

**THE UNIVERSITY OF THE FUTURE
AN ENTREPRENEURIAL STAKEHOLDER LEARNING ORGANISATION?**

Allan A Gibb

Professor Emeritus, University of Durham

enterprise@allangibb.com

www.allangibb.com

and

Gay Haskins

Associate Fellow, Saïd Business School, University of Oxford

Gay.Haskins@sbs.ox.ac.uk

**A version of this paper appears in
Handbook of Research in Entrepreneurial Education
Volume 4 –Entrepreneurial University Handbook
Edited by Fayolle, A. and Redford, D,T.**

2013

Published By Edward Elgar

THE UNIVERSITY OF THE FUTURE

AN ENTREPRENEURIAL STAKEHOLDER LEARNING ORGANISATION?

INTRODUCTION

This paper explores the present and future pressures shaping the entrepreneurial nature of universities and the responses to these pressures. It eschews the conventional association of entrepreneurship with business and commercialisation of university intellectual property¹. It also goes beyond the concept of the Triple Helix² (Etzkowitz 2008) to a wider stakeholder model, which it explores as 'entrepreneurial'. It is centrally concerned with how universities, using a broader entrepreneurial paradigm, can negotiate their freedom and autonomy in the light of the creation of imposed 'market' conditions and mounting pressure from a wide range of stakeholders. Its central focus is upon the dynamics of the Higher Education (HE) environment in the UK, with particular regard to the situation in England³. It seeks to use this context to draw out lessons for the way in which the university paradigm, more generally, is changing throughout the world (Brennan and Sha 2011) : and it concludes with a suggested framework which might be used in practice to explore individual university development strategies for the future

The paper builds upon three earlier contributions which underpinned axioms and contexts that are important to understanding of this paper. The first (Gibb 2005) sought to clarify the concepts of enterprise and entrepreneurship in an HE context and demonstrate their link to the creation of innovations⁴ of all kinds true to the 'idea' nature and tradition of universities as sources of imaginative use of knowledge (Newman 2007, Whitehead 1927). The central aim of the paper was to begin to move the debate on the 'entrepreneurial' future of universities away from the narrow focus upon commercial exploitation of knowledge and the associated traditional business school corporate approach to entrepreneurship (Gibb 2002). This view still seems to be responsible for fears that fundamental academic freedoms may be at risk from entrepreneurial and corporate business exposure (Graham 2002, Evans 2002, Evans 2004, Collini 2012). The definitions used are embodied in this paper and the issue of freedom will be explored further below.

The second paper (Gibb, Haskins and Robertson 2009) set out more broadly, by way of a substantial review of the literature, the nature of the challenges to leadership of universities arising from changes in the global environment and the implications for the entrepreneurial design of the HE sector. The focus was upon the impact of a growing complex and uncertain environment on key areas of university activity and the leadership challenges involved. The paper aimed to provide a strong conceptual base for the development and delivery of the Entrepreneurial University Leaders Programme (EULP⁵). The

¹ For an academic defence of this stance see Gibb (2002).

² A model of government, business and university interaction

³ Wales and Scotland in particular have their own policy control over university finance and development and have not chosen to pursue the student led market approach to funding as in England.

⁴ Embracing innovations for example, in: programme design, development, curriculum and pedagogy, stakeholder relationship development and partnerships (local, regional, national and international); research design and development; research impact; funding and resource acquisition; trans-disciplinary approaches to research and teaching; Interdepartmental and cross boundary collaborations in general; internationalisation; and organisation development.

⁵ www.eulp.co.uk. Entrepreneurial University Leaders Programme -A pioneering executive development programme for senior university leaders, now run annually through the National Centre for Entrepreneurship in Education and Universities UK.

descriptions of the nature of uncertainty and complexity, the concept of knowledge flows (Nowotny, Scott and Gibbons 2003) the Triple Helix model of university (Etzkowitz 2008), business and government interaction and the concept of public value (Moore 1995) are all of major relevance to the arguments below.

The third paper (Gibb 2012) sought to provide a strong basic framework for reviewing the entrepreneurial development capacity of a university by exploration of existing and potential enterprising and entrepreneurial activity in five key areas of: Strategy, Governance, Organisation and Leadership; Knowledge Exchange; Stakeholder Relationship Development and Partnership (local, regional, national and international); Enterprise and Entrepreneurship Education; and Internationalisation. This was in recognition that many universities embrace substantial pockets of personal enterprise and organisational entrepreneurial activity that can be fruitfully conjoined (although many activities may not be formally labelled as entrepreneurial). The paper explores the potential for building synergies between the various activities and describes how and why this might be done. The framework, developed into a review tool, has been used in practice and is embraced by the European Union (EU) as a basis for its recommendations on entrepreneurial university development (Bauer 2012). It provides a basic background to the issues explored below and arguments concerning the entrepreneurial stakeholder model.

The present paper moves a step further than the earlier articles by examining in some detail the 'specifics' of turbulence in the Higher Education (HE) 'task environment'⁶ in the UK and England in particular and the immediate challenges these pose for HE institutions. Many universities are currently reviewing their strategic plans (and the very nature of the conventional strategic planning approach) in response to substantially increased levels of uncertainty and complexity in their environment. That the enterprise and entrepreneurial label is frequently used in mission statements⁷ and plans is a reflection of the fact that it seems to be increasingly recognised that enterprising behaviour and entrepreneurial organisation are both needed and stimulated by turbulence in the environment. The paper describes how universities are addressing the new challenges and examines the wider issues that are emerging in practice relating to the future positioning of the HE sector in society.

Perhaps the most important issue in this respect is that of preserving academic freedom (and the 'idea' of a university) an issue currently the subject of major controversy in the UK⁸. The paper will argue that such freedom needs to be negotiated, as has always been the case, but that this stance is of particular importance in coping with the current imposition of 'market' conditions in the HE sector in England and numerous additional external pressures for change. In exploring this issue, the position of the leader of the university is contrasted with that of the independent entrepreneur seeking to maximise organisational autonomy and personal 'independence' in an often uncertain and complex stakeholder relationship task environment (Covin and Slavin 1991, Namen and SlavIn 1993). Building from this, the paper explores the repositioning of the university as a broad, pluralistic entrepreneurial stakeholder

⁶ The task environment constitutes the institutions and forces with whom the organisation interfaces in pursuit of its activity. It is a concept that has influenced organisation development theory for many years initially explored by the Tavistock Institute. See for example William R. D. (1958), 3 and Lawrence and Lorsch 1986

⁷ See the Enterprise Universities website <http://www.enterprisinguniversities.co.uk/resources/files> for a review of missions

⁸ Leading to the establishment of a Council for the Defence of British Universities by high profile academics and writers.

learning organisation, managing numerous interdependencies, and examines what this might mean for the development of future institutional strategies.

PRESSURES SHAPING THE CURRENT UNIVERSITY TASK ENVIRONMENT

Funding, fees and competition

The major force contributing to recent environmental turbulence in the English HE sector has been the dramatic shift in the way that universities are financed and the creation of market conditions where funding, substantially and directly, follows student choice. The major rationale for the change, whereby direct public funding of the teaching in English universities has been largely replaced by a student loan system, was set out in the UK Government's White Paper of 2011 (UK Department of Business Innovation and Skills). The three key objectives were: savings in public expenditure; the creation of a market demand for better student experience; and the establishment of HE responsibility for social mobility. Universities in England⁹ are now free (within limits) to set their own fees and create associated incentives to influence student choice (with the government still retaining major influence on the direction of student choice via its control of overall student numbers, its capping of fees, and its offer of certain incentives relating to criteria for selection). Traditional methods of public funding of research are largely maintained, as are some programmes to facilitate student engagement and knowledge transfer with industry¹⁰, although these funds are now somewhat constrained, reflecting the crisis in public finance.

The changes are creating a highly competitive environment in England against a backdrop of falls in student university applications. There are particular concerns about falls in postgraduate applications and the dominance of international students in this area (Higher Education Commission 2012). New and improved 'national accountability' metrics on student satisfaction, employability, subsequent job quality, salary and social mobility are becoming very important. Price competition and incentives to student choice are emerging signs of a competitive market place (see below). Competition is being further honed via the encouragement and licensing of private providers, with US companies in particular moving in) and the granting of full degree awarding status to some vocational and former education colleges. The private sector offer leans towards a focus upon professional and vocational degrees but not exclusively so. In contrast, and perhaps a signpost to the future, the UK private New College of the Humanities (NCH), the brainchild of the philosopher Professor Grayling, offers a new model of higher education for the humanities in the UK. NCH students, it is claimed, will have one of the best staff-student ratios in UK higher education and will benefit from a high number of contact hours as well as 'engaging and challenging' weekly one-to-one tutorials¹¹.

Government intervention

The creation of a 'market' in the HE sector, particularly in England, has not overly constrained the level of government intervention. There remains a strong UK drive to position the university sector as an engine of future economic growth (Department of Innovation and Skills op.cit.) via the strengthening of university ties with business. This seems to be a view shared by the European Union (European Commission 2011). The UK government has accepted the findings and recommendations of its

⁹ The funding changes apply only to England with the Scottish and Welsh governments able to make their own HE funding decisions.

¹⁰ See reference to the Higher Education Innovation Fund (HEIF) below

¹¹ New College of the Humanities (NCH) is a private for-profit college in London, England, the creation of which was announced in June 2011 by the philosopher A.C. Grayling, its founder and first master. Disciplines covered are economics, English, history, law and philosophy.

commissioned report by Professor Wilson into the relationship of the HE sector to business (Wilson 2012). The report characterises universities as a key part of the supply chain for economic development with an emphasis upon building networks, applied research, up-skilling of future employees, business collaboration on degree programmes, technology transfer and exchange and skills development of doctoral and post-doctoral research students. There is also substantial emphasis upon developing the enterprising and entrepreneurial skills of staff and students with calls for: the development of innovators who can look beyond their disciplines; the embedding of entrepreneurial learning in all disciplines; internships for all students; and work experience for doctoral students. Particular attention is to be paid to the strengthening of links with Small and Medium Enterprises (SMEs), the engagement of intermediaries in this process and use of volunteering. The report underlines that its recommendations can only be achieved if the university itself is enterprising and entrepreneurial.

Innovation and business

The Wilson recommendations are to be underpinned by the creation of a National Centre for Universities and Business under the auspices of the Council for Industry and Education (CIHE)¹². The Centre will focus upon strengthening the strategic partnership between universities and business, will offer services in this respect and will measure impacts. A major focus will undoubtedly be upon innovation in the light of the CIHEs own findings that UK investment in Research and Development is falling behind key European competitors, particularly with respect of the engagement with SMEs (Hughes and Mina 2012).

The UK government's support for investment in R&D research processes through a Catapult programme¹³ (Technology Strategy Board 2012) and its concern to emulate the work of the German Fraunhofer system (Hauser 2010), highlights the pressure for closer university/business collaboration in pursuit of commercial innovation (NESTA undated, Corporate Economic Consultants 2012). Such pressure is also evidenced in the intention to devote 20 per cent (rising eventually to 25%) weighting to the economic and social impact of research in the new university Research Excellence Framework (REF) which is used to determine allocation of public research funding. The pressure for relevance will also be enhanced by the move toward Open Access in publication following a commissioned report (Finch 2012) which broadly supports this. It is already influencing the terms and conditions for research funding from private foundations¹⁴ and will have major implications for individual university research funding as effectively it transfers much of the costs of publication to the university.

