2010-01-01

Transforming Academic Practice: Human Resources Challenges

Ellen Hazelkorn
Technological University Dublin, ellen.hazelkorn@tudublin.ie

Amanda Moynihan

Recommended Citation

Hazelkorn, E. & Moynihan, A. (2011) Transforming Academic Practice: Human Resources Challenges. In S. Kyvik & B. Lepori (eds.) *The Research Mission of Higher Education Institutes outside the University Sector*. Dordrecht: Springer. Forthcoming. The original publication is available at www.springerlink.com http://www.springerlink.com/home/main.mpx

Transforming Academic Practice: Human Resources Challenges

Ellen Hazelkorn* Amanda Moynihan†

*Dublin Institute of Technology, ellen.hazelkorn@dit.ie

†Dublin Institute of Technology, amanda.moynihan@dit.ie

— Use Licence —

Attribution-NonCommercial-ShareAlike 1.0

You are free:

- to copy, distribute, display, and perform the work
- to make derivative works

Under the following conditions:

- Attribution.
  You must give the original author credit.
- Non-Commercial.
  You may not use this work for commercial purposes.
- Share Alike.
  If you alter, transform, or build upon this work, you may distribute the resulting work only under a license identical to this one.

For any reuse or distribution, you must make clear to others the license terms of this work. Any of these conditions can be waived if you get permission from the author.

Your fair use and other rights are in no way affected by the above.

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

Chapter 5

Transforming academic practice: Human resource challenges

Ellen Hazelkorn and Amanda Moynihan

Changes in academic work

The emergence in the post-1960s of a higher education alternative to universities was a response to the pressures of socio-economic demand and new opportunities at a time of rapid economic change (Scott 1995, Huisman et al. 2002, Taylor et al. 2008). In many cases their growth was facilitated by upgrading existing vocational training institutions which had a ready cohort of students while others were formed through merger or occasionally as *ab initio* institutions. Each country responded differently to the same challenges but essentially whether these higher education institutions (HEIs) were called polytechnics (UK), fachhochschulen (Germany), hogescholen (Netherlands and Belgium), institutes of technology (Ireland) etc., they were established to provide vocational, career oriented, technological and specialist programmes at certificate, diploma and/or bachelor level with a responsibility towards their region or the SME sector. Often branded today as universities of applied sciences (henceforth UAS), their institutional mission has variously been described as 'carrying out applied research and development work' (Finland), 'scientific consultancy work and organised technology transfer activities' (Germany), or transmitting 'scientific knowledge that is both theoretical and practical in order to prepare students for professional life' (Portugal).

Over the years, the environment which generated these institutions has changed dramatically and the strategic focus of many of them has changed as a consequence. Even before the harmonising effects of the Bologna process had begun to take full effect, the political and public climate was already changing (see Verhoeven 2008: 56, Välimaa & Neuvonen-Rauhala 2008: 94). As higher education came to be seen as vital to economic development and national innovation, these institutions began to offer higher level programmes and strengthen their research capacity and capability in order to support professional training and advances in knowledge. In recent years, these trends gathered pace under the influence of EU and national policy decisions, such as the strategy for a European Research Area, academisation in Belgium, competitive research opportunities in Ireland, and re-designation of university colleges in Norway. They have all contributed to raising both the profile of research and the sense of urgency. In the process, they have impacted significantly on role and responsibilities of academic staff in UAS, their contractual arrangements, and their working environment.

The academic literature, with notable exceptions (see below), has however been largely silent on the particulars of this experience. Instead, it has chronicled the transformation of a relatively autonomous academic profession operating within a self-regulated code of 'collegiality' into an increasingly 'organizationally managed' workforce comparable to other salaried employees (Slaughter & Leslie 1997, Rhoades 1998, Farnham 1999) as if this is the common and only experience – not just across national borders but across sectoral boundaries. Yet, it stands to reason that if massification results in a greater diversity of institutions, then these HEIs will recruit 'different kinds of staff to the academic profession, who, in turn, are more disparate in their professional and social origins' (Farnham 1999: 21). Thus, not only is the 'ideal, and self-concept, of the professor' (Altbach 2000: 13) no longer valid but the notion that there is a 'single academic profession' (Marginson 2000: 23) with a common experience of academic work no longer applicable. The 'diversification of institutions has meant diversification of the professoriate [and the professoriate experience] as well' (Altbach 2000: 13).

