

Report: HUBS Winter Meeting 2014

Higher Education 2015 and beyond: Funding, Opportunities & Challenges

12 November 2014

10:00 - 16:00

Charles Darwin House, London

Organised by Dr Chris Baldwin (Newcastle University) and Sarah Cox (Society of Biology)

10:00-10:30	Registration and Refreshments
10:30-12:30	MORNING SESSION
10:30-11:10	Professor Julia Buckingham – Society of Biology Council and Vice Chancellor at Brunel University London
	<i>‘Society of Biology perspective and the perspective of higher education institutions’</i>
10:30-11:00	Talk
11:00-11:10	Questions
11:15-11:55	Special Guest Professor Ian Gibson – former MP, former member of Select Committee on Innovation, Universities and Skills and former Chair of Science and Technology Select Committee
	<i>‘Future political landscape for higher education’</i>
11:15-11:35	Talk
11:35-11:55	Questions
12:00-12:30	Claire Boothman – President of Newcastle University Student Union and recent Graduate in Biochemistry
	<i>‘Higher education support now and in the future for students and career prospects for bioscience students’</i>
12:00-12:20	Talk
12:20-12:30	Questions

A Special Interest Group of the Society of Biology, Charles Darwin House, 12 Roger Street, London, WC1N 2JU
Tel: +44 (0)20 7685 2550 hubs@societyofbiology.org www.societyofbiology.org/hubs

12:30–13:45	Networking Lunch
13:45-15:30	AFTERNOON SESSION
13:45-14:15	David Sweeney – Director of Research, Education and Knowledge Exchange, Higher Education Funding Council for England (HEFCE) <i>‘Perspective of HEFCE addressing funding in the future’</i>
13:45-14:05	Talk
14:05-14:15	Questions
14:20-14:50	Professor Ian Haines – Executive Secretary, UK Deans of Science and a board member of Directors of the Campaign for Science and Engineering <i>‘Perspective of UK Deans of Science and Campaign for Science and Engineering’</i>
14:20-14:40	Talk
14:40-14:50	Questions
14:55-15:25	Nick Hillman – Director, Higher Education Policy Institute (HEPI), former chief of staff and special advisor for department of Business Innovation and Skills <i>‘Perspective of HEPI, drawing on previous experience as chief of staff, for the Minister for State for Universities and Science, and special advisor for department of Business Innovation and Skills’</i>
14:55-15:15	Talk
15:15-15:25	Questions
15:30–16:00	Refreshments

Professor Julia Buckingham

Society of Biology Council and Vice Chancellor at Brunel University London

‘Society of Biology perspective and the perspective of higher education institutions’

Professor Buckingham introduced the day and gave an excellent overview of the issues facing higher education institutions from the perspective of a Vice Chancellor as well as the Society of Biology.

1. The Past 5 Years in Higher Education

The recession brought major cuts in public spending but universities fared reasonably well. The critical role of Science Technology Engineering and Mathematics (STEM) to economic recovery and development was recognised and, hence, science budget was protected, although not against inflation. The importance of the biosciences has been emphasised by the establishment of the Crick and the recent appointment of a minister for Life Sciences.

Research

- ❖ The funding landscape has changed with greater emphasis on larger interdisciplinary grants and increasing difficulties for early career scientists to establish themselves as independent researchers. University research continues to be driven by the REF, with growing emphasis on impact and on partnership with business and the not-for-profit sector
- ❖ Scientists have been encouraged to engage more with the public; this has led to science having a higher profile in the media etc.
- ❖ There has been support for open access publication, data sharing and open innovation
- ❖ The pharmaceutical industry has shrunk in the UK but biotech has grown.
- ❖ The need for bioscientists to have expertise in mathematics and computer sciences has come to the forefront with the growth of work in e.g. systems biology, synthetic biology and big data analyses

Education

- ❖ Implementation of the £9000 fees has brought the student experience, the quality of teaching and learning, and employability of graduates to the forefront in universities, as also has the NSS
- ❖ The removal of the student number cap and concomitant reduction in the numbers of eligible UK students due demographic changes and increased numbers choosing to study in mainland Europe and the USA has led increased competition between universities for well qualified students. At the same time, changes in visa regulations have put pressure on the overseas student market and our ability to compete with Australia and the USA as the choice destination for study. The rise of universities South East Asia and China in the international league tables may well put further pressure on the market in the coming years
- ❖ Placements and international experiences are increasingly sought by students as a means of increasing their experience and employability skills
- ❖ There are serious problems with postgraduate funding with very limited opportunities for UK students to access funding. Master’s courses have a

very high proportion of overseas students; if these numbers were to fall, many courses would not be financially sustainable

- ❖ Funding for post graduate research courses has reduced
- ❖ Bioscience at all levels is an expensive discipline to teach; funding for practical classes is stretched
- ❖ Capital funding from HEFCE has been reduced and universities are increasingly expected to fund new buildings through other sources, including increased surpluses. The increased emphasis on the student experience has led many universities to explore how contributions to teaching can be evaluated and better recognised through promotion. An increasing number of universities now offer a 'teaching track'.