Employability, employment and social mobility

The creation of a 'market' has stimulated the debate upon how the sector will in the future provide more 'value for money' for the student¹⁵. The three key components of the debate are the employability of students, their subsequent progress into employment and the degree to which the sector engineers greater social mobility in society. A distinction is made between employability and employment (Knight and York 2004).

¹² <http://www.hefce.ac.uk/news/newsarchive/2012/name,73447,en.html>

¹³ The Catapult programme is a network of centres publically primed, aimed at bridging the gap between universities and business focussed upon high value manufacturing, cell therapy, offshore renewable energy, satellite applications, connected digital economy, future cities and transport systems.
<http://www.innovateuk.org/deliveringinnovation/catapults.ashx>

¹⁴ See for example Wellcome Trust on Open Access - <http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/wtd002766.htm>

¹⁵ See for example: Shaheen, F. (2011) 'Degrees of Value. How universities benefit society.' Universities UK, Universities Partnership Programme and New Economics Foundation. London

Employability can be seen as creation of ‘...skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy (Pegg et al 2012 p. 4). The challenge is stated to be one of creating a higher degree of learner autonomy and self management capacity through the opportunity for the gaining of tacit knowledge and associated ‘practical intelligence’ (Sternberg et al 2000). This has clear links with the concept of ‘wisdom’ discussed below. The UK Commission for Employment and Skills sees employability as being the capacity for; self management; thinking and solving problems; working together and communicating; and understanding the business/organisation (CES 2009).

Employment relates to the transition to work and job futures of graduates. Universities are being asked: to produce data on subsequent employment of graduates and their salaries; and also to boost up their careers advisory services and embed more of careers’ futures responsibility in academic departments. This links in with the official rhetoric for universities to build better academic degree linkages with business and offer more internships (following the Wilson report recommendations). There is particular concern for part time students who constitute one-third of the UK higher education student population. Applications from mature students, many of whom are part time, have fallen following the changes in financing arrangements.

The enhancement of social mobility, strongly officially endorsed, has a number of key components. Access to top universities is of major concern. The most advantaged of young people in the UK in terms of social background are reportedly 7 times more likely to get into a top university than those at the bottom of the social ladder; and independent private school students are 22 times more likely to achieve this goal (Pearce 2012). Another key area of concern is the relatively low progression of students into vocational education and through vocational apprenticeships into the HE sector compared with certain major European countries (UKCES 2010, Dolphin and Lanning 2011). A challenge to universities in this respect comes from the growth of a programme of Higher Level Apprenticeships supported by government and involving partnerships with companies, enabling progress through apprenticeship to degrees at undergraduate and postgraduate level¹⁶ The UK government is providing special scholarship support for students from disadvantaged backgrounds and is encouraging consideration of shorter two year degrees, while also opening up degree awarding powers to selected vocational colleges.

Overall, there are concerns that the pursuit of the above agenda will move the focus of university activity more towards competence based education and human capital development and away from the broader cultural development of the individual (Grayling, 2012, McGettigan 2012). Linked with this is the fear that student choice of disciplines to study will be increasingly influenced by related employment pathways and that there will be a move towards greater preference for vocational and professional degrees and away, in particular, from humanities.

¹⁶ The UK government’s £25mn Higher Apprenticeship Fund aims to support a progression through vocational training to undergraduate and postgraduate degrees in partnerships with companies. It already covers accounting, professional services, hospitality, management, manufacturing and public relations, and in future will aim more widely at science and technology.

Local and regional partnership development

Much has been written about the attempts over the past decade or so to address the disconnect between the universities and their local and regional environment (Williams et al 2008, Goddard and Vallance 2011). This challenge has several components: that of engagement of the university with its immediate community, culturally, socially and economically; its relationship with the business economy and particularly its role in innovation and knowledge transfer; its contribution to graduate retention in the locality; and more lately its contribution to social innovation and social enterprise. Much of the official support for this activity in England comes from a Higher Education Innovation Fund (HEIF) aimed at supporting 'third mission' activities of universities; this is administered by the publically funded Higher Education Funding Council for England (HEFCE). There are similar financing arrangements in Scotland and Wales. The main thrust is upon knowledge exchange related to research but there is smaller support for local entrepreneurship education, community development initiatives, skills development and use of physical assets. Compared with the total funds flow to universities the sums are small - £601mn is allocated in England for the period 2011-15 – although universities are expected to leverage this amount several times from private, other public and often European sources. Much of the additional public funding has in the past come from regional development agencies but these have been replaced by Local Enterprise Partnerships¹⁷ with smaller budgets available.

The most recent challenges to the UK universities have come for the UK government's 'big society' concept¹⁸, and from the government commissioned report into growth by Lord Heseltine, a former Deputy Prime Minister¹⁹. Both of these support the notion of stronger university local links and in the latter case the development of more joint degree ventures with employers. The growth of social enterprise (Universities UK 2012) has also presented a new challenge to universities in engaging with local communities in areas of research, knowledge transfer, student project engagement and voluntary support experience – the last mentioned being a key recommendation of the Wilson Report.

Enhancing student experience

In the light of the market emphasis placed upon student choice, alongside the Wilson recommendations on engagement with SMEs, there is considerable pressure upon universities to enhance the student experience. A key UK component of this in the past has been a Knowledge Transfer Partnership programme (KTP) of student project placement in organisations (Regeneris Consulting 2010). While the number of KTPs involving SMEs has grown substantially in the UK in recent years there remain two major challenges: first, to bring back more of the learning from the KTP experience into the curriculum of university programmes; and second to build ongoing relationships with those companies that have been engaged in the KTP process, thus ensuring that the concept of ongoing knowledge exchange is truly fulfilled (see below).

Building relationships with SMEs also demands closer university ties with the local community and local development agencies. This falls in line with a pressure for the universities to create stronger partnerships with students and between students and local communities while offering them greater ownership of learning. Universities have, for some time, been encouraged to sponsor and engage with

¹⁷ Thirty-nine LEPs cover the whole of England. LEPs bring local business and civic leaders together with the aim of stimulating vision and leadership to drive sustainable economic growth and create the conditions to increase private sector jobs in their communities.

¹⁸ This has led to a growth of university/local voluntary and 'pro bono' activities across the country. See The Guardian November 9 2010 for a review by Lucy Tobin

¹⁹ Lord Heseltine (2012) 'No Stone Unturned. In Pursuit of Growth' UK Cabinet Office October, London

an enhanced Academy Schools Programme²⁰ and are being asked to play a major role in development of the planned new Baccalaureate²¹. The UK government emphasis upon improving the student experience will demand a whole new range of measures by universities including provision of more detailed information on: course offers; qualifications required for successful students; student feedback/satisfaction indicators on individual courses; as well as employment and salary data as noted above.

Entrepreneurial learning

The Wilson Report's major emphasis upon student entrepreneurial learning has been followed up by the issuing of Guidance for UK Higher Education Providers on Enterprise and Entrepreneurship Education by the UK Quality Assurance Agency for Higher Education (QAA)²². The Guide closely matches the recommendations of Wilson in emphasising the development of personal qualities and skills relating to innovation, the building of self efficacy and personal confidence, action orientation and ownership and control of events (QAA 2012) and the embedding of entrepreneurship pedagogies and curriculum contextually across the whole university.

The challenge to the university in pursuing this agenda has been outlined in an earlier article referred to at the beginning of this paper (Gibb 2012). In summary it embraces a number of key components: clarification of the key personal enterprising attributes to be prioritised in student development; creation of awareness among students and staff of the need for such development; embedding of pedagogical approaches to meet the above and development of capacity within each department to embed them contextually in the curriculum; development of self employment awareness and self efficacy programmes open to all students; delivery of start-up programmes for those students and staff wishing to set up their own business immediately; and creation of opportunities for student internships/projects with SMEs in all departments. Several of the above activities can be delivered by strong student entrepreneurial societies, supported where appropriate by university staff and resource. Partnerships with external agencies and businesses will also be a necessary component.

Utilising new learning technologies

Perhaps the greatest challenge in addressing many of the above objectives is that of the utilisation of new technologies. The global IT revolution has opened up mass markets for learning and has greatly enhanced the potential for flexible 'self directed' learning approaches (JISC 2012). The provision by major US universities of Massive Open Online Courses (MOOCs) is leading the field in this respect (Daniel 2012). Harvard, MIT, Princeton and Berkeley now offer free online lecture programmes by leading professors and some are joining in delivery consortia of which Coursera is the most visible²³. In the UK Edinburgh University has joined in Coursera with 12 other international universities to offer online new courses in the arts, computer science, health, mathematics, history, literature and other disciplines.

The associated 'flipped classroom' model, where lectures are delivered on-line and classroom time is spent in debate and discussion, is attracting substantial attention, particularly in the US, although approaches of this nature have long been used by the Open University in the UK (Institute of Educational

²⁰ A government programme designed to, in theory, to increase the independence of former state schools

²¹ See 'Michael Gove plans Baccalaureate shakeup of A levels'. Guardian October 17 2012

²² The QAA is an independent body that reviews the performance of universities and colleges of higher education. Its audit reports are available online- www.qaa.ac.uk

²³ <https://www.coursera.org>

Technology 2012). They are also a means of attracting mature students particularly when accompanied by flexible credit accumulation and institutional transfer possibilities. This may become of increasing importance in the UK where numbers of full time mature students have fallen with the rise in tuition fees²⁴. They also build upon student competence in use of social media (Twitter, Facebook and You Tube among others) which it is argued is outstripping the competency and awareness of many academic staff (Selwyn 2012).

Programmes of this kind are attracting venture capital as they offer the opportunity for reaching out to many hundreds of thousands of future graduate students. They are also attracting private providers such as Udacity and EdX²⁵. Private provision of university education in general is also opening up the debate on two year, more intensive, degrees where there is already public university experience (Foster et al 2011, Evans 2012). An outstanding issue in wide delivery of online learning is the link between the offer and assessment and accreditation together with an ability to accumulate credits flexibly in moving to qualification²⁶. There are many limitations on this in the present offer.

International market dynamics

In general UK universities are facing increasing international competition and are falling down global rankings²⁷. The substantial growth of the HE offer in Asia is symbolic of this (Marginson 2012b). In particular, the trends in global education delivery through technology have long-term implications for the attraction of foreign students to UK universities. But the substantial international student market for UK HE institutions is also being affected by a number of other factors. Most recently, the impact of stricter immigration controls relating to overseas student study has caused major concern (Universities UK 2012). This is against a backdrop of a growing number of UK students now choosing to study abroad²⁸. The substantial rise in tuition fees following the changes noted above (with annual fees running between £7000 and £9000) makes English institutions highly uncompetitive on price with many European counterparts²⁹. Following the recent changes in funding arrangements, student numbers from abroad are falling³⁰. This is happening against a futures scenario of a weakening of the pull of the English language appeal to study in the UK, with overseas providers now offering a range of taught degrees in English³¹. There is also a questioning in developing countries of the conventions of the 'colonial' university model of knowledge and learning for its own sake: many developing countries struggle to absorb graduates into graduate type employment, often leading to the creation of politicised dissident groups³².

