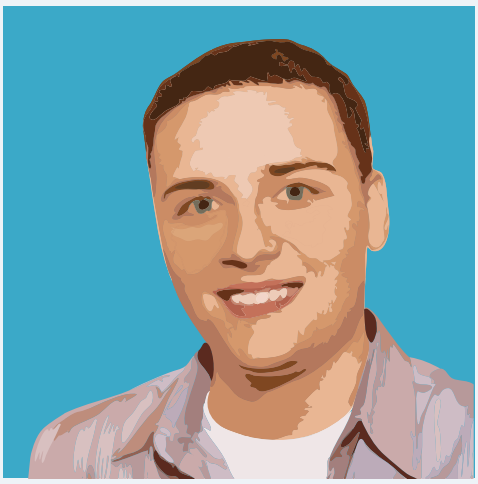
As this useful chapter makes plain, the student experience is now such a broad concept that the term itself needs to be re-thought. Rather than discussing a single 'student experience', those involved in higher education should learn to talk about the many 'student experiences' on offer in our higher education sector.

I enjoyed my three years of university at the more traditional end of the spectrum, studying history at Cambridge University, but some of my friends and colleagues did not enjoy it, and may have had a better experience elsewhere.

There is something to note here about the university league table culture. If we look at the experience in a holistic way, from the student's point of view, then 'better' (on crude measures of performance) is not necessarily *right*. League tables cannot measure appropriateness: that requires an individual context. We are working to develop a higher education system in which all forms of advanced learning have their centres of excellence, and in which every potential student has a destination that is right for them. We cannot achieve this if we maintain the same preconceptions of excellence, the same separation of the academic and the vocational, or the traditional approaches to the way our courses are taught. Fortunately, the majority of institutions in the higher education sector know this, and are responding to increasing diversity, new student demographics and changing student needs.

Higher education is in a state of transition. This chapter describes how it is changing, and explains some of the reasons for that change. The future is likely to see a far higher proportion of part-time students, and these students are likely to be older, causing the average age of the cohort to rise even further. Many more students will be pursuing shorter courses – such as two year foundation degrees. In an environment of even greater competition and higher financial pressures, institutions will become increasingly specialised, and many courses may begin to be 'wound down'. These factors will all have an impact on the many diverse experiences of the students involved, in their hundreds of thousands.

I am quoted in the chapter, warning of the growing trend towards consumerism in higher education. Full-time students are now asked to pay a large proportion of the cost of their course, which I believe is the most influential cause of the changing attitude. To minimise their debt, many students now undertake more paid work in term-time than ever before, to a level that is undoubtedly harmful to their studies. Teachers are under growing pressure to give students what they want, and not what they *need*. Students will become more risk-averse, and less inclined to go beyond the confines of the syllabus to find and discover new perspectives and arguments for themselves. The educational experience is also changing rapidly.



Wes Streeting is President of
the National Union of Students.

It is clear that student experiences cannot be managed or steered. They are fast becoming too diverse for this kind of approach to be effective, so new approaches must be found. One possibility is to ensure that students have a strong sense of ownership around their programme of study, and a high degree of control over – and responsibility for – their own experience. This can be achieved by making courses more flexible, enabling administration to take place at a distance where possible, and getting students involved in shaping the programmes and services on offer. In some ways, the very notion of ‘student representation’ seems quite tired today, and talk of ‘student demand’ might serve to promote a consumerist approach. Instead, genuine student involvement in the production of learning may be the approach we need to make the student experience the best it can be in the future.

Chapter 6

# Funding and accountability

Universities in England are generally considered to be part of the public sector. In fact, although the largest share of their income is derived from the state, they are independent institutions with statutory protection from government direction and unique systems of governance.

The government of the day, through its various agencies, controls the financial levers that allow it to set the broad agenda for the sector. Some of these – such as the level of undergraduate fees – have legal force. But in most areas, institutions are free to decide whether national policy chimes with their own strategic aims: around 95 per cent of the more than £7.5 billion disbursed by HEFCE, for example, is allocated in the form of an annual block grant rather than earmarked payments. A few universities have contemplated total freedom from the public purse, but none, with the exception of the University of Buckingham, relies solely on private sources.

## Flexibility and competition

This hybrid system of self-governance and public responsibilities gives each university the scope to plough its own furrow, within the purposes laid down in its charter. The flexibility and competition that this encourages is often seen as one of the main strengths of English higher education, particularly in comparison with continental Europe.

Professor Yves Mény, President of the European University Institute, has described continental universities trying vainly to catch up with the British reforms. These grafted greater competition and more attention to individual and collective performance onto selective admissions procedures and a strong research base.[1] Both Germany and France have opted to identify a group of elite institutions to receive differential funding in order to compete more effectively with universities in Britain and the US.

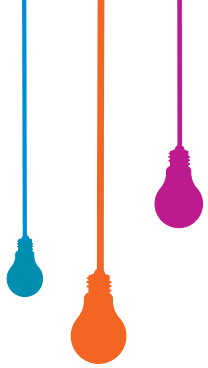
The success that higher education in England has enjoyed suggests high levels of efficiency in the system of governance, since investment in universities remains below the European Union average, at only 1.1 per cent of GDP, and far behind US funding levels. A report for the Centre for European Reform by Richard Lambert and Nick Butler suggested that a figure close to 2 per cent was the least that was required to build a knowledge-based economy. 'Any member-state that fails to meet this target will have increasing difficulties in retaining its best brains and in competing in the global economy,' the report said.[2]

American universities benefit from a combination of healthy public and private investment. Although English HEIs cannot match the scale of US corporate and individual donations, their turnover has been rising at more than 5 per cent a year over the past decade.[3] Further growth is predicted for the next three years, albeit at a lower rate. Increases in the science budget and the introduction of variable tuition fees have been partly responsible, but universities' own activities have also seen considerable increases.