2. The Next 5 Years in Higher Education

Significant further cuts in public spending are expected in the comprehensive spending review and there is no guarantee that the science budget will continue to be protected. It is also likely that universities will be expected to demonstrate still further efficiency savings. High cost STEM subjects need protection. It is also likely that universities will be expected to progress their interactions with local businesses to support regional development and the provision of a suitably skilled work force.

Research

- ❖ UK research ranks very highly internationally. STEM subjects, and in particular the biosciences, offer many exciting opportunities for development. Provided that funding can be secured, the UK is very well positioned to deliver
- ❖ The emphasis on impact is likely to remain and increase. It will be important for academics to collaborate with each other and with industry to create effective groups with an international dimension to address major global challenges
- ❖ Capital funding is likely to remain an issue for new buildings, refurbishments and equipment
- ❖ The prospects for talented younger researchers are set to improve following recent very welcome funding announcements from the Wellcome Trust
- ❖ There will be a continued need to ensure that researchers are equipped with skills in mathematics and computing as well as the biosciences and that interdisciplinary work is supported both by funders and universities and that the contributions of all team members are recognised
- ❖ Gender imbalance remains a major problem in the science work force, especially above the post doctoral researcher level. Much work needs to be done to enable equality in career progression and, particularly, to ensure that those returning from career breaks and juggling research with the demands of a young family are able to sustain and develop their research portfolios. There is also a need ensure that academics develop their leadership and management skills to facilitate progression into senior roles

Education

- ❖ The long-term funding arrangements for undergraduate tuition fees are likely to be reviewed; while the RAB charge is a problem, so too is the failure to link the current fee to inflation, particularly for expensive courses such as the

biosciences where practical teaching requires significant human resource as well as expensive laboratories, equipment and reagents

- ❖ Competition for both home and overseas students is likely to increase significantly
- ❖ It is also likely that there will be changes to the regulatory framework
- ❖ Universities will need to do more to widen participation and increase social mobility
- ❖ With higher fees, students and parents will have higher expectations of universities of the employment and careers prospects a university education will offer. Coaching and mentoring for interviews, skills training, placements and internships will be expected as part of the package
- ❖ Students are likely to expect a more personalised approach to learning and feedback, with less didactic teaching and greater emphasis on small group work, cutting edge IT and blended learning together with state-of-the-art facilities for teaching and learning and social and residential activities
- ❖ Transnational education is likely to grow as more students seek to broaden their university experience by studying in two or more countries and universities develop their business models to reflect the global nature of both research and education

Discussion

Funding is an issue within both research and education.

It is difficult for mid-career researchers to gain grants, funding and independence as new researchers.

Data shows that post graduate taught programmes are of value to the economy and to the individual. While a very small number of master's programmes are funded by research councils and medical charities, the vast majority are not meaning that students who already have a significant debt on graduation are required to raise further funds to cover the costs (fees and subsistence) of master's level education.

Given that many universities require a master's degree for entry onto a PhD programme, the lack of master's funding is likely to impact on the pipeline of PhD students.

While the depth of the UK's UK 1 year Masters programmes is not questioned, the breadth of material covered in that period often is, particularly in Europe and also in the Far East where a two year programme is considered the norm.

Fundraising in universities is often focused on research rather than teaching and learning facilities as there is an expectation that universities should provide the latter.

Professor Ian Gibson

Former MP, former member of Select Committee on Innovation, Universities and Skills and former Chair of Science and Technology Select Committee

'Future political landscape for higher education'

Professor Gibson's route into politics was unusual, coming directly from academic research. He discussed a range of interesting topics including:

1. Lobbying Government

Professor Gibson discussed how politics and science talk to each other and noted the importance of providing evidence to select committees to promote scientific rigour in legislation. His work on wide-ranging issues has included increasing funds for the future of cancer research, improving open access (allowing the whole nation access to research), increasing PhD studentships and reducing short-term contracts. In particular, his work on the Human Fertilisation and Embryology Act 1990 involved seeking evidence from a breadth of sources including social scientists to provide evidence for children not needing a father for full development and well-being. Recent examples of political lobbying that has gained wide media attention include badger culling and banning neonicotinoids that are linked to honey bee decline. Professor Gibson suggests that the stance the community should take is that "science funding needs to be doubled."