²⁴ See Study in Europe. Compare tuition fees schemes in Europe. <http://www.studyineurope.eu/tuition-fees>

²⁵ www.udacity.com/, <https://www.edx.org/>

²⁶ There are initiatives in the US, funded by the Gates Foundation and supported by the American Council on Education to overcome some of the accreditation problems

²⁷ 'British Universities fall in global rankings' Daily Telegraph October 4 2012

²⁸ www.Cherwell.org 'Investigation: British students flock overseas. Recent statistics show a sharp increase in British applications to American and European universities. Friday 27th April 2012

²⁹ Study in Europe. Compares tuition fees schemes in Europe. <http://www.studyineurope.eu/tuition-fees>

³⁰ See Financial Times July 9 2012

³¹ See for example International University of Japan www.iuj.ac.jp

³² This issue, provoked by the Minister for Higher Education, was debated at the Policy Dialogue Higher Education in Sri Lanka and UK on the theme of the Entrepreneurial University. See Report by Eranda Ginige available from the British Council Sri Lanka British Council June 2008

A global curriculum?

The dependency of the university sector on overseas students and consideration of the issues raised above is moving the focus away from income generated by this activity to debate about the kind of intellectual and academic interchange that trans-cultural opportunities to study at our universities should bring (King and Findlay 2010). Combined with the fact that there is a growing international market place for UK graduate employment, there is increasing pressure for enhancing the curriculum in many disciplines to embrace a wider global context (Welikala 2010). The challenge is seen as one of preparing all students for global citizenship by means of creation of a wider range of programmes that relate more closely to global issues and allow sharing of learning and experience of different cultures (Bourne, McKenzie and Sheil (2006). Such a challenge has major implications for staff recruitment and development.

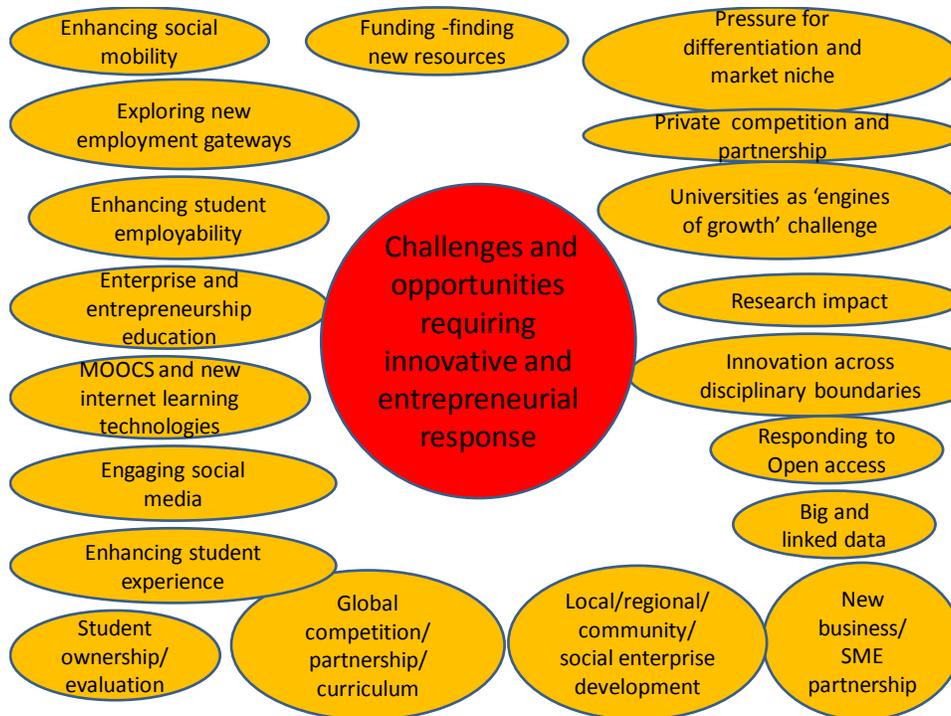
The growth of international student mobility is occurring against a backcloth of the pull of higher levels of international research collaboration and publication. One third of high level journal publications involve international author partnerships (Bone 2011).

Summary

The pressures on universities from the ‘task environment’, summarised above, are numerous and cover all aspects of university activity: discovery, direction of scholarship, teaching and learning, relevance to society, student partnership and community engagement (Exhibit 1).

EXHIBIT 1

PRESSURES IN THE UNIVERSITY ‘TASK ENVIRONMENT’



REVIEWING RESPONSES TO THE ABOVE PRESSURES

Differentiation

Universities in the UK and internationally are pluralistic organisations and vary substantially in terms of their local and regional engagement, overseas initiatives, student recruitment, attitudes to research, development from research, degree of focus upon current real world problems, engagement with business and linkages with the wider stakeholder environment. In Scotland, Wales and Northern Ireland such foci are considerably influenced by the policies of substantially devolved national authorities. Reflecting their origins and traditions, individual universities also have distinctly different modes of governance and indeed cultures. The responses to the pressures outlined above are therefore likely to be highly differentiated. But they are also conditioned, in the UK, by lobbying groups of universities with different agendas relating to the shaping of the sector and particularly competition for resources³³. Many universities are seeking to position themselves in what is described as blue oceans (Kim and Mauborgne 2004) of differentiation in applying knowledge, engagement, partnership, learning and enterprise³⁴ (see also Coiffait 2012). The work of the HEFCE funded 'Leading Transformational Change' partnership programme led by Plymouth and Teesside Universities³⁵, provides evidence through case studies and surveys of this activity.

Influencing student choice

Notwithstanding the above differences, a common overriding response is to find innovative ways of reaching out to students and all those who influence student choice – parents, schools, NGOs, local government, social networks, the media, potential external investors and sponsors, and sources of funding for educational innovations.. Some of the ways in which universities are seeking to influence student choice are shown in Exhibit 2 with a strong focus upon partnership with schools, students³⁶ and further education colleges in the university catchment area³⁷. Examples include the setting up of a specific study centre in a school for a particular subject area, the creation of a 'learning passport' system by which students monitor their development in a particular subject area with assistance from the university and the establishment of university staff 'ambassador' links with schools. The messages carried by these means are competitive and differentiated, with different emphases upon physical facilities, employability, employment record, research and teaching excellence and specialisation, pedagogy, financial incentives and social life.

³³ There are four distinct university mission/pressure groups in the UK: two brand themselves as research-intensive institutions (the Russell Group and the 1994 Group); one represents universities that are largely teaching focused with an emphasis on social inclusion (Million +); and one represents universities that are research-led and business-engaged (Alliance). Not all higher education institutions within the UK belong to a mission group.

³⁴ See <http://www.enterprisinguniversities.co.uk/resources/files>

³⁵ Enterprise Universities: 'Leading, Governing and Managing Enterprising Universities' <http://www.hefce.ac.uk/whatwedo/lgm/landg/lgmf/leadingtransformationalchange/>

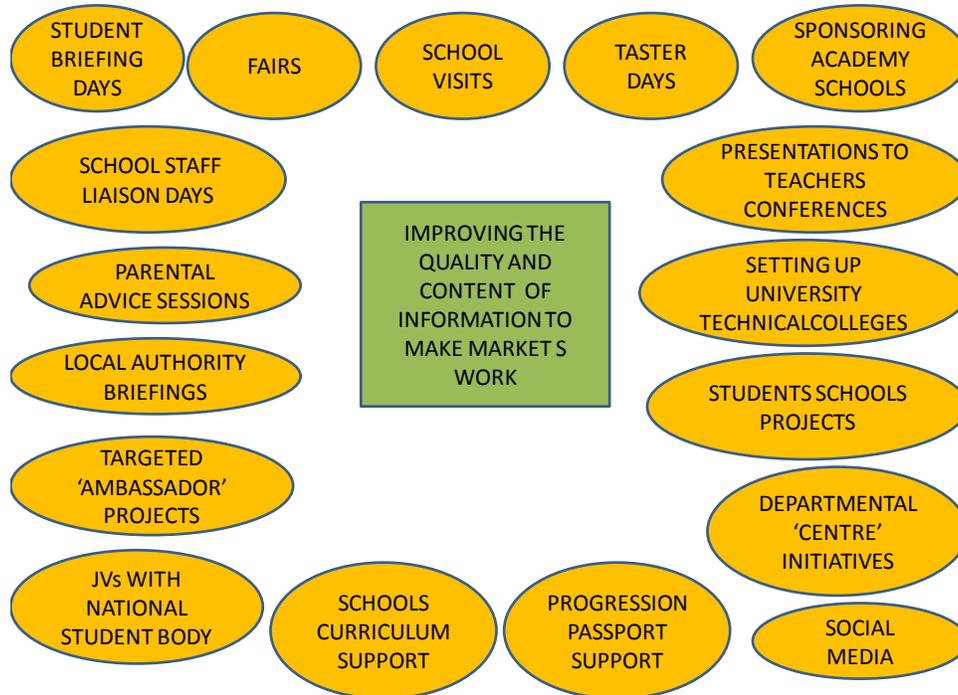
³⁶ The Newcastle University PARTNERS Programme links the university with schools across the north of England offering a wide range of activities for students and parents as well as guarantees for places at the university linked with various pre university courses and activities.

<http://www.ncl.ac.uk/partners/about/events/studentfinance/therealdeal.htm>

³⁷ The University of Derby has an extensive national and international partnership programme in particular providing strong links between further and higher education. <http://www.derby.ac.uk/lei/uk-partnerships/be-a-partner>.

EXHIBIT 2

THE FOCUS OF RELATIONSHIP BUILDING TO INFLUENCE STUDENT CHOICE



Focus upon employability and job quality

A key competitive focus is upon student employability and subsequent job quality and the enhancement of student experience to these ends. The issue of employability has long been of concern to UK universities (Sternberg et al 2000, Knight and Yorke 2004) but has become a major competition issue not only because of market changes but also because of the global economic (and associated employment) crisis. Many UK universities have responded imaginatively to this challenge as described in the Higher Education Academy 'Pedagogy for Employability' paper (2012). A major emphasis in many programmes is upon embedding employability issues contextually in the curriculum of each department, backed up by the provision of opportunity for students to gain tacit (experiential) knowledge and thus develop 'practical intelligence' (Butcher et al. 2011). There are also experiments in engaging employers in the development of the curriculum (Tallantyre and Kettle 2011). The research of the UK National Union of Students (NUS) in partnership with the UK Confederation of British Industry (CBI) documents a variety of examples (2011).

The competition provoked by the enhanced metrics on graduate employment, noted above, has led to a boosted role for careers departments, some being rebranded (for example as 'Futures' or 'Employability' departments), partnerships with private agencies and attempts at embedding employment responsibility contextually in academic departments. It is also boosting pressure for increases in student work experience via short 'sandwich' experience and internships.

Ensuring wider access

Social mobility was one of the three major pillars of the UK Government's White Paper on Higher Education. The change in the English fee structure has placed extra pressure on the sector to ensure

wider access. The Office of Fair Access (OFFA), established alongside the new funding arrangements, has pressured the universities to use more 'contextual' data in entry criteria for universities and will monitor access agreements to be set out by all universities charging fees above the base level. A National Scholarship Programme³⁸ has been introduced to provide financial help to universities to assist access to poorer students. A 2012 report by the Independent Reviewer on Social Mobility and Child Poverty (Milburn 2012) called for: greater outreach efforts by the sector; simplified admissions criteria; more foundation programmes; better online provision; and university sponsorship of schools in deprived areas. There is particular challenge to part time student development with some universities specialising in this field with flexible evening programmes³⁹.

In this respect, and noting the developments in MOOCs discussed earlier there is likely to be a major growth in on-line learning⁴⁰. A review of the existing UK offer in 2010, funded by HEFCE (White et al 2010) found 400 course offers, mainly at the postgraduate level, by over 100 higher and further education institutions and further 175 in partnership with private providers. The major potential for expansion was noted.