Indeed, the increased flexibility that HEIs have enjoyed over the past 20 years has been due to some degree to new sources of funding, albeit often either new public sector contracts or activity dependent to some extent on public investment. The recruitment of international students, for example, requires investment in facilities such as halls of residence. Nevertheless, the Higher Education Statistics Agency (HESA) divides institutional income into more than 30 headings. Sources include more than £1 billion from residences and catering, £645 million from charities and nearly £1.5 billion from overseas student fees. The funding bodies provide less than 40 per cent of the income of most institutions.

## Public and private funding

There are wide variations in the proportions of public funding at different universities, but approaching £7 billion of the £18 billion total higher education revenues now comes from non-state sources. Research contracts, including from charities such as the Wellcome Trust, and student fees, endowments and knowledge transfer activities are all significant contributors to the higher education balance sheet.



The range of profit-making ventures stretches from long-established enterprises like the Oxford University Press, (which transfers a third of its considerable surplus to the university each year) to spin-out companies and, at the University of Lincoln, the manufacture of chilled foods. Universities have also steadily increased the amounts raised from alumni and other donors so that education as a whole now accounts for 5 per cent of all charitable giving in the UK.[4] Bursaries, professorial chairs and new buildings have all been funded in this way.

State-funded incentives have helped to develop some of these income streams – for example, through the £200 million matched funding scheme to increase voluntary donations and the Higher Education Innovation Fund which has stimulated knowledge transfer. Some activities though may be loss-making, at least at the outset, and universities need to look to recover the aggregate full costs over the range of their activities. Such activities require a higher order of risk management than conventional public funding. The Transparent Approach to Costing (TRAC) methodology developed by the sector is intended to aid the process of determining how much money activities generate, as well as providing the basis for funding of research projects by the UK Research Councils.

HEFCE's approach to its own allocation procedures has been to keep intervention to a minimum. Around 95 per cent of its total annual funding of over £7.5 billion is allocated by formula. The Government's broad aims and objectives are set out each year in the Secretary of State's annual grant letter to HEFCE. Exceptions to formula funding are made in priority areas – for example with a Revolving Green Fund to support sustainable developments – and for projects that are beyond the scope of single institutions. A Strategic Development Fund (SDF) is available for HEIs, or groups of institutions, in such circumstances to support constructive development and change in the HE sector at a strategic level. The SDF supports change and innovation in the sector, and plays a critical role in supporting HEFCE's priority of sustaining a high quality HE sector. In 2007-08 over £100 million of SDF funding was approved to support over 30 proposals.

Despite the attention they continue to receive both inside and outside universities, variable tuition fees for full-time UK undergraduates account for only 12 per cent of the income of HEIs when the cost of bursaries is discounted.[5] Even at the newest universities and higher education colleges, the proportion of income from top-up fees is below a quarter, while at Russell Group universities, the proportion drops to less than 7 per cent.

The much higher fees paid by students from outside the EU have taken the share of income derived from international students to 8 per cent throughout English universities. But the HEPI has reported that ten institutions show twice this level of dependence and some others are overly reliant on particular countries, where government policy or economic conditions could affect student mobility.[6] Universities have seen the damage that swift changes of policy can do: a change of government in Malaysia in the 1980s brought a temporary halt to recruitment of students from a country which had been sending the largest number of students to England. Currently, a number of institutions are heavily reliant on recruitment in China.

In 2006-07, the funding council contributed £1.3 billion towards the cost of research, under the dual-support system (see Chapter 3), while the seven Research Councils allocated over £950 million a year in grants for specific projects to universities in England. Successive governments' policy of concentrating research funds to maintain international excellence and competitiveness has resulted in nine universities attracting half of all the funding from both sides of the dual-support system.

Charities also play an important role in the funding of research, with HEFCE providing £185 million to supplement their awards in order to bring funding up to 80 per cent of the full economic costs of carrying out the work. Some additional research funding comes through the EU's Framework Programme and the new European Research Council.

State support for English higher education is not confined to HEFCE and the Research Councils. The Training and Development Agency for Schools is a major

funder. The NHS has become a major funder and joint ventures between universities and Regional Development Agencies or local authorities are becoming increasingly common, for example for wealth creation projects, or for the provision of facilities such as sports centres.

## Effective governance

The way HEIs in England are governed has been streamlined over recent years to allow quicker decision-making and more consistency in strategic direction. The size of many university councils has been reduced, in line with recommendations in the Dearing Report. Those who chair university councils, in particular, play a pivotal and little-noticed role in the direction of institutions.

In formal terms, these individuals not only lead the governing body of the institution but are responsible for the institution's funding agreement with HEFCE. They and their fellow governors set the institutional mission and monitor performance against it. External stakeholders, such as banks, donors and public regulators, rely on their judgments. Strong and effective governance is essential to an autonomous system, so as to maintain confidence and keep monitoring and regulation by external bodies to a minimum.