2. Students and Tuition Fees

Professor Gibson was opposed to top-up fees and the campaign lost by just 5 votes in 2004. The USA has high fees however at certain universities/ colleges such as MIT 80% of students don't pay fees and have scholarships instead. He applauded the American education system throughout his talk. He also reflected on how influential and tenacious students can be, especially now that they are paying higher tuition costs for their education. He referred to the recent protests in Hong Kong which have attracted the media spotlight worldwide and expressed pride in students standing up for their beliefs and being involved in decision making. There is also fear that 75% of students may never pay back their fees.

3. Function of Universities

The modern purpose of universities was questioned where universities are not only a place of academia but are important in the personal growth and development of young people. This includes aspects of socialising, widening cultural awareness and becoming independent. Also queried was the effectiveness of league tables and how they are put together. Do they have a positive effect on universities or do they add unnecessary pressures that negatively affect teaching? Schools now have more admin staff than teachers – is this right? There is also need to re-examine grading systems where just 1% can be the difference between a First and a 2:1.

Universities, researchers and academics need to be ready to respond to consultations, governmental decisions and press releases relating to the future of higher education institutions. Professor Gibson finished on the note that politics is unpredictable apart from fees, which will no doubt continue to rise.

Discussion

Professor Hilary MacQueen asked how HUBS, to whom she is chair, can better feed into politics. Professor Gibson said it was key to engage with what is being discussed in

Parliament and to work with select committees, providing them with advice from a breadth of evidence bases.

Claire Boothman

President of Newcastle University Student Union and recent Graduate in Biochemistry

'Higher education support now and in the future for students and career prospects for bioscience students'

Ms Boothman started her talk explaining the demographics of her university, which has a high proportion of affluent students from the south, with public school backgrounds. The sharp increase in fees has led to students expecting more from their university.

Three main priorities were highlighted:

1. Financial support

- ❖ The majority of queries come from pre-entry students who don't understand how benefits and loans work
- ❖ There is a greater reliance on hardship funds and food banks
- ❖ Students receive a £3500 maintenance loan but £4000 is spent on rent. This means students enter their overdrafts buying essentials such as food and paying bills without accounting for social activities. A mechanism is needed to help students manage their money and guide them through overdraft use
- ❖ Some students use library facilities as they can't afford to turn heating on at home

2. Academic support

- ❖ Recap has been a great facility to revisit lectures, particularly for students who may feel anxiety going to lectures with other students
- ❖ Students want better access to their lecturers, with more 1 on 1 feedback
- ❖ Knowing there is support available is sometimes support enough
- ❖ Library space and computers are in high demand, more so than social facilities such as student union bars, which have reduced in number

3. Counselling access

- ❖ According to a NUS survey, 20% of students consider themselves as having a mental illness and 18% have suicidal thoughts
- ❖ The counselling service at Newcastle University is currently overwhelmed
- ❖ As student population increases, so do waiting times

Discussion

Ms Boothman said statistically, you have to apply to 28 graduate programmes to be accepted on one. There is a vicious cycle of needing experience to get a job but needing a job to get experience, therefore more investment into placements is needed. [Think tank findings](#) suggest students pay their fees back to the universities, as opposed to student loans companies. This may encourage universities to invest more in career assistance in order to recoup their fees but draw-backs included potential underinvestment in the

humanities and arts as they are less profitable, leading to a loss of diversity. Universities may also start accepting students who do not need to take out loans, narrowing participation further. Finally students are only offered jobs at 2:1 or above – there is devaluation of 2:2 and below degrees that needs to be addressed.

David Sweeney

Director of Research, Education and Knowledge Exchange, Higher Education Funding Council for England ([HEFCE](#))

'Perspective of HEFCE addressing funding in the future'

Mr Sweeney discussed important upcoming matters such as Research Excellence Framework (REF) results, next month's Science and Innovation Strategy (SIS), the upcoming Capital Spend announcement, the Autumn Statement (including PG funding) and the spending review from new government. Higher education will be part of the solution and central to the government plan for growth of the economy.

1. SIS Objectives

Objectives of SIS include securing economic growth, creating high quality jobs borne out of REF results, universities to be evidenced as efficient, increased productivity of the science system, excellence driven competition, and a desire to build overseas contacts to enhance academic links. The employers view on skills also needs to be addressed and accreditation of courses and employer involvement in their development is important to combat skills shortages. We must be clear to government that we are committed to the agenda.