Debate on the use of knowledge

The employability debate, the pressure for universities to become part of the economic 'value chain' and therefore to focus more upon issues of immediate economic and social relevance to society, and the influence of the vast volume of data on the web, is encouraging wider reflections on the way that universities organise, influence and use knowledge flows (Valima 2009). This takes a number of directions. Perhaps the most transparent is the intensification of the debate about the value of more focused Mode 2⁴¹ problem/issue multidisciplinary and transdisciplinary research and teaching (Lyll and Meagher 2012). A related, very practical and pressing, edge to the debate is that of how universities are approaching the issue of the sheer volume of information on the Web -Big Data and Linked Data (McAuley et al 2012). The former is concerned with the 'philosophical and methodological approach to democratising data': and the latter is focused upon the cross correlation of data across cultures, institutions and traditional disciplinary boundaries. In the light of the increasing use by students of such data Universities are being forced to consider what this means for the training of staff and students in data literacy.

A deeper philosophical component of the discussion on useful knowledge (somewhat ignited by the current debate on the 'idea' of a university) recalls early philosophical writings which emphasise the role of universities as being concerned with the imaginative and creative use of knowledge and not just knowledge delivery per se (Whitehead 1927 Newman 2007). Leading on from this is the reminder that the concept of useful knowledge is not confined to a focus upon 'know how' in the technical sense but refers as much if not more to the need to link the development of student knowledge to values and to broad areas of society's need for development and the carrying forward of culture. This marries up with the concept of wisdom (Maxwell 1984) as being concerned with the individual's capacity to embrace a combination of experience/knowledge and deeper understanding of a life world of uncertainty and

³⁸ <http://www.hefce.ac.uk/whatwedo/wp/currentworktowidenparticipation/nationalscholarshipprogramme/>

³⁹ For example Birkbeck College London with its 'learning cafés' in East London, an area with very low HE participation

⁴⁰ For example, in response to the US initiatives King's College London, along with the Universities of Birmingham, Bristol, Cardiff, East Anglia, Exeter, Lancaster, Leeds, Southampton, St Andrews and Warwick have partnered with FutureLearn, a company set up by the Open University that will offer free, non-credit bearing courses to internet-users around the world.

⁴¹ See an earlier paper 'Leading the Entrepreneurial University' for a brief discussion of the Mode 2 concept

complexity. There is a link here with Graylings defence of the 'generalist', noted above and the notion of 'practical intelligence' (Sternberg et al 2000). There is little evidence, however, that this concept (while increasingly debated) has been in practice widely accepted and embodied in university employability agendas.

Enterprise and entrepreneurial skills development

A key component of the employability agenda, as noted above, is the provision of enterprise and entrepreneurial skills and knowledge. There is now wide experience across the UK with many deans and pro vice chancellors charged with this responsibility. The UK experience in this respect has been captured by the National Centre for Entrepreneurship in Education (NCEE) in its national surveys⁴² and programmes for university staff development in partnership with Enterprise Educators UK⁴³. While there is growing evidence of the embedding of entrepreneurship education in individual disciplinary contexts there are relatively few examples as yet of comprehensive coverage across the whole university. There remains therefore a major challenge in terms of pedagogical and organisation development.

Student ownership

There is mounting evidence that student bodies can play a major role in entrepreneurship education development. The student-initiated National Consortium of University Entrepreneurs (NACUE), set up to support students entrepreneurship society development is now operating on 120 campuses and embracing 40,000 UK student society members: and, with government support, it is rapidly expanding. The societies offer start up programmes and promotions, business connections, in some cases loan schemes and links to venture capital and gateways to experience in SMEs. In many cases they are supported financially by the university⁴⁴.

Building SME relationships

As in entrepreneurship education there is much experience of universities seeking to build relationships with SMEs. The KTP system noted earlier is one approach that has been substantially developed: though in many cases it has yet to meet a true knowledge exchange criteria of embedding the learning from KTPs into the formal curriculum and developing long term partnerships⁴⁵. The Shell Technology Enterprise Programme (STEP⁴⁶) was aimed at building opportunities for student project work in SMEs, was highly evaluated (Weston et al 1995) but government support has been removed. It also dealt with relatively small numbers. In general, universities find it easier to develop partnerships with small professional service companies rather than the majority of the highly differentiated small firm sector⁴⁷. The focus of much university SME linkage support by government programmes has been upon the narrow high technology and innovation sector. Attempts to widen the base through a government

⁴² Enterprise and Entrepreneurship in Higher Education 2010 National Survey. www.ncge.com/EE_Survey

⁴³ International Entrepreneurship Educators Programme for university staff from any department wishing to lead entrepreneurship and enterprise education. www.ncee.org.uk/entrepreneurship_education/ieep.

⁴⁴ [www,nacue.com](http://www.nacue.com)

⁴⁵ The KTP evaluation study of 2010 (Regeneris Consulting) focused substantially on a knowledge transfer as opposed to knowledge exchange process with KTPs and has little to say about the bringing of knowledge gained back into the university or the building of longer term partnerships with business.

⁴⁶ Originated at Durham University Small Business Centre in Partnership with Shell UK in 1986 and expanded across the UK via a process of local partnerships. It ran for over 20 years.

⁴⁷ See for example the Huddersfield University Partners in Law and Partners in Accountancy programmes programmes working with groups of local firms.

<http://www.hud.ac.uk/courses/supporting/law/businessprofessional/>

funded UK Employer Ownership Partner scheme⁴⁸, aimed at creating joint ventures in skill development, appear to be attracting mainly larger firms.

Community engagement

Local SME engagement can also be viewed through the lens of a university's strategy for community engagement. Many UK universities in recent years have created local community engagement offices and programmes, at times in partnership with other universities⁴⁹. These are not always focused upon economic development but also upon issues of social deprivation and wider societal problems. They vary in intensity in terms of the degree to which they open up active gateways to engagement across the university for staff and students as opposed to providing information access to the university for local stakeholders⁵⁰. Social enterprise is an area of growing focus. Reflecting this a National Social Enterprise UEN (University Enterprise Network) was established in 2011 hosted by Plymouth University with founding partners from the private sector the Co-operative Group and SERCO (a private deliverer of services including education), together with the Social Enterprise Mark Company and the National Council for Entrepreneurship in Education (NCEE). Its aim is to research, pilot and communicate best practice to help shape national policy, and work with students and staff in the partner institutions to build social enterprises. It will also work with SMEs and existing social enterprises to provide targeted business advice, mentoring and support.

Recent research into university engagement with disadvantaged communities demonstrates substantial and growing involvement across the UK in areas of: collaborative research; outreach education; voluntary work; student project and experience; and institutional commitment in general, including a focus upon student recruitment from disadvantaged groups (Robinson, Zass-Ogilvie and Hudson 2012)⁵¹. One UK university has deliberately put the understanding and development of social enterprise⁵² at the heart of its activity. Many universities have signed up with a National Co-ordinating Centre for Public Engagement⁵³.

Innovation and regional/local development

Despite the constraints on funding resulting from the abolition of regional development agencies in England and their replacement by lower resourced Local Enterprise Partnerships (noted earlier) there has remained a strong impetus to University activity in the field of business engagement, innovation and knowledge transfer/exchange. In part this continues to be lubricated by the Higher Education Innovation Fund (HIEF) and European Community grants but reflects also the pressure for differentiation and need for local engagement and visibility as well as resource acquisition via partnership (University Alliance

⁴⁸ Launched in November 2011 with government funding to drive enterprise, jobs and growth within a sector, supply chain or locality. <http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/e/12-1026-employer-ownership-of-skills-pilot-state-aid-application.pdf>

⁴⁹ Funded by HEFCE, the South East Coast Communities Partnership (2008-11) involved nine universities in the South East of England working collaboratively with members of the local community in the area in order to build their capacity to meet their Health and Wellbeing needs. <http://www.coastalcommunities.org.uk/>

⁵⁰ See De Montford University Square Mile Project as an example of wide staff, student and stakeholder engagement. <http://www.innovationunit.org/blog/201209/de-montford-university%E2%80%99s-square-mile-project-university-local-public-good>

⁵¹ See also Universities UK (2010) 'Universities Engaging with Local Communities'. <http://www.universitiesuk.ac.uk/Publications/Documents/EngagingLocalCommunities.pdf>

⁵² See University of Northampton. <http://www.northampton.ac.uk/socialenterpris>

⁵³ The National Centre for Public Engagement consists of a network of six beacons which are university-based collaborative centres that help support, recognise, reward and build capacity for public engagement work

2012⁵⁴). Research demonstrates that in engineering and physical sciences academic engagement has grown, that academics in these disciplinary areas are entrepreneurial and that they perceive the barriers to engagement to be falling (Salter et al 2010).

Partnerships: programmes and curriculum development

Partnerships between public universities and with private institutions in the education field are also growing as the competitive environment accelerates. There have always been university partnerships in research, some more formalised and longer term than others⁵⁵: one major barrier to collaboration in this respect has been the Research Assessment Exercise which focuses upon individual university competitive ratings. But these constraints are disappearing as universities seek scale and multi-disciplinarity in their research⁵⁶.

Partnerships between UK universities to offer transfers and joint degrees are only slowly emerging and are perhaps more easily managed with overseas institutions once substantial set-up costs are covered. Such partnerships will be important in the future if universities are to follow the Wilson recommendations and offer a wider range of internships and international experience to students. Partnerships with the private sector to deliver available online programmes are well under way⁵⁷. And private companies are actively engaged with universities and colleges in the provision of Foundation Degrees⁵⁸. Partnerships with large companies to create joint degrees are growing⁵⁹. Private-public collaborations of this nature are likely to further develop, perhaps, on the basis of US experience, towards a model where private providers operate foundation and 'short degrees' and public university partners provide linked Masters and Doctoral programmes. In the UK, however, there are reservations as to whether some of this activity will divorce teaching from accreditation.

International Strategies

Partnership strategies in research, teaching and stakeholder relationship development have an increasingly strong international perspective in many universities (Nivesjo et al. 2011). The pressure responded to extends beyond the issues of attraction of overseas students and the employment of more overseas staff, to joint overseas programme development and active engagement with commercial interest groups. The global curriculum pressures noted in the previous section are also bringing a new

⁵⁴ This paper provides a variety of perspectives on, and examples of, English university activity.

⁵⁵ For example the N8 Research Partnership involves collaboration between the Universities of Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield and York, aimed at exploiting the research and industrial strengths of the North of England. Centres have been established which focus on areas of future growth in the economy, such as regenerative medicine and molecular engineering, each working to create collaboration between industry and academia. <http://www.n8research.org.uk>

⁵⁶ See for example the Francis Crick Institute to be launched in 2015 focused upon multidisciplinary medical research through partnerships between public and private research councils and three leading London universities. <http://www.crick.ac.uk>

⁵⁷ See for example Liverpool University's partnership with Laureate International offering a wide range of Masters and Doctoral degrees to several thousand students worldwide. <http://www.liverpool-degrees.com/>. Also Resource Development International (RDI) partners with several UK universities to provide a broad portfolio of degrees, masters and MBA programmes on-line which it markets and delivers worldwide. <http://www.rdi.co.uk/about-rdi/>

⁵⁸ For example, retail company TESCO and the travel company TUI have their own tailored UK foundation degrees. Manchester Metropolitan University is in partnership with MacDonal'd's in a foundation degree. See also <http://www.ucas.ac.uk/students/choosingcourses/choosingcourse/foundationdegree/>

⁵⁹ The UK Open University is a lead UK institution in actively engaging in degree provision with a range of large private companies. <http://www.open-university.co.uk/ou-for-your-business.php/>

inter-cultural dimension to the partnership concept. UK universities such as Oxford Brookes⁶⁰, Bournemouth (Shiel and Mann 2005), Leeds and Bristol are for example paying particular attention to many of the issues raised by Welikala (2011). This is bringing recognition that addressing issues of global curriculum development goes beyond the design of programme content. It involves partnerships in the creation of; communities of practice between existing student groups; their involvement in more reflexive modes of learning; exchange of experience and resulting experiment on pedagogies; external partnerships for building multi cultural modes of learning; and wider democratic approaches to learning.