As universities have become more businesslike, the demands on those leading them have increased. The turnover of vice-chancellors has accelerated to the point where the average tenure in office is down to less than five years. Richard Lambert, whose 2003 review included governance, found that the variety of stakeholders and different roles within universities made the leadership role among the most complex in any field.[7]

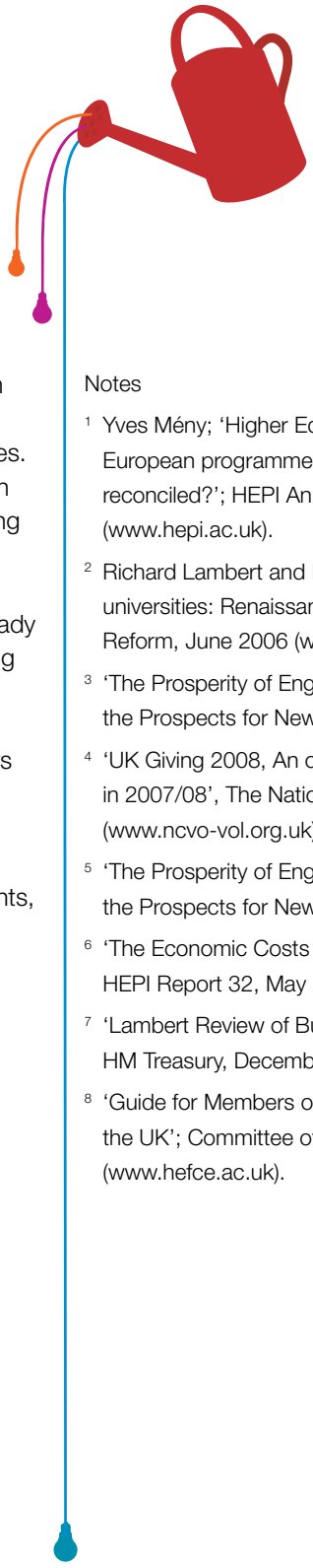
There has also been a shift in the office of chancellor – once the senior administrative position in universities, and still nominally the most powerful office-holder. In recent years, a stream of high-profile individuals, successful in the arts, business and the media, have taken on chancellorships. Their active participation in university affairs – acting as ambassadors and unpaid advisers, as well as performing ceremonial functions – suggests increased visibility of higher education institutions in public life.

University administration, too, has become more professional, with specialists replacing the more generalist administrators of previous eras. But, to varying degrees, universities have retained the committee system and representative structure that give staff and students a voice in decision-making. Tensions between the pressure for 'modernisation' and a desire to maintain the collegiate traditions of higher education inevitably come to the surface where reforms are less than gradual.

Following publication of the Lambert Report, the code of practice issued by the Committee of University Chairs (CUC) in its 2004 guide for governors has helped to guide the reform of procedures of governance.[8] Sir Andrew Cubie, who chaired the CUC until October 2008, said every institution now uses the code, which has clarified the division of responsibilities between lay officers and vice-chancellors. Most universities have gone further than the code's recommendations in reducing the size of governing bodies, with some now restricting the membership to 16 or fewer.

Student representation on governing bodies has enjoyed something of a resurgence, despite continuing low levels of interest in student politics. For the first time, a Minister has been given specific responsibility for students, and the Government has used student juries to identify common concerns. At institutional level, higher fees and the establishment of the National Student Survey (which takes the views of final-year undergraduates on their experience at university or college) have encouraged more attention to be paid to the views articulated by student unions. Some universities are even paying student representatives for their work.

Relations between management and staff are more variable. Levels of union membership remains relatively high in universities and colleges, and tensions over pay have developed into two national disputes in the past five years. The number of different unions representing



staff can make for a confused picture, both in relation to pay and conditions, and in generalising about the level of representation afforded to university employees. Many academics and senior administrators have seen salary levels improve markedly in recent years. Looking at the most recent developments, a 5 per cent pay increase in 2008 has strained the finances of many HEIs at a time when pension commitments were already causing concern. The future of national pay bargaining remains uncertain.

The 2009 edition of the CUC's guidance for governors urges them to rise to the challenges of the times. In his introduction to the guide Sir Andrew Burns, Chair of the CUC, says: '...universities and colleges must respond to heightened expectations from their students, from Government, from business and from their own academic and professional staff. ...At the start of the 21st century institutions of higher education have become highly ambitious communities. Governing bodies must therefore also be ambitious.'

Notes

1 Yves Mény; 'Higher Education in Europe: National Systems, European programmes, Global issues. Can they be reconciled?'; HEPI Annual Lecture, January 2008 (www.hepi.ac.uk).

2 Richard Lambert and Nick Butler; 'The future of European universities: Renaissance or decay?' Centre for European Reform, June 2006 (www.cer.org.uk).

3 'The Prosperity of English Universities: Income Growth and the Prospects for New Investment'; HEPI, September 2006.

4 'UK Giving 2008, An overview of charitable, giving in the UK in 2007/08', The National Council for Voluntary Organisations (www.ncvo-vol.org.uk).

5 'The Prosperity of English Universities: Income Growth and the Prospects for New Investment'; HEPI, September 2006.

6 'The Economic Costs and Benefits of International Students'; HEPI Report 32, May 2008.

7 'Lambert Review of Business-Industry Collaboration'; HM Treasury, December 2003 (www.hm-treasury.gov.uk).

8 'Guide for Members of Higher Education Governing Bodies in the UK'; Committee of University Chairmen, November 2004 (www.hefce.ac.uk).