2. UK Research

Volume of research has increased within the UK and highly cited publications increased. Research income has also been increasing with Life Sciences being particularly strong. The UK has an enviable historical legacy and reputation, world-class and highly innovative sectors (including pharmaceutical, aerospace and automotive) and vibrant new sectors like digital design.

3. Research Excellence Framework ([REF](#))

Research impact is the demonstrable contribution research makes to the economy, society, culture, national security, health, the environment and general quality of life, beyond contributions to academia. This must be identified and rewarded by making high impact research explicit to Government and wider society. REF has galvanised universities to focus on long-term contribution of research to society. A panel of academics and industries has been used and demonstrated an ability to discriminate between case studies. Future analyses of the case studies will inform us about how impact is crystallized from underpinning research and support a discussion about what the priorities and areas of strengths are.

Discussion

The costs and benefits of a PGT loan scheme were being examined, which potentially the Society of Biology could work on. The topic of multidisciplinary work often not being recognised was raised, questioning whether panels recognise excellent work of this type. Future investment must be justified to create an environment that grows our brightest people and allows the excellence of those in special circumstances to be recognised. Collaboration with local enterprise partnerships (LEPs) and investigating other opportunities in the local community can be useful to increase positive impacts of universities.

Professor Ian Haines

Executive Secretary, UK Deans of Science and member of Board of Directors of the Campaign for Science and Engineering

'Perspective of UK Deans of Science and Campaign for Science and Engineering'

Professor Haines started with an overview of **UK Deans of Science (UKDS)**. Its remit includes promoting UK science and scientists within Higher Education Institutions and beyond. UKDS interact with government departments, funding and research councils, learned societies and industrial organisations to raise public awareness of the importance of science & science education and has given oral evidence at a number of parliamentary inquiries. It also organises meetings of members to discuss issues and share experiences.

1. High level issues

- ❖ Debt will be a huge issue for the next Government – on 7 November UK public sector debit was approx. £1,344,000,000,000 and increasing by over £4000 per second
- ❖ The case for science funding will need to be argued before and after the General Election
- ❖ Universities are being pressed to be more efficient which can have negative effects
- ❖ Autumn statement and a new science and innovation strategy are due on 3 December
- ❖ There are increasing demands for financial leverage and collaborative working with business. For example, the matching funding required for £200M teaching capital funding 2015-16; the triennial review of the Research Councils on support for research: “should include....greater joint working with TSB and leverage of private sector funding”

2. Threats

- ❖ The Coalition’s anti-immigration rhetoric continues to discourage bright international students from accessing education opportunities in the UK
- ❖ Medics and engineers being prioritised for funding as government can be persuaded that they offer, respectively, major changes in the health of the nation and the rapid development of tangible and profitable products
- ❖ Review of Research Councils could lead to change in balance of resourcing between their three Royal Charter objectives
- ❖ Politicians’ promises and short-term political decisions to allocating research funding (e.g. the investment in graphene)
- ❖ Potential for 2015 graduates, with major debt, being even more averse to continuing into pgt/pgt programmes
- ❖ For Scotland creation of a separate Scottish Research Council might lead to less research funding as Scottish universities currently receive more from the Research Councils than would be expected from the size of its population. (UKDS has pointed this out in its submission to the Smith Commission)

3. Opportunities

- ❖ The life sciences are seen as a cornerstone of the UK’s future, exemplified by the appointment of a Minister for Life Sciences

- ❖ Biological Sciences are the current cutting edge of the sciences, supported by the formation of the Society of Biology, Francis Crick Institute and Wellcome Trust
- ❖ Biology relates more to being human and the environment than engineering (e.g. much of engineering can simply focus on time-saving gadgetry!)
- ❖ HEFC's commitment to support the upturn in recruitment to science courses and "the dual support mechanism and vital flexibility which quality research funding gives universities to implement their own research agendas"
- ❖ The Catapults, especially if the Hauser Report proposals for 30 Catapults by 2030 are implemented

4. Campaign for Science and Engineering (**CaSE**) Policies as exemplified by its three recent Policy Briefings

Education and Skills

- ❖ Support education professionals to adapt to the new science curriculum and stabilise the system
- ❖ Science subject specialists in all primary schools
- ❖ Sufficient HE funding for high quality science and engineering education
- ❖ Compulsory unconscious bias training for all involved in Research Council grant awarding
- ❖ Immigration policies that ensure the UK can attract the world's best in STEM

Investment

- ❖ Need for a coherent long term plan for science and engineering linked to an upward trajectory in government investment in STEM

Government

- ❖ Minister for Universities, Science and Cities to continue to attend Cabinet
- ❖ All government departments to have a Chief Scientific Adviser
- ❖ Government should publish all responses it receives to its consultations and all research performed or commissioned by government departments should be freely, publicly available

Discussion

It was agreed that we need to remain aware, keep making the case for science, form partnerships to make our voice stronger, invite MPs and House of Lords members to our workplaces to showcase our successes and never be complacent.