The drive for efficiency and alternative revenue

Partnerships of a different nature are emerging in response to the public funding crisis. The private company University Partnership Programmes (UPP), has for example, partnered extensively with universities in the provision of student accommodation and campus infrastructure.⁶¹ There is also major outsourcing activity in the supply of IT services and an estimated considerable untapped potential in other areas (Massey 2010) covering not only infrastructure such as playing fields and environment but also marketing, accounting, student relationship development and registration activity. The sharing of services between universities is also growing with as yet considerable untapped potential⁶². Funding problems are also generating pressure for revenue raising via the selling of services, utilisation of spare capacities and consulting and training activity This can involve the setting up of separate joint venture companies with the private sector and/or the creation of independent service businesses which can be marketed or franchised to others⁶³. There is also estimated untapped potential elsewhere, for example in the expansion of procurement partnerships; such arrangements already account for 15-20% of an estimated £5bn collective university spend.⁶⁴

Closer engagement with alumni is also being pursued: a recent study for HEFCE found that approximately half of philanthropic revenue for universities came from alumni, with arguably much greater potential at stake (More Partnership 2012). There is accompanying pressure for all departments to be involved in this role and, in general, to meet revenue raising targets. In part this may, in the long term, have to be achieved by greater co-operation, and fee sharing arrangements, with business as well as direct fund-raising appeals⁶⁵. Joint private/public ownership is not beyond future possibility. Changes in the legal status of some universities may be pursued to facilitate external investment (Eversheds 2009).

In the light of the foreseeable resource problems of universities, following the changing financing arrangements, the representative organisation, Universities UK, set up a task force to review efficiency in universities which reported in 2009 (Diamond et al). The goal was to identify ways in which institutions could work more efficiently and effectively to ensure value for money by developing

⁶⁰ See Oxford Brookes Centre for Curriculum Internationalisation <http://www.brookes.ac.uk/services/cci/index.html>

⁶¹ <http://www.upp-ltd.com/about/>. UNITE, another private company, manages higher education facilities and accommodation for over 50 universities with over 40,000 bedrooms in 20 cities in the UK. <http://www.unite-group.co.uk/our-customers/universities.go>

⁶² The HEFCE Shared Services Advisory Group estimates that successful use of shared services can yet produce cost savings of 20-30% in the public sector. A HEFCE Modernisation Fund provides a small financial incentive to increase efficiency. <http://www.hefce.ac.uk/whatwedo/invest/funds/umf/>

⁶³ For example Unitemps, a Warwick University company is an online recruitment service which provides temporary staffing to leading universities and commercial businesses across the UK and globally. <https://www.unitemps.co.uk/>

⁶⁴ See HEFCE REPORT. http://www.hefce.ac.uk/pubs/rereports/2006/rd15_06/rd15_06.pdf. FCE Report.

⁶⁵ De Montfort University has, for example, issued £110mn of bonds to raise cash for modernisation of facilities.

procurement, streamlining institutional processes, improving the use of data and benchmarking, and supporting better use of shared services and outsourcing (Universities UK 2010). A number of Task Groups are working on developments in each of these areas moving towards an implementation phase (Diamond et al 2011). It is possible that many universities are seeking to increase 'efficiency' by more traditional cost cutting means, involving larger classes, freezing appointments, use of more adjunct and part time staff, increasing teaching loads and limiting staff travel (Standard and Poor's 2008).

Organisational change

The above challenges are triggering broader organisational change and reflections on the managerialist norms of some existing structures. Several universities have changed or are considering change in rewards and promotional tracks linked with knowledge exchange and stakeholder development activity as well as teaching and learning excellence. The use of adjunct staff in teaching and mentoring support seems to be growing with some evidence of greater entrepreneur engagement⁶⁶. Externals, including Board and Council members are being used to drive agendas and leverage change. Internally, role models are sought to highlight certain kinds of activity. There may be moves to structure Boards of Governors in a more 'representative of interest' mode away from a more traditional composition of disinterested parties from the community, perhaps enhancing the role of alumni and student representation (Gillies 2011). Official support for student entrepreneur societies is growing.

There is also recognition of the limits of many standard approaches to external relationship development –for example professionally managed enterprise and technology transfer offices and science and technology parks. There is growing evidence that what is important in technology transfer success is the degree of support and availability of role models at the departmental, bottom-up, level (Bercovitz and Feldman 2008): activities overly dominated by professional technology transfer staff may therefore at times weaken the motivation of academic staff to build, independently, external networks of social capital. This process has been identified as key to enhancing a university's capacity for knowledge transfer and exchange. It has been shown that the building of such social capital can also be an important key to innovation. Overall, as noted above, there is evidence of moves to embed issues of employability, external relationship management, knowledge exchange revenue and resource raising activity more substantially in individual departments. This can lead to some layering of levels of management in the organisation which in itself will demand closer professional and academic staff partnership.

THE REBALANCING OF STAKEHOLDER RELATIONSHIPS

Realigning the interface with the environment

In the introduction to this paper, and following from arguments in earlier papers, two key propositions as to the nature of organisations operating in uncertain environments were set out. The first was that contingency organisation theory underpins the notion that it is the distinctive nature and dynamism of the task environment that must weigh heavily in organisation design. The second was that it is the level of uncertainty and complexity in the environment that will dictate the need for entrepreneurial behaviour. This paper, so far, has outlined numerous external pressures on universities in England and the UK contributing to uncertainty and complexity in their task environment. It is clear from the description of university responses to these major changes that there is now considerable pressure for the sector to engage more fully than hitherto with a wider range of stakeholders, locally, nationally and

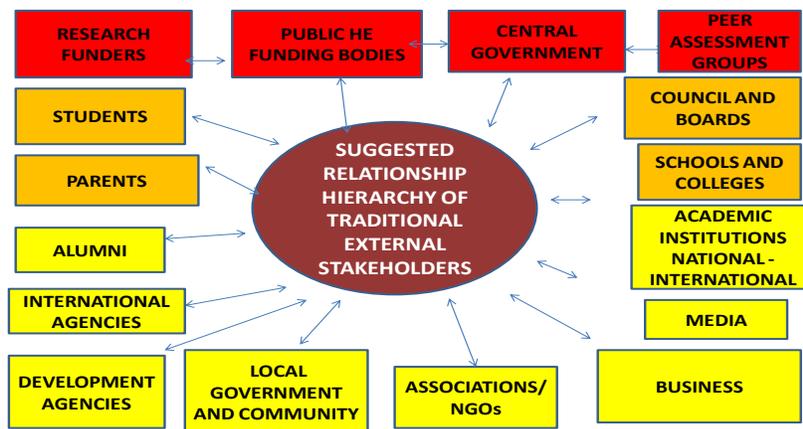
⁶⁶ The University of Plymouth is, for example, advertising for an Entrepreneur in Residence with responsibility for 'curricula and extra-curricula interventions.

internationally. UK universities have always interfaced with the broad spectrum of stakeholders as set out in Exhibit 3 below but with a strong ‘traditional’ orientation towards certain groupings.

The traditional stakeholder balance (as shaded most heavily in the Exhibit) has been towards the sources of public funding directly through ‘independent’ conduits (the Higher Education Funding Council for England HEFCE) and complemented by ‘directed’ (targeted upon particular desired outcomes) public funding from government which is often available on a bidding basis. This has been topped up by research grants (public and privately supported) most of which are either dependent upon or influenced to a considerable degree by, peer assessment/review processes.

EXHIBIT 3

UNIVERSITY KEY STAKEHOLDERS: A SHIFTING BALANCE



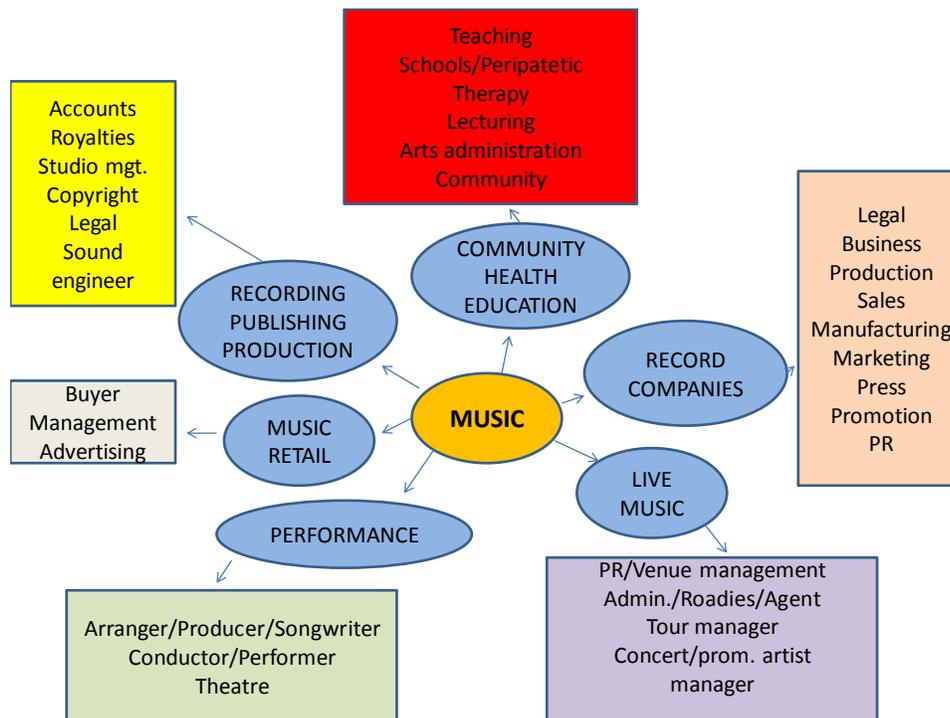
As a result of new funding and market arrangements in England, the balance of stakeholder dependency patterns is shifting. The emerging dominant stakeholders are students, accompanied by those who influence their choice (shown moderately shaded in Exhibit 3). The government’s somewhat determined supply chain view of the role of universities in economic and social development, together with a wider sensitivity to competition, has strengthened the concern of universities to link with external agents at the local, regional, national and international level. There is enhanced motivation to build partnerships both with peer institutions and sources of funding as well as network building to secure sustainable futures. The stakeholders who are more lightly shaded in Exhibit 3 are therefore also becoming more prominent.

It is, however, of limited value to explore university stakeholder relationships from a ‘total organisation’ perspective. Every university is a highly pluralistic organisation with each department facing distinctive variations in the stakeholder community mix. ‘Traditional’ departments/faculties such as law, medicine, music and divinity have strong links to their associated professions. Many universities now embrace vocational subject areas, for example hospitality, education, tourism, design, nursing and accounting, each with strong associated stakeholder relationships. Humanities departments, at times characterised as having weak external links, are found in practice to be as strong in this respect as departments such as engineering (Hughes et al 2011).