Commentary on

# Funding and accountability

Andrew Cubie

Non-executive board members in the private, public and voluntary sectors must, and invariably do, provide a huge reservoir of experience, remunerated or not, to the boards on which they serve. This is emphatically the case with lay governors of higher education institutions. In particular, where the chair and the vice-chancellor have a constructive relationship, the university gains immeasurably. Conversely, if they do not it suffers. Some vice-chancellors still appear to feel anxious about the governance role of their governing bodies and by their interaction with their chairs. I suggest that more still needs to be addressed in this and in the working relationship between the representative bodies of the vice-chancellors (Universities UK) and the chairs of governing bodies (the Committee of University Chairs, CUC).

Over the last six years of my involvement in CUC, the relationship with Universities UK has been transformed. However, the two bodies continue to make separate representations to the Government and opposition parties. In the voluntary sector, major national charities do not distinguish between the roles of chair and CEO as they address the issues for their organisation. Why is this part of the culture of the higher education sector? With clarity of responsibility, why should there be a perceived threat here to the autonomy of the vice-chancellor as the chief executive of a complex organisation?

The CUC's Governance Code of Practice and General Principles provides a robust framework for governance and the clear separation of executive and non-executive functions. The adoption of the tenets of that code by all universities funded by HEFCE significantly facilitated HEFCE's adoption of a 'light touch' approach to regulation. This was and is welcome.

All of our universities are independent, autonomous institutions with charitable status. They are responsive and accountable to all of their stakeholders, including HEFCE. Such accountability needs to be proportionate. The average proportion of funding for a university from public sources is around 60 per cent. I would urge a wider acceptance amongst funders and regulators of the benefits of the 'single conversation' – a streamlined accountability process linked to assessment of risk. This helps to reduce the burden of accountability, and its wider adoption could mean that the many regulators of the higher education sector would place more reliance on HEFCE's own regulation, which has been demonstrably successful over many years.

Other stakeholders require assurance on issues surrounding HEIs' mission and scrutiny. They are those many others, referred to in this chapter, as alumni, trusts, sponsors and others. They also demand confidence in governance, and often civic and national leadership, by the chair and governing body in their custodian roles as trustees. A joined-up approach between chair and vice-chancellor provides confidence in purpose and will exude real strength internally and externally.

Self-reliance by universities is part of the culture of today: we live in a time of a 'mixed economy' for the higher education sector. The proportion of funding from the state seems to me inevitably to decline year on year. With the pursuit of other funding (from fees, etc), substitution and not additionality may follow. Government does, however, need to understand that it is core funding for institutions which matters and must not demand outcomes from the sector which are inadequately resourced; such funding is so often confused with

Sir Andrew Cubie CBE, FRSE writes as former Chair of the Committee of University Chairs which represents the chairs of 125 governing bodies of UK universities.

student support. For the foreseeable future, I see no appetite to have the proportion of our GDP that is devoted to higher education match the 2 per cent proposed by Lambert and Butler as the minimum to build a knowledge-based economy. Without further state support, the possibility of the sector receiving in the current and anticipated economic climate further non-state resource to such a level seems remote. And without that, we will not have a knowledge-based economy essential for this century despite our best efforts. But if we fail our grandchildren will deservedly not look kindly upon us.

Chapter 7

# Looking ahead

Discussion on the future of English higher education tends to focus, to an unhelpful degree, on the Government's review of undergraduate fees and in particularly whether and by how much it will lift the cap on tuition fees for full-time undergraduates in 2010. Although this decision will be important to all universities – and crucial to some – it is but one of a number of factors that will determine whether the system maintains its current strength and increases its contribution to the economic and social life of the nation.

## Future challenges

Other equally significant challenges include: an uncertain economic outlook, both for public spending and for private sector partners; the way in which institutions adapt to demographic change; private sector competition; and political decision-making both at home and abroad. A prosperous future will depend on sound research policy and successful international strategies, as well as on finding a sustainable balance between the contributions of the state, individuals and employers to the cost of undergraduate education. Universities and colleges will be at the forefront of attempts to bridge the skills gap, as well as maintaining their strong record of civil engagement.

John Denham, the Secretary of State for Innovation, Universities and Skills, has identified five areas in which English higher education should be world-class in the future:[1]

- to be responsible for a disproportionately high share of leading research, and home to leading thinkers in a full range of disciplines.
- maximising the benefits of links to business and public services – both educating the workforce and exploiting the fruits of research and innovation.
- developing international collaboration and top-quality relationships with higher education systems elsewhere in the world.
- teaching to high standards and reaching all of those who can benefit.
- making the fullest possible contribution to local and regional development, and to cultural life.

Imminent demographic change has encouraged more long-term horizon-scanning than is usual in higher education. Mr Denham commissioned a series of reviews looking 15 years ahead,[2] while Universities UK has been speculating on the size and shape of the higher education system 20 years hence.[3] Such are the uncertainties facing universities, like institutions throughout the public and private sectors, that even the most generalised projections on these timescales are fraught with danger. Higher education will be affected by political and economic trends that are impossible to predict, as well as by their own decision-making. The value of the pound, for example, has a direct influence on the increasingly important practice of recruiting international students, and on the cost of using scientific facilities.

However, institutions are having to commit themselves to a direction of travel that is based on assumptions about the next decade and beyond. This will need to take into account at least an initial period of economic turbulence, followed by demographic decline in the age group that produces the majority of full-time undergraduates. Without sophisticated planning and a supportive state funding regime, there is a risk that some universities will cease to be viable before more favourable conditions return. Institutional business models are already changing to address new markets, in which mature students are likely to have a greater involvement in HE.