Nick Hillman

Director, Higher Education Policy Institute (HEPI), former chief of staff and special advisor for department of Business Innovation and Skills

'Perspective of HEPI, drawing on previous experience as chief of staff, for the Minister for State for Universities and Science, and special advisor for department of Business Innovation and Skills'

Mr Hillman began with explaining that HEPI is an independent charity that encourages debate surrounding HE policy and gets evidence into the hands of politicians. The 31st March will be the annual conference. He discussed three main topics:

1. Impacts of Reform

Positive

- ❖ Universities have been relatively well funded during the austerity. The £9000 undergraduate tuition fees are accompanied by HEFCE top-up funding for lab-based subjects. In contrast, Australia have system of fee caps by discipline, which makes Biosciences one of the most expensive degrees to take
- ❖ The student number control has been removed and students now have more choice due to a wider variety of universities and courses
- ❖ Consumer power of students has been increased
- ❖ Quality of universities in league tables is based on research that is rated highly

Negative

- ❖ Benefits of international students and academics are still not seen in policy. MPs are focussed on curbing immigration with many not having universities in their constituency so don't understand importance of international students
- ❖ Fiscal forecasting – 55p/£1 return of student loan to government, not 67p/£1
- ❖ People with view that the undergraduate loan system is not fit for purpose (where loans are not always paid back) want to extend it to postgraduate education
- ❖ There is a lack of legislation

2. Future of HE

- ❖ 2015 spending review will be similar to 2010
- ❖ Current promises to cut the deficit are only expressing very small savings to get it down – 30% cut in budget to unprotected departments
- ❖ Awareness needs to be continuously raised that funding for HE teaching and research is not assured
- ❖ Fees are likely to stay, no country in the world has graduate tax
- ❖ Suggestions that Labour may cap fees at £6000

3. Science Lobbying

- ❖ Lobbying does not always equate to funding
- ❖ Being concise is important (David Willetts categorised 150 issues into 13 themes, which was easier to digest by Ministers)

Discussion

The issue of student awareness surrounding university costs was raised. They need to be made aware that tuition fees don't equal £X per lecture - they also support infrastructure.

Delegate List

Name	Organisation
Debbie Baker	UBMA
Dr Christopher Baldwin MSB	Newcastle University
Dr Celia Bell FSB	Middlesex University
Professor Annie Bligh FSB	University of Westminster
Claire Boothman	Newcastle University Student Union
Professor Julia Buckingham FSB	Society of Biology Council
Rachel Burnett	Biochemical Society
Sarah Cox MSB	Society of Biology
Dr Mark Downs FSB	Society of Biology
Professor David Evans	Oxford Brookes University
Dr Maurice Gallagher	University of Edinburgh
Professor Ian Gibson FSB	Society of Biology Guest
Dr Kate Graeme-Cook	University of Hertfordshire
Professor Jonathan Green MSB	University of Birmingham
Professor Ian Haines	UK Deans of Science
Dr Neville Huntley Hall FSB	Middlesex University
Professor Peter Heathcote FSB	Queen Mary University of London
Professor Janey Henderson FSB	Teesside University
Nick Hillman	Higher Education Policy Institute
Professor Lindy Holden-Dye FSB	University of Southampton
Dr Sandra Helen Kirk FSB	Nottingham Trent University
Rachel Lambert-Forsyth MSB	Society of Biology
Dr Susan Laird	Sheffield Hallam University
Professor Jane Lewis FSB	University of Westminster
Professor Paul Lynch	University of Derby
Professor Hilary MacQueen FSB	The Open University
Professor Patrick 'Gerry' McKenna FSB	University of Ulster
Craig Nicholson	Press - Research Fortnight
Dr Angela Priestman	Staffordshire University
Professor Graeme Reid FSB	University of Edinburgh
Daniel Rowson AMSB	Society of Biology
Alastair Stewart	Biochemical Society
David Sweeney	Higher Education Funding Council
Dr Alan Michael Seddon MSB	Kingston University
Professor Judith Smith	University of Salford
Dr Peter Watkins MSB	Cardiff Metropolitan University