The challenge at the departmental level

The university challenge in adapting to change in the environment is therefore largely a decentralised one. Each department within the university will face different types and combinations of stakeholders with resultant different levels of uncertainty and complexity. Every department will therefore need to map out its own 'task environment', societal, academic, community and 'practitioner'. A possible stakeholder practitioner scenario of a music department is illustrated in Exhibit 4 below and can be described as characterising the potential future music related occupational life-world of the student. The challenge for the department can be that of engaging with these 'music world' stakeholders to provide opportunity for students and staff to acquire tacit/experiential knowledge in all of the potential employment contexts: and where possible to build this knowledge and experience into the curriculum and pedagogy. The stakeholders shown can be explored in a local, regional, national and international context. Similar maps could be drawn for each department as the basis for a review of the present position and future potential for tacit learning and the development of practical intelligence.

EXHIBIT 4
EXAMPLE: MUSIC DEPARTMENT STAKEHOLDER PRACTITIONER RELATIONSHIP MAP



MANAGING MULTIPLE STAKEHOLDER INTERDEPENDENCY: AN ENTREPRENEURIAL CHALLENGE?

This section of the paper focuses upon the management of multiple stakeholder interdependency as described above. It is argued that to maximise freedom and autonomy in such a milieu requires an entrepreneurial model. The rationale and modus operandi for such a model is explored by borrowing from the manner in which entrepreneurs seek to maintain their independence and organisational autonomy in uncertain, and sometimes, complex environments.

Freedom and organisation autonomy

It was emphasised at the beginning of this paper that there are a significant number of academics who feel that their academic freedom and the basic 'idea' of a university and its autonomy are being threatened by the pressures and changes noted above and particularly by the entrepreneurial concept. The academic freedom they refer to was underpinned traditionally by systems of public funding which were managed by intermediaries and therefore ensured limited detailed direct accountability to government. Peer review processes were seen to be the major vehicle for standards setting and accountability to society (although in the UK, as in many other countries, this process has been eroded over the past two decades in particular by increasing government guidelines and directives). Nevertheless the system enabled academics to enjoy substantial degrees of freedom to think, research, teach and do whatever they deemed to be important. It is the apparently growing constraints on this freedom that are now lamented. Yet, in reality, over many years, this freedom has had to be negotiated with an increasingly wider range of stakeholders seeking to influence and/or work in partnership with universities. The scenario described earlier in this paper has, however, ratcheted up the imperative to negotiate freedom and begs questions as to how universities in general should respond.

How entrepreneurs 'manage' independence

Almost universally, international research from the beginning of major academic interest since the 1960s has demonstrated that the major personal driver for the establishment of an independent business/organisation is not financial reward but the search for individual freedom and independence (Collins and Moore 1964). Yet, paradoxically, most would-be entrepreneurs are in fact exchanging their dependence upon a single source of income and/or work for a situation of interdependency on a wide range of external stakeholders who they have very limited power to influence. The entrepreneur has, therefore, from the onset, to 'negotiate' his/her desired level of freedom. Consequently, there is, in the process of development of the business or organisation, a constant battle to assert independence in the face of pressures from all the stakeholders whose needs must be met if the organisation is to survive (customers, suppliers, financiers, staff, regulators, professional service providers, local government and the revenue among many others). The art of entrepreneurial management can therefore be described as the management of interdependency in such a way that the desired level of independence and associated freedom is achieved and personal goals are met. It has been argued by one of the present authors that this can only be achieved successfully if the entrepreneur's organisation embraces the model of a porous learning and educating system (Gibb 1997).

Managing independence through trust based relationships

In this model of entrepreneurial stakeholder management the overriding aim is to build mechanisms and motivation at all levels of the organisation to negotiate with key stakeholders in the environment to achieve what the entrepreneur and his/her team want (rarely is it just money). The major strategic means to this is the building of trust-based relationships with people and organisations (Aldrich and Zimmer 1986, Hohman and Welter 2005) in order to reduce risk in a task environment over which the entrepreneur has little control. This process of relationship trust building has three key components each of equal importance. The first is to maximise the organisation's capacity at all levels to learn continuously from all stakeholders. This involves: ongoing monitoring of changing stakeholder needs; obtaining continuous feedback as to how the entrepreneur's organisation is perceived in the environment; and evaluation as to whether it is successful and helpful to stakeholders in meeting their goals.

Optimising success in building such a trust based relationship model, however, necessarily involves a two-way process of communication. The second key component is therefore the ongoing education of major stakeholders not only about the capacity of the organisation to help them achieve their goals but also proactively to help 'bring forward their futures'. This process demands empathy, some sharing of goals, and at times values, and often, in practice, partnership. The third component is the encouragement of the organisation's stakeholders to learn from each other. This demands that the organisation constantly strives to influence and help engaged stakeholders to build, between them, partnerships and strong relationships. The strategic aim is to cement the interdependency network of the firm, so that understanding of, and confidence and trust in, the firm is shared. In summary, the entrepreneur and his organisation are playing the role of builders of social capital and, as knowledge brokers, are often using innovative means to bring forward the future for stakeholders.

Designing an entrepreneurial organisation to successfully manage interdependence

Successful pursuit of the process described above demands a distinctive entrepreneurial organisation design. The key component is maximising the freedom of individuals in the organisation to behave enterprisingly: to take responsibility for building personal stakeholder relationships; to take risks in pursuit of this; be supported in this process; to feel ownership for, and commitment to, seeing things through; and to engage informally in innovation and communication across boundaries laterally and vertically in the organisation.

Achieving the above implies a certain kind of organisational culture. Entrepreneurial organisations can be characterised as held together by a shared culture embodied in 'ways of doing, thinking, organising and communicating things' (Gibb 2007). The model of trust based relationship building is as important internally as it is externally and limits reliance upon highly formal control and accountability systems. In such an organisation an autocratic leadership style that reserves external stakeholder relationship development to the power elite is inappropriate. A key characteristic of leadership in this cultural climate is that of a role model exemplar 'by doing'. Highly formal strategic planning is replaced by a notion of strategic awareness and orientation where strategy and action are intertwined in constant reflexive mode (Pencarelli et al 2008).

It is argued below that this model is highly appropriate as a response to the present and most probably future environment of universities (Kitson et al.2000).

THE UNIVERSITY AS AN ENTREPRENEURIAL STAKEHOLDER LEARNING ORGANISATION

The model described above characterises the entrepreneurial institution as a dynamic 'learning organisation'⁶⁷, meeting two major criteria in this respect. First, that it is porous to learning from stakeholders at all levels of the organisation by empowerment of staff in this respect. Second, that its shared culture of internal trust based relationships facilitates a flow of the knowledge gained across horizontal and vertical boundaries in the organisation.

⁶⁷ Defined as an organisation that collects information and creates knowledge about the relevant *environment*, both the internal environment and the external environment. . An organization that manifests learning is not necessarily a learning organization, The above process must be an omni-present thread in the organisational fabric. Interdependence is an essential feature of a learning organisation as is the capacity of the organisation members to 'absorb'. (Taken from Xi An Lu literature review (undated) 'Surveying the Concept of the Learning Organisation' Southern Illinois University)

The university as a knowledge broker

The traditional university could, perhaps somewhat unfairly, be characterised as a ‘learned’ rather than ‘learning’ organisation as described above, with its focus upon learning from ‘objective’, often arms-length, research and scholastic texts. Yet, as argued in an earlier paper (Gibb, Haskins and Robertson 2009), universities in the technology led information age can no longer pretend to be the sole dominant source of knowledge and discovery (Novotny et al 2003). They are being pressed to adapt to the international diversity and complexities of knowledge flows as well as to the knowledge and learning needs of a wider range of stakeholders to be engaged (Watson, 2010, Watson et al 2011)⁶⁸. This does not move the university away from its classical role as a focus ‘for the imaginative use of knowledge’ (Newman 1852) or from its long established task of discovery, reflection and the carrying forward of the culture of society (Collini 2012); it does, however, add in the role of ‘transformation’ (Brennan, King and Lebeau 2004).

The stakeholder relationship model, as described above, aligns strongly with Mark Moore’s conceptualisation of the creation of public value via processes of engagement with all key partners in society (Moore 1995). The model, by its open processes of engagement, meets the criteria of facilitating the pursuit of rich procedural knowledge, rich and tacit factual knowledge and life span contextualisation (Marchand 2003). It therefore clearly addresses the challenge of the ‘how’ as well as the ‘why’ in learning and therefore the creation of what Maxwell deems as ‘wisdom’ (Maxwell 1984).

Organising for a learning organisation

If the concept of the entrepreneurial stakeholder learning organisation, as described above, is accepted as appropriate to university development, it has major implications for the redesign of the university to harmonise with a dynamic task environment. The entrepreneurial learning organisation model demands the maximising of the potential and freedom of the individual in the organisation to reach out to wider communities of practice, harvest tacit as well as explicit knowledge and innovate across the broad spectrum of institutional activity as described in Note 1. This will demand the empowerment of individual staff members to take risks and be protected and rewarded by the system for their initiative. The most important challenge in pursuing this is that of maintaining academic freedom in a milieu of wider stakeholder demands and competition as described earlier.

There are major implications for the way that communication, internally and externally, takes place, if the benefits from external two way learning processes are to be optimised. There is substantial evidence that innovation is maximised within a climate of informal networks and social interaction (Obsfeld 2005). Overall, to be successful, it requires, as noted above, a shared set of beliefs as to the purpose and process of the organisation which might be characterised as the appropriate enterprise culture. Some of the major parameters of such an HE organisation are summarised in Exhibit 5 below.

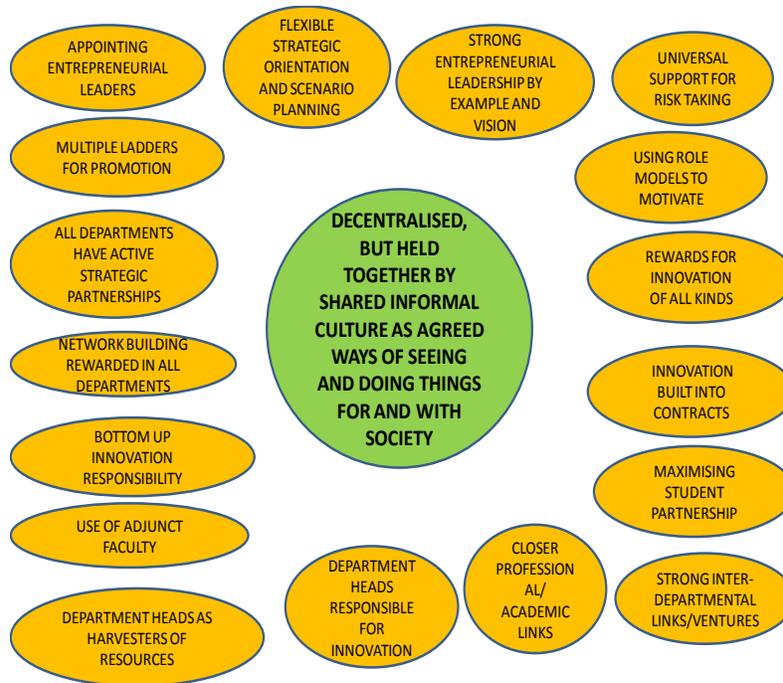
The Exhibit underpins notions of: a decentralised organisation designed to empower individuals all the way down the institution; departmental leaders being held responsible for innovation, harvesting resource, and support of risk taking; the breaking down of boundaries within and without the organisation; developing strategic partnerships with stakeholder institutions and engaging them directly through increased use of adjunct faculty; creating new avenues for rewards and promotion;

⁶⁸ See also Watson Powerpoint ‘What is a University For? Available on Google.

using faculty to act as boundary knowledge brokers; the appointment of entrepreneurial staff in pursuit of these goals; the creation of new forms of partnership with students to maximise their ownership of learning; the use of social media and new technologies to enhance this goal; the full exploitation of synergies across the university as described in an earlier paper (Gibb 2012); and, above all, strong entrepreneurial leadership by example.