In many respects, higher education in England is in a good position to withstand these challenges. The considerable development of university estates over the past decade, for example, has been largely financed by long-term borrowing at advantageous rates, with banks recognising the importance of HEFCE's regulatory role. The system as a whole starts from a position of strength in relation to Mr Denham's five tests above. The diversification of income streams should provide some protection against changes of national policy and economic downturn. And, while future levels of public spending are increasingly uncertain, there is a political consensus that higher education is crucial to economic success and that investment should be increased to keep pace with global competition.

# There is a political consensus that higher education is crucial to economic success and that investment should be increased

## Role of the state

There is no doubt that the state (through a combination of teaching and research grants, as well as contracts in health and other public services) will continue to be the largest source of income for most institutions for the foreseeable future. Maintaining international competitiveness in the face of increased competition from parts of Europe, China, India and other emerging nations will require our university leaders to make the case for increased funding against the trend of public policy. American universities, in particular, will continue to enjoy a considerable premium over their English counterparts in federal support, as well as in private funding. Unprecedented investment in higher education in China has attracted global attention, and it is by no means the only country to have earmarked large sums to develop internationally competitive universities.

The 2009 review of fees will give some indication of support for and political preparedness for enhanced investment in English universities. Although the case for increased fees will be judged in the context of teaching, rather than research, the arguments for increased funding will range over the effectiveness of higher education as a whole.

David Willetts, the Shadow Secretary for Innovation, Universities and Skills, is yet to commit the Conservative Party on fees policy, but he believes that HEIs will need to demonstrate that they offer value for money before any increase is considered. 'There have been concerns expressed about contact hours, for example, which will have to be addressed if people are to be asked to pay more,' Mr Willetts said. 'There will be other considerations about the impact on the public finances, but universities have to show that they could provide an even better service.'

It is likely that there will be continuing demand for further progress in widening participation in higher education. Significant increases in the recruitment of students from working-class families will rest on improved performance in secondary education – particularly among boys – perhaps through the programme of diplomas introduced in autumn 2008. The current focus on workplace learning could also lead to some improvements. But universities will be expected to maintain recent gradual increases through their outreach activities and bursary programmes – and to show that these would not be endangered by a new fee regime.

## Population decline

Whatever the level of fees, there will be no escaping the decline in the number of 18-20 year-olds in England between 2010 and 2020. While the number of mature students has grown in recent years, the 18-20 age group still accounts for more than 70 per cent of full-time undergraduates and approaching half of all students. Although the decline is less severe in England than in the rest of the UK – and most of Europe – numbers are still expected to fall by more than 13 per cent to levels last seen in the late 1990s before recovery begins.[4] Migration patterns could significantly affect the figures to an extent, but the population trend is already established.

The impact on higher education is not straightforward as the profile of young people will be changing at the same time. The Higher Education Policy Institute reports that the proportion of births to parents of those social classes with the highest HE participation rates has been increasing, leading it to conclude that the decline might be between 2 and 9 per cent, rather than the full 15 per cent.[5] Nor is the decline uniform, even within England. While the national population of 18-20 year-olds is set to drop only in 2011-12, the decline has already begun in parts of the country, such as the north-east, and is not expected to recover to the extent anticipated for England as a whole.[6]

There will be a differential impact on HEIs of population decline, according to their intakes. While the school-leaving age group declines, there will still be growth in the numbers aged 30 to 50. Since the majority of part-time students and many postgraduates are over 30 at entry, business-facing universities with a strong portfolio of work-based and other part-time courses should enjoy some protection. The skills agenda outlined in

the Leitch Review[7] will surely encourage more HEIs to take such a route, diversifying away from a reliance on full-time undergraduate education. Such institutions are likely to face increased competition from private providers of part-time or distance teaching in niche markets such as law and finance.

If demographic decline is not offset by other factors such as higher participation rates then it may intensify the competition for well-qualified, full-time undergraduates. Universities' recent focus on the student experience seems set to continue and, judging from trends in the US, to lead to increased competition to provide the best facilities, particularly in student accommodation, libraries and other student services.

The more research-intensive universities may respond to changing circumstances by increasing their recruitment of postgraduates, both at home and from abroad. While demographic decline in more developed countries, possible effects of the global recessions, greater competition from overseas universities and the strengthening of indigenous higher education will make it harder to attract international students, English universities continue to enjoy considerable advantages. Their degrees have a high reputation, their comparatively short duration limits the cost to students and their families, while the English language is a strong attraction in itself.

## Need for high quality

The international nature of higher education, both in terms of student mobility and research collaboration, is certain to accelerate. Leading universities already have research centres and branch campuses in other countries. Some predict greater competition from overseas (mainly American) universities in England – whether through branch campuses or online courses – though countries with weaker higher education systems and unsatisfied demand for study places would seem a more natural target for private providers. Transnational research partnerships are set to not only become commonplace but, in all likelihood, an essential ingredient for success in bidding for many major contracts. Universities will need to be able to call on significant support from state and industrial sources to remain attractive partners.

The long-term impact of the 2008 Research Assessment Exercise and the shift to the more metrics-based Research Excellence Framework is yet to be established. Many institutions are already focusing on knowledge transfer rather than fundamental or 'blue skies' research, and more may do so as the higher education system becomes more specialised. In particular, universities and colleges with a regional focus have tended to move away from national and international competition for research funds in all but a few areas, concentrating instead on local priorities.

The common thread running through all the likely developments of the coming decade is the need for universities in England to maintain their reputation for high quality. Most obviously, this applies to international activities in both teaching and research. But it is also imperative for the maintenance of public confidence at home. Both business and political support may be weakened if this reputation is damaged.

Home students will need to be persuaded of the continuing value of higher education at a time when the cost of study may be rising. The salary premium for graduates continues to be strong by international standards, but this is not universally recognised. Similarly, business will need to be convinced of the value of engagement with HEIs if higher education is to capture the increased share of the training market envisaged by Ministers and for work-based learning to grow in line with the targets set in the Leitch Review.

Last summer's controversy over degree standards, particularly in relation to overseas students, demonstrated how quickly criticisms of the system can escalate. Untested allegations are picked up in other countries and may undermine the reputation that is the hallmark of English universities' success. Secure funding and trusted quality assurance are the best defences against such concerns.

Universities are well aware of the need to adapt their teaching methods to embrace new technologies more fully. They may also face growing pressure to increase teaching time, especially in small groups, outside the sciences. As in other areas, international norms are becoming common currency, and the expectations of both home and overseas students may rise with the level of fees.

## Advances in technology

Advances in technology are also changing the way research is conducted, with digitisation impacting on the social sciences and humanities, while enhanced computing power continues to drive further concentration towards 'big science' and developments such as mapping the human genome. English universities' early recognition of the potential of interdisciplinary research gives it a further advantage in the international arena. Both interdisciplinary and 'blue skies' research have benefited from the dual-support system, which remains a keystone of research policy, underpinning basic research and work in emergent fields.

The rate of change in technology is dramatic, as is its continued impact on learning, teaching and research. This will continue relentlessly over the coming years, with likely advancements in interactive Web 2.0 technologies, e-infrastructure, personalised computing solutions and increased access to online resources. As students of the 'Google Generation' – those brought up and educated entirely in the digital age – enter higher education, so their expectations of institutions and their teachers with respect to technology are likely to be even higher than they are today. Mobile technologies, open content, flexible forms of delivery and technology-rich learning spaces are likely to become key requirements. At the same time evidence suggests that our greater reliance on technology can lead to more superficial research, suggesting an important role for universities in supporting wider concepts of information or digital literacy.

## Increasing diversity

Some of the measures required to sustain higher education in England will be expensive. But the alternative is to risk decline in an area of activity that brings demonstrable economic and social benefits. Although the current downturn will place extra strains on funding in the short term, investment in higher education brings social and economic benefits that could both lessen the depth of the recession and help lay the foundations for greater prosperity when recovery begins. The cost of funding students in higher education compared to providing benefits to unemployed people is marginal.

The multiplier effect of economic activity created by HEIs is well documented, and their research is at the heart of some of the country's most valuable export industries.

The opportunity exists for English universities to build on their status as major players on the world stage and for the higher education system to adapt successfully to changing national needs. The diversity of mission within the current system is one of its strengths and the next decade is likely to make this characteristic still more pronounced.

Notes

1 John Denham: speech at Wellcome Collection Conference Centre, London, 29 February 2008 (www.dius.gov.uk).

2 'The debate on the future of higher education'; DIUS, November 2008; (www.dius.gov.uk).

3 'The future size and shape of the higher education sector in the UK: demographic projections'; Universities UK, March 2008 (www.universitiesuk.ac.uk).

4 Ibid.

5 'Demand for higher education to 2029', Higher Education Policy Institute, December 2008 (www.hepi.ac.uk).

6 'East Midlands projected to be the fastest-growing region in England'; Office of National Statistics, June 2008 (www.statistics.gov.uk).

7 'Leitch Review of Skills'; HM Treasury, 5 December 2006 (www.hm-treasury.gov.uk).

HE in England discussion

# Looking ahead

This is a cut-down version of a discussion which took place in the recently opened New Academic Building at the London School of Economics and Political Science (LSE).

**David Eastwood:** It's almost a cliché to say that we live in a knowledge economy, and therefore higher education has never been more important. **Do you think that's right? Is there now a danger of us overselling higher education?**

**Mark Walport:** I don't think you can possibly oversell higher education. If you look at the resources of the UK, the most important resource now and in the future is people.

**Janet Beer:** You also have to consider that developing economies would not prioritise higher education as one of their main points of investment if they didn't think that it was crucial.

**DE: Are we investing sufficiently in higher education given its importance to the knowledge economy?**

**Ed Smith:** In comparative terms, no. Overall I could argue pretty strongly that a leading indicator of the health of the nation is its investment in higher education.

**JB:** We have to ensure that we extend the ownership of higher education: that it's not always up to the public purse. In the US, which spends twice as much as we do in terms of GDP, there is a greater sense that people will default to the universities. Industry will default to the universities.

Ed Smith, Professor David Eastwood, Sir Mark Walport, Professor Janet Beer.

**DE:** So we are saying simultaneously that in a knowledge economy higher education will become still more important and ultimately will require even higher levels of investment than now. But also that much of that investment is going to have to come from different sources. **Do we think the challenge therefore will be to those who lead systems to change the systems? Or to challenge universities themselves to behave differently?**

**MW:** Most universities do recognise that they have got to get out there and diversify their funding sources. The question of course is whether it's been done in a sustainable way.

**ES:** There is a need for more universities to focus on agility, speed, changing operating models, brand, mission, reputation. And being particularly clear about what they are really good at and being distinctive for that. Many universities are not what I would call 'agile' in the private sector sense of the word.

**JB:** I agree we have to be faster, but we must make sure that we don't sacrifice quality.

**MW:** Many [HEIs] have not got modern models of governance. So if universities are going to get more agile they have got to improve their executive and governance functions.