EXHIBIT 5

ORGANISING THE UNIVERSITY FOR ENTREPRENEURSHIP



OVERVIEW AND CONCLUSION

The challenge of differentiation and strategic partnership building

It has been constantly emphasised in this paper that enterprising behaviour and entrepreneurial organisation are contingent phenomena most needed when operating under dynamic conditions of uncertainty and complexity. The nature and scale of pressures for change in the HE task environment have been described above, along with the challenge to organisation design. The sheer volume of change pressures in the in the environment provides numerous opportunities as well as threats, demanding entrepreneurial response. It has been argued that the opportunities lie in the ability of institutions to: adopt an entrepreneurial organisation model; strategically assess the stakeholder environment; identify appropriate responses; seek to bring forward stakeholder futures alongside their own vision; build upon views of the long term HE environment; match it to their own organisation strengths and weaknesses; and develop a discovery, learning, educational and relationship agenda accordingly. This means moving substantially beyond a triple helix concept, confined to tripartite government/business/university partnership, to a model of much wider stakeholder and societal culture engagement. There have been attempts to move the triple helix

model into fourth or fifth dimensions to cover wider aspects of a civil society (Carayannis and Campbell 2012) but the stakeholder model allows strategies covering the totality of knowledge flows, relationships and cultural/global challenges.

Such strategies are already emerging, with institutions choosing distinctive key local, regional, national and/or international areas of focus. Entrepreneurial organisations seek to differentiate themselves. Almost certainly many of the strategies will demand more fluid internal cross-boundary relationships and the building up of strong external strategic partnerships. They will also necessitate continuous reflection on the foci of teaching and learning and its relationship to research (Prince et al 2007), particularly in the light of the growing debate on 'wisdom' and 'practical intelligence'. Scholarship stands apart from research: and the concept of wisdom in turn demands an intellectualism that goes beyond scholarship. A focus on the broad concept of wisdom is also a reminder that the supreme stakeholder for the university is society itself and that the sum total of the stakeholder relationship parts may not truly represent the whole.

In addressing the learning agenda and the issue of differentiation, the key 'discovery' aspect of university activity may need to be an area for reflection. It does not necessarily follow that good teaching follows from good research (Jenkins 2004). As Jenkins points out, effective approaches to teaching and learning can stand apart from formal research. The increasing demands (of both business and other organisations) for a wider range of personal transferable and entrepreneurial skills to be developed in graduates create major new pedagogical challenges for learning and teaching (QAA 2012). These challenges are being intensified by advances in technologies for learning. The new dynamics of the task environment provide many opportunities for niche differentiation in the discovery and learning process. Example abound: the University of Plymouth brands itself as 'enterprise led', the University of Northampton as the university for employability, and Strathclyde University as a university for 'useful learning'.

It has been argued that a major challenge in creating greater public value will be that of aligning, appropriately, the university with the future for key stakeholders and beyond, for society (the transformational role). As noted above, much of the detail of the challenge in this respect will be at the departmental level with each department mapping out its own 'task environment', academic, community and practitioner. Overall, closer engagement with stakeholders will demand a more flexible approach to strategic planning, the flexibility being determined by the dynamics of the learning relationships. As in an entrepreneurial company there will be stronger pressure to seek to lower uncertainty by the building of trust based relationship partnerships. Drawing down from the strategic partnership literature (Morh and Spekman 1994) some key guidelines in this respect might include:

- A careful search for multiple partnerships with longer term horizons.
- A sharing of vision and objectives with selected strategic partners.
- More open exchanges and a move away from isolated development processes to greater joint activity and problem solving.
- Maximising gateways to ongoing informal social relationship building with stakeholders across the university as a key to stimulating innovation.
- Moving away from limited one-off contact points to more ongoing engagement.
- Associated greater empathy with stakeholder values and a willingness to share these.
- An associated movement from fragmented development projects to networked approaches and more joint technical development processes with a sharing of costs and benefits.
- An enhanced understanding of professional stakeholder standards and ways of doing things.

- Greater co-operation with HE competitors rather than the taking of adversarial stances.

Although this paper has focused substantially upon the UK and England, it is clear that many of the issues raised are relevant to the future of universities across the globe (Kweik 2009, Marginson 2012a). At the core of an entrepreneurial academic response to environmental change is the preservation of freedom. It has been argued in this paper that such freedom needs to be negotiated with an ever wider range of stakeholders. The adoption of the broadly defined entrepreneurial approach to managing relationships, described in this article, might enhance the capacity of a university to move away from short term reactive 'market' tactics, strengthen its ability to influence social and cultural change in society and at the same time enhance, negotiate and maintain key areas of academic independence and freedom.

REFERENCES

- Aldrich, H. E. and Zimmer, C., 'Entrepreneurship through Social Networks' (1986). University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership. Historical Research Reference in Entrepreneurship. Available at SSRN: <http://ssrn.com/abstract=1497761>
- Bauer P. (2012) 'Developing Entrepreneurship and Entrepreneurial Universities in Europe'. Presentation to Conference on Universities, Munster April 26-27. European Commission
- Bercovitz, J. and Feldman, M. (2008) 'Academic Entrepreneurs: Organisational Change at the Individual Level'. *Organization Science* Vol. 19 No.1 pp 69-85
- Bone Sir Drummond, (2011) 'Internationalization 2011 An overview'. Balliol College Oxford, United Kingdom Higher Learning Research Communications Volume 1 Number 1 pp 4-9 June
- Bourn, D. McKenzie, A. Shiel, C (2006) 'The Global University: the role of the curriculum' Development Education Association
- Brennan, J. and Shah, T. Eds. (2011) 'Higher Education and Society in Changing Times: looking back and looking forward' Centre for Higher Education Research and information Open University UK
- Brennan, J., King, R. and Lebeau, Y. (2004) 'The Role of Universities in the Transformation of Societies. An International Research Project'. Synthesis Report. Association of Commonwealth Universities and Centre for Higher Education Research and Information, Open University
- Butcher, V , Smith, J. Kettle, J. Burton, L. (2011) 'Review of good practice in employability and enterprise development'. Centres for Excellence in Teaching and Learning. A report for HEFCE by, the Higher Education Academy
- Carayannis, E.G. and Campbell, D.F.J. (2012) 'Mode 3 Knowledge Production in Quadruple Helix Innovation Systems'. *Sp[ringer Briefs in Business* 7, DOI 10. 1007/978-1-4614-2062-0_1
- CES (2009) 'The Employability Challenge 'UK Commission for Employment and Skills 2009
- Coiffait, L.(Ed) (2012) *Blue Skies New thinking about the future of higher education'*. A collection of short articles leading commentators.UK pearsonblueskies.com
- Collini, S (2012) 'What are Universities for?' Penguin Books.
- Collins, O. F. and D. G. Moore. (1964) *The Enterprising Man*, Michigan State University, East Lansing, MI
- Covin, J.G. and Slevin, D.P. (1991) 'A conceptual model of entrepreneurship as firm behaviour'. *Entrepreneurship, Theory and Practice* 16 pp7-25
- Daniel, Sir John (2012) 'Making Sense of MOOCs: Musings in a Maze of Myth, Paradox and Possibility' Fellow – Korea National Open University Education Master – DeTao Masters Academy, China
- Department for Innovation, Universities and Skills (2007) 'Academies, Trusts and Higher Education Prospectus'. Department for Education and Skills UK
- Diamond, I. (2009) 'Efficiency and Modernisation in Higher Education. A report by the Universities UK Efficiency and Modernisation Task Group'. Universities UK

- Diamond, I. (2011) 'Efficiency and Modernisation in Higher Education. Phase 2. Implementation Plan.' Universities UK
- Dolphin, T. and Lanning, T. 'Re-thinking Apprenticeships' Institute for Public Policy Research (IPPR) London
- Etzkowitz, H. (2008) 'The Triple Helix. University- Industry- Government, Innovation in Action'. Routledge. London
- European Commission (2012) 'Supporting growth and jobs: an agenda for the modernisation of Europe's higher education system'. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels COM 2011 567 final.
- Evans, G. R. (2002) 'Academics and the Real World'. The Society for Research in Higher Education and Open University Imprint
- Evans, M. (2004) 'Killing Thinking. The Death of the Universities'. Continuum 2004
- Evans, A. (2012) 'The Role of Private Universities'. Presentation to the Higher Education Conference Workshop. BPP University College
- Eversheds (2009) 'Developing Future University Structures. New funding and legal models'. Report for Universities UK
- Finch, J. (2012) 'Accessibility, sustainability, excellence: how to expand access to research publications'. Report of the Working Group on Expanding Access to Published Research Findings. Department of Innovation and Skills, June
- Foster, W., Hart, L., and Lewis T. (2011) 'Costing study of two year accelerated honours degrees' Liz Hart Associates for HEFCE
- Gibb, A. A. (1997) 'Small Firms Training and Competitiveness. Building upon the Small Business as a Learning Organisation' International Small Business Journal Vol. 15 pp13 - 29
- Gibb, A.A. (2002) 'Creative destruction, new values, new ways of doing things and new combinations of knowledge. In pursuit of a new enterprise and entrepreneurship paradigm'. International Journal of Management Reviews, 4(3), pp233-268
- Gibb, A.A. (2005) 'Towards the Entrepreneurial University. Entrepreneurship education as a lever for change'. National Council for Graduate Entrepreneurship (NCGE) Policy Paper. Retrieved from www.ncee.org.uk) Designing Entrepreneurial Organisations
- Gibb, A.A. (2007) 'Entrepreneurship: Unique Solutions for Unique Environments. Is It Possible to Achieve this with the Existing Paradigm? International Journal of Entrepreneurship Education 5: 93-142. Senate Hall Academic Publishing.
- Gibb, A.A., Haskins, G. & Robertson, I. (2009) 'Leading the Entrepreneurial University. Meeting the Entrepreneurial Development Needs of Higher Education Institutions'. A National Council for Graduate Entrepreneurship (NCEE) Policy Paper. Retrieved from www.ncee.org.uk
- Gibb, A. A. (2012) 'Exploring the synergistic potential in entrepreneurial university development: towards the building of a strategic framework'. Annals of Innovation & Entrepreneurship 2012, 3:pp 1-24 16742 - DOI: 10.3402/aie.v3i0.16742

Gillies, M. (2011) 'University Governance. Questions for a new Era'. A personal view from the Vice Chancellor of London Metropolitan University. <http://www.hepi.ac.uk/files/UniversityGovernance.pdf>

Goddard, J. and Vallance, P. (2011) 'The civic university and the leadership of place'. Centre for Urban and Regional Development Studies (CURDS) Newcastle University UK

a

Graham, G. (2002) 'Universities. The Recovery of an Idea'. Imprint Academic UK

Grayling, A.C. (2012) 'Higher humanities education in the 21st Century'. Chapter 2 in 'Blue Skies . New thinking about the future of Higher Education'. The Pearson Think Tank (pearsonblueskies.com) and (thepearsonthinktank.com)

Hauser, H. (2010) 'The current and future role of technology and innovation centres in the UK'. Report for Lord Mandelson, Secretary of State Department of Business Innovation and Skills

Heseltine, Lord Michael (2012) 'No Stone Unturned. In Pursuit of Growth'. Cabinet Office, UK October

Higher Education Commission (2012) 'Postgraduate Education: an Independent Inquiry by the Higher Education Commission'. London UK

Hohmann, H. and Welter, F. Eds. (2005) 'Trust and Entrepreneurship. A West east Perspective'. Edward Elgar Publishing

Hughes, A., Kitson, M., Probert, J. and Milner, I. (2011) 'Hidden Connections: Knowledge exchange between the arts and humanities and the private, public and third sectors'. Arts and Humanities Research Council and Centre for Business Research Cambridge.

Hughes, A., Mina, A. (2012) 'The UK R&D Landscape'. Reprinted and Revised, March, London Cambridge: Council for Industry and Higher Education and UK Innovation Research Centre

Institute of Educational Technology (2011) 'Future Learning Systems'..Google. www.slideshare.net/.../future-learning-systems-presentation-oct-2011 Open University.

Jenkins, A. (2004) 'A Guide to the Research Evidence on Teaching-Research Relations' Higher Education Academy UK

JISC (2012) 'Learning in a digital age. Extending higher education opportunities for lifelong learning'. HEFCE UK

Kim, W.C. and Mauborgne R. (2004) 'Blue Ocean Strategy' Harvard Business Review, October

King, R., Findlay, A. and Ahrens, J. (2010) 'International student mobility literature review'. Report to HEFCE and co-funded by the British Council, UK National Agency for Erasmus

Kitson, M. Howells, J. Braham, R. and Westlake, S. (2009) 'The Connected University. Driving recovery and Growth in the economy'. NESTA UK

Knight, P. and York, M. (2004) 'Learning, Curriculum and Employability in Higher Education' Routledge Falmer London

Kwiek, M. (2009) 'The Changing Attractiveness of European Higher Education. Current Developments, Future Challenges and Major Policy Issues'. Chapter 7 in Kehm, B. M., Huisman, J. And Stensaker, B. Eds. (2009) The European Higher Education Area. Perspectives on a Moving Target' Sense Publishers Rotterdam.

Lawrence, P. R. and Lorsch, J. W. (1986), *Organisation and Environment: Managing Differentiation and Integration*, Harvard Business School Classics

Lyall, C. and Meagher, L. (2012) 'A Masterclass in Interdisciplinarity: Research into Practice in Training the next generation of Interdisciplinary Researchers'. Innogen Working Paper No.95. ESRC Genomics Network. Economic and Social Research Council

Marchand, H. (2003) 'An Overview Of The Psychology Of Wisdom' Prometheus Research Group: www.prometheus.org.uk.

Massey, A. (2010) 'Higher Education in the Age of Austerity'. Part Two: Shared Services, Outsourcing and Entrepreneurship. Policy Exchange Research Note

Marginson, S. (2012) 'Resurrecting Public Good(s) in Higher Education'. Presentation to British Education Research Association Manchester September Conference on 'Privatization in Tertiary Education; the good, the bad and the ugly.

Marginson, S. (2012) 'A More Plural Higher Education World: Global implications of the rise of East Asia systems'. Paper to the AC21 Conference University of Adelaide Australia.

<http://www.cshe.unimelb.edu.au/people/marginson>

Maxwell, N. (1984). *From knowledge to wisdom: A revolution in the aims and methods of science*. Oxford: Basil Blackwell

McAuley, D., Rahemtulla, H., Goulding, J. and Souch, C. (2012) 'How Open Data, data literacy and Linked Data will revolutionise higher education' in Pearson Blue Skies 2012 Asia <http://pearsonblueskies.com/category/editions/2012-asia-pacific/> pp.88-93

McGettigan, A. (2012) 'Academics and standards; avoiding market failure'. Chapter 3 in 'Blue Skies . 'New thinking about the future of Higher Education'. The Pearson Think Tank (pearsonblueskies.com) and (thepearsonthinktank.com)

Milburn, A. (2012) 'University Challenge: How Higher Education Can Advance Social Mobility' A progress report by the Independent Reviewer on Social Mobility and Child Poverty. 'Cabinet Office

Mohr, J. and Spekman, R. (1994) 'Characteristics of partnership success: Partnership attributes, communication behavior, and conflict resolution techniques'. *Strategic Management Journal* Volume 15, Issue 2 pp 135-152

Moore, M. H. (1995) 'Creating Public Value: Strategic Management in Government'. Harvard University Press

More Partnership (2012) 'Review of Philanthropy in UK Higher Education'. UK Higher Education Funding Council.(HEFCE) September

Namen, J. L. and SlavIn, D. P. (1993), "Entrepreneurship and the Concept of Fit: A Model and Empirical Tests", *Strategic Management Journal* Vol. 14, pp.137-153.

National Union of Students/ HSBC Bank (2011) 'Students Research Experience'. Report: Teaching and Learning

NESTA (undated) 'Doing the business. University-business links and innovation'. NESTA UK

Newman, J. H. (1852) ' Knowledge, Learning and Professional Skill' in Alden, R.M. (edt) (1917) 'Readings in English Prose of the 19th Century'. Cambridge Press. Mass. USA PP. 418-439

Newman J.H. in Newman Reader (2007) 'Discourse 6. Knowledge viewed in relation to learning; The National Institute for Newman Studies

Nivesjö, S. Winzer, R. and Brassell, L. (2011) 'Strategies and Trends in the Internationalisation of Universities' Policy Report 1994 Group's Strategic Planning and Resources Policy Group

Nowotny, H., Scott, P., Gibbons, M. (2003) 'Mode 2' Revisited: The New Production of Knowledge'. *Minerva* 41: pp. 179–194

NUS and CBI (2011) 'Working Towards Your Future'. National Union of Students and Confederation of British Industry

Obsfeld, D. (2005) 'Social Networks, the Tertius Iungens Orientation, and Involvement in Innovation'. *Administrative Science Quarterly* vol. 50 no. 1 **100-130**

Pearce, N. (2012) 'How can students best be served. Mature policies for higher education access'. Section 5 in 'Blue Skies . New thinking about the future of Higher Education'. The Pearson Think Tank (pearsonblueskies.com) and (thepearsonthinktank.com)

Pegg, A., Waldock, J., Hendy-Isaac, S. and Lawton, R. (2012) 'Pedagogy for Employability'. Higher Education Academy UK

Pencarelli, T., Savelli, E., Splendiana, S. (2008) Strategic Awareness and Growth Strategies in Small Sized Enterprises'. 8th Global Conference on Business and Economics Oct 18th-19th 2008 Florence Italy

Prince, M.J., Felder, R.M. and Brent, R. (2007) 'Does Faculty Research Improve Undergraduate Teaching? An Analysis of Existing and Potential Synergies'. *Journal of Engineering Education*, 96(4), 283-294 USA

Public and Corporate Economic Consultants Cambridge (2012) 'Strengthening the Contribution of English Higher Education Institutions to the Innovation System: Knowledge Exchange and HEIF Funding'. An executive summary for HEFCE UK

Quality Assurance Agency for Higher Education (QAA) (2012) 'Enterprise and Entrepreneurship Education. Guidance for UK Enterprise Education Providers'. QAA London UK

Regeneris Consulting Limited (2010) 'Knowledge Transfer Partnerships Strategic Review' Technology Strategy Board, Cheshire, UK.

Robinson, F., Zass-Ogilvie, I. and Hudson, R. (2012) ' How can Universities support Disadvantaged Communities?' Durham University

<http://www.dur.ac.uk/StChads/prg/JRF%20Universities%20and%20Communities%20pre-full%20publication.pdf>.

Salter, A., Tatari, V., D'Este, P. and Neely, A. (2010) 'Republic of Engagement. Exploring academic attitudes to collaborating with Industry and Entrepreneurship'. Advanced Institute of Management Research (AIM) and UK – Innovation Research Centre UK

- Selwyn, N. (2012) 'Social Media in Higher Education' The Europa World of Learning www.worldoflearning.com
- Shaheen, F. (2011) 'Degrees of Value. How universities benefit society'. Universities UK. University Partnerships Programme. New Economics Foundation . London
- Shiel, C.and Sarina, M.(2005) 'a Global Perspective at Bournemouth University, Education for Global Citizens and Sustainable Development'. Global Perspectives Group Bournemouth University
- Standard and Poor's (2008) 'Revenue Diversification and Sustainability: A comparison of Trends in Public Higher Education in the UK and US' The Council for Industry and Higher Education. UK
- Sternberg, R. J., Forsythe, G.B., Hedland, J., Horvarth, J.A., Wagner, R.K., Williams, W.M., Snook, S.A., Grigorenko, E.L. (2000) ' Practical Intelligence in Everyday Life'. Cambridge University Press UK
- Tallantyre, F. And Kettle, J. (2011) 'Learning from experience in employer engagement'. Higher Education Academy. UK
- Tatlow, P.(2012) ' Gove needs to put a brake on A level Reforms'. Guardian September 11
- Technology Strategy Board (2012) 'Catapult update'. Shaping the network of centres'. Technology Strategy Board UK
- UK Commission for Employment and Skills (2010) 'Progression from Vocational Applied Learning to Higher Education'. University Vocational Awareness Council for UKCES
- UK Commission for Employment and Skills (2009) 'The Employability Challenge'. UKCES
- UK Department of Business Innovation and Skills (2011) 'Higher Education. Students at the Heart of the System'. Command 8122 June
- Universities UK (2010) 'Efficiency and effectiveness in Higher Education'. A report by the universities efficiency and modernisation task group. Efficiency and modernisation in higher education. Phase II. Implementation Plan
- Universities UK (2012) 'Universities Enabling Social Enterprise. Delivering benefits for all'. Universities UK London, November
- Universities UK (2012) 'Universities UK response to the student immigration system – a consultation.
- University Alliance (2012) 'Growing the future: universities leading, changing and creating the regional economy'. www.university-alliance.ac.uk
- Valima, J. (2009) 'The relevance of Higher Education to Knowledge Society and the Knowledge Driven Economy: Education, Research and Innovation' Chapter 2 in Kehm, B. M., Huisman, J. And Stensaker, B. Eds. (2009) The European Higher Education Area. Perspectives on a Moving Target' pp 23-41. Sense Publishers Rotterdam.
- Watson, D., Hollister, R.M., Stroud, S.E. and Babcock, E. (2011) 'The Engaged University. International Perspectives on Civic Engagement'. Routledge.
- Watson, D. (2010) Universities' Engagement with Society. in The International Encyclopedia of Education, 3rd Edition, edited by Barry McGaw, Penelope Peterson and Eva Baker, Elsevier.

- Welikala, T. (2011) 'Rethinking International Higher Education Curriculum: Mapping the research landscape'. Universitas 21
- Weston, P., Storey, D.L. and Martin, F. (1995) 'Outcomes reported by students who participated in the 1994 Shell Technology Enterprise Programme'. University of Nottingham Institute for Enterprise and Innovation.
- White, D., Warren, N., Faughnan, S. and Marian, M. (2010) 'Study of UK Online Learning'. Report to HEFCE by the Department of Continuing Education, University of Oxford
- Whitehead, A.N. (1927) 'Universities and their Function' Address to the American Association of the Collegiate Schools of Business. Harvard University
- William R. D. (1958), 'Environment as an Influence on Managerial Autonomy.' *Administrative Science Quarterly* 2 pp 409-443
- Williams, L., Turner, N. and Jones, A. (2008) 'Embedding Universities in Knowledge Cities'. Work Foundation UK
- Wilson, T. (2012) 'A review of business-university collaboration'. Department of Business and Skills UK