**DE:** We have said that higher education will be as pivotal in the next decade as it has been in the last. But we are looking to other forms of partnership, other forms of investment, other kinds of funding. If universities are to attract more funding from students, from research sources, from business and industry partners, they will need to be responsive in perhaps ways we haven't yet seen.

**What do you hope will be the headlines in the proposed White Paper in terms of the future shape and the future challenge to higher education?**

**MW:** … universities have to decide what it is they are going to do; clearly education is the major role. There is research and scholarship, that's critical. Then there is all the broader interactions with the university in the community. And universities working more effectively with policy makers.

**JB:** There is a civic and community role that universities increasingly need to play. Universities have always worked in partnership with the professions, but those partnerships have not necessarily been communicated beyond selective audiences.

**ES:** The UK has to look to a meritocratic higher education system, not an elitist one.

**DE:** One of the things that we seem to be saying is that the higher education world is still too hermetic, too self-referential. It's unwilling to partner with Government and with policy makers in a rich way. And there is a default position that we know our business best. **Do you think that's right?**

**MW:** There are huge opportunities for universities to provide policy advice. Because there hasn't been an overt funding stream [for this], because it hasn't been rewarded in the RAE, people have tended to say, 'We can't do this' – and that's nonsense.

… the bottom line is universities mustn't dumb down. There is confusion in the 'equality versus elitism' discussion; there needs to be access to universities for bright youngsters.

There are falling numbers of students going into what I call the 'difficult' sciences: physics, pure maths. And part of the issue is, because there is this idea that if you go to university to read science, that you are going to become a scientist. Whereas we need scientists in all walks of life; how many MPs are scientists? A handful.

**JB:** Part of the problem in terms of science teaching in schools, is that those scientists have not been going into universities or schools, they have been going into industry and the city. So I absolutely agree with you, we have to get a better balance in terms of different disciplines.

**DE:** We are thinking about the shape of the system as we move forward, and the way in which Government may wish to re-engineer that. If you leave the system just to demand, as we've seen, the number of scientists coming into higher education relatively diminishes. So there is a profound policy question: **if you just run a demand-led system, who shapes that demand? And on what kind of knowledge do they determine choices?**

**MW:** It's the experience they got of science at school when they were 12 and 13 that determines their choices.

**DE: Looking forward over the next decade do we think the nature of the student experience is going to change substantially? Will the university in 2020 look much the same as it does now?**

**JB:** A number of surveys indicate a shift in reasons why students go to universities; 70% are there because they think it will enable them to get a better job. Social life is shifting away from the campus. They are in the university to study and to improve their prospects. We have to make sure that they can do the same things that they can do in Starbucks; they can switch on their machines and have coffee at the same time.

**MW:** Access and knowledge have been transformed: you can read almost anything you want over the internet. At the Wellcome Trust we are making sure that the results of research we fund is available, open to anyone, anywhere in the world.

**DE:** So in the next decade, students will:

- become more demanding, particularly as they bear a greater proportion of the cost of their higher education
- become more selective in the way they engage
- have higher expectations around the quality and the flexibility of their learning experience.

The best examples of what the university of 2020 will look like are universities in 2008 which are thinking for the future.

Over the past decade we have seen an unprecedented increased investment in the research and science base. That's from public funds, but it's also come from organisations such as yours Mark which has been able to drive research investment at a near-unprecedented level. There has been a collective recognition of the importance of research, and a recognition that high quality research requires substantial funding. **Do you think that the research base has and will deliver on that investment?**

**MW:** It certainly has delivered. But it's going to have to look carefully how it's going to continue to deliver and whether existing models are right for the future. … science in universities is changing. We are seeing research requiring collaborations between geneticists on a scale never done before … and that places new demands on how science is organised. The opportunity is terrific, but the status quo is not going to deliver the science of the future.

**JB:** We could also argue for more collaboration between institutions, rather than internal reorganisation. Should we be thinking along the same lines as Scotland, where scientists are working across a number of universities?

**MW:** … universities are going to have to work together in a very fluid way. And one can't stereotypically impose solutions.

**ES:** We have major issues to solve as a civilisation with respect to the planet. We need the best brains focused on that. And real insights often come from cross-disciplinary research, with the real deep experts coming together to look at what comes when you combust two disciplines.

**JB:** The more mobility between universities we can encourage the better. And it's something that we have been resistant to here in the UK.

**MW:** Industry is increasingly outsourcing its primary discovery research to academia. And that's a huge opportunity, but there is a threat because these companies are global and will go where the best research is in the world. The other area that we should mention is this whole question of translation.

**DE: Are we saying that that universities should discover, translate and exploit? Or is there rather a complicated interface between universities and the research base, those that are going to invest in the exploitation of ideas and the subsequent transmission?**

**MW:** In the first place the university has got to recognise that turning something discovered in a laboratory into a product is an important thing to do. But will the university have the complete skill set to do it? Of course not, that's then about the relationships between university and industry.

**JB:** They need to say to the Secretary of State that this is absolutely the wrong moment to have a 'little England' mentality about higher education, that you need in fact to facilitate global movement.

**DE:** We seem to be saying that research is part of something which is globally competitive, but England is competitive, and can remain competitive providing we sustain current levels of investment. That we improve the way in which institutions manage research and the way research is funded? And we continue to try and remove the impediments in the system to exploitation, knowledge transfer and so forth.

When we started this publication we were operating in much more benign times. Few predicted the extent of the economic slowdown. For policy makers and leaders, heads of institutions and funders, we are in the foothills of understanding what the global downturn is going to mean. **Are we going to have to rethink our fundamental assumptions about the funding and the position of higher education?**

**ES:** This is a global economic recession, it's not the end of the planet. Don't get alarmed by it, but take action.

**JB:** I absolutely agree, many of us have major capital programmes in progress. It's very important that we continue with them. Also there can't be a better moment for saying to employers, '…it's a moment to invest and to make sure you have the best workforce that you possibly can.'

**DE:** The real challenge is to institutions to take seriously the rhetoric of autonomy, to recognise that [the recession] gives them real opportunities. Almost certainly what we will see is some institutions who put themselves in a position to thrive when the recovery comes. And others that find themselves quite challenged.

A key issue and a message which has been least well received, is to say to universities: 'Do what you are good at, or do what you can become good at.'

So we have a clear message for higher education in the recession, that there are opportunities for the brave to reposition themselves, but for the complacent it will be a time of peril.

**What do you think are going to be the major trends in the next decade which will reshape higher education in England?**

**MW:** Countries such as China, India and Brazil will provide very significant competition. And the historical model of students coming to the UK (and possibly also the United States) will be challenged.

**JB:** Added to that, nobody believes that online and distance learning is a cheap option, but nevertheless it is a viable option to extending higher education.

**MW:** Other important trends are to do with global threats. … universities need to look to whether they have a more philanthropic role with respect to the poorest countries of the world. There is an increased interest amongst the students in what is going on in the developing world.

**DE:** There is a lot of innovation in the US system, there is public and private provision. But then look at what the students who are prepared to invest most in their higher education seek to buy. They buy something quite traditional: higher education delivered in a particular location, with a lot of personal tuition and access to the best teachers and the best scholars. Now if American models are the future, then the future looks as if it's about differential access to very high quality higher education. And to that to some extent runs counter to many of the trends in the UK over the last generation. It seems to me there are two responses to that. One is to say that those who are prepared to invest most will always be able to buy the premium product and we shouldn't worry too much about that. The other is to say we need to remake and to reshape higher education to drive a reasonable degree of equity into higher education provision.

**JB:** There is a much more flexible view of higher education. Yes okay US retention rates are not anywhere near ours, but their participation rates are much higher. The GDP invested is similarly higher. There are interesting things to learn from American higher education, but for me they would be about access, rather than about exclusivity.

One of the things that we can stop doing is denigrating the local. Students choose to stay at home for a variety of reasons. So we need to say that the students who choose to study down the road are making as interesting and valid and empowering a choice as those who move away and go to an institution for other reasons.

**MW:** We need to be looking around the world at different models all the time, recognising that the social context may be different but also recognising that we shouldn't repeat the failed experiments of others and should be able to build on the successful experiments in other parts of the world.

Participants in the discussion were, Professor Janet Beer, Vice-Chancellor of Oxford Brookes University, Ed Smith, a former global partner in PWC and a board member of HEFCE, and Sir Mark Walport, Director of the Wellcome Trust. The discussion was chaired by Professor David Eastwood, Chief Executive of the Higher Education Funding Council for England.

A transcription of the complete discussion and video highlights are on the HEFCE web-site.

# Acknowledgements

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## Author

John O'Leary, freelance writer

## External advisory board

Professor Janet Beer, Vice-Chancellor, Oxford Brookes University

Professor Bob Boucher, former Vice-Chancellor, University of Sheffield

Dr Tim Bradshaw, Senior Policy Adviser, CBI

Dr Tony Bruce, Director of Policy Development, Universities UK

Professor David Eastwood, Chief Executive, HEFCE

Maggie Galliers, Principal, Leicester College

Ian Rowley, Director of Communications, University of Warwick

Professor Peter Scott, Vice-Chancellor, Kingston University

Sir David Watson, Professor of HE Management, Institute of Education

Professor Paul Wellings, Vice-Chancellor, Lancaster University

## Commentators

Professor Janet Beer, Vice-Chancellor, Oxford Brookes University

Sir Andrew Cubie, former Chair, Committee of University Chairs

Professor Dame Nancy Rothwell, Vice President for Research, University of Manchester

Dame Marjorie Scardino, Chief Executive, Pearson

Ed Smith, HEFCE Board member, former senior partner at PricewaterhouseCoopers

Wes Streeting, President, National Union of Students

Sir Mark Walport, Director, Wellcome Trust

Sir David Watson, Professor of Higher Education Management, Institute of Education

# Glossary

| | |
|---|---|
| CBI | Confederation of British Industry |
| CUC | Committee of University Chairs |
| DIUS | Department for Innovation, Universities and Skills |
| GDP | Gross domestic product |
| HEFCE | Higher Education Funding Council for England |
| HEI | Higher education institution – a university or higher education college |
| HEIF | Higher Education Innovation Fund |
| HEPI | Higher Education Policy Institute |
| NSS | National Student Survey |
| NUS | National Union of Students |
| OECD | Organisation for Economic Co-operation and Development |
| RAE | Research Assessment Exercise |
| SDF | Strategic Development Fund |
| STEM | Science, technology, engineering and mathematics |
| THE | Times Higher Education |
| TRAC | Transparent Approach to Costing |
| UUK | Universities UK |

Higher Education Funding Council for England
Northavon House
Coldharbour Lane
Bristol
BS16 1QD

T 0117 931 7317
F 0117 931 7203
W www.hefce.ac.uk

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