At the time many UAS academic staff were initially employed, 'their principal role [was] as teachers' (Pratt 1997) and their focus was on vocational/professional practice. Most held an undergraduate qualification with professional experience, but few had research credentials or practice. As the focus of attention has shifted towards more active engagement in the research enterprise, these academic staff have been asked to build up a sustainable research profile, participate in 'national and international scientific networks' and develop a presence in international publications. The sheer magnitude of this transformation – on a personal and collective level – cannot be underestimated; 'acquiring and/or developing research competences is a complex process of apprenticeship which requires time and resources' (Lepori & Attar 2006: 57, 64). Indeed, the particular characteristics of academic work and institutional culture in UAS may necessitate policy involvement in maximizing research potential.

While this profile has changed over time, many new academic staff are still being recruited into institutions which retain many historic values and where 'academic work' is still contested. According to Bland and Ruffin (1992), building an active and prominent research portfolio is thus dependent upon changes in academic attitudes and behaviour, such as social and professional norms, what it takes to be successful, promotional opportunities and processes, and changes in organisational structures and environment (quoted in Pratt et al. 1999: 46). The process of growing a research culture – of transforming an institution from a teaching to research-focused one is complex, difficult and potentially lengthy, equivalent to a 'generational change among the academic staff...' which could take twenty years (Hazelkorn 2008: 166). Studies on research culture have focused on the kind of environment that leads to research productivity among faculty members in HEIs. The process of building the

appropriate environment can be theorised as a paradigm shift comprising 'three concentric circles of change' whereby academic staff are (1) transforming their own academic practice concurrently with a (2) revolution in the strategic focus and institutional culture at a time when (3) higher education nationally and globally is itself coming under pressure to modernise, be competitive, more accountable and efficient (Hazelkorn 2008).

This chapter argues that there are particular characteristics of academic work and institutional culture in UAS across Europe. Divided into three sections, the first two sections describe (1) academic employment conditions across selected UAS, and (2) the teaching and research environment. Finally, (3) discusses the tensions and challenges that arise as UAS attempt to develop a research culture. The chapter draws variously on a subset of country experiences, e.g. Belgium, the Czech Republic, Finland, Germany, Ireland, the Netherlands, Norway and Portugal, and explores the extent to which these developments transcend institutions and countries and should be considered part of a wider sectoral experience. Finally, because UAS – despite differences in origin and mission – are competing with universities for research funding and prestige, comparisons, where appropriate, between sectors will help contextualise the UAS experience.

Comparison of academic employment in UAS

For many UAS, research is a relatively new mission objective, and for most academic staff, research competence is a new condition of employment. 'Typically [they came]...from work experience in their profession rather than the traditional academic progression from doctoral student to apprentice academic' (Adams 2000). Many had a taught (or non-research) masters degree in disciplines which were new, and often without a strong academic focus or research ethos (Gellert 1994). In some disciplines such as nursing, media, art, design, architecture, social work and social care, postgraduate qualifications are only recently becoming the norm (Jones & Lengkeek 1997), and the development of a research culture with internationally agreed academic outputs is still under discussion. As a consequence, many inherited academics – those associated with the original institutional mission – lack the appropriate research background or experience and/or have limited capacity to produce the obligatory outcomes at the requisite level or compete for funding.

Given their origin and mission, it is not surprising that research has not been a precondition for appointment. Most countries continue to require an undergraduate qualification supplemented with appropriate practical or professional experience. Only relatively recently has the masters degree become a prerequisite for career advancement in Portugal, the Czech Republic or Ireland. Candidates must produce verifiable evidence of publications or other scholarly activity, albeit institutions have discretion in most circumstances. This is similar for most senior positions in all countries, such as the lector who leads a 'knowledge circle' in the

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

Netherlands or the senior lecturer in Ireland. Portugal's new funding formula (2006), which is tied to indicators such as the educational level or the percentage of academic staff holding a PhD, has contributed to changing the profile (Taylor et al. 2007). In Belgium, seniority combined with useful professional experience is required for promotion to most posts, albeit promotion to professor requires that the college itself must be actively involved in scientific research in co-operation with a university within the field of the vacancy, and that the candidate must have been a lecturer, senior lecturer, or assistant professor for six years at a college or university and, during that time, have been responsible for quality research (Verhoeven & Beuselinck 1999, Verhoeven 2008: 52). This trend is likely to accelerate under the academisation process now underway in Belgium, and similar processes in other countries.

Hence, the qualifications profile is changing, slowly and unevenly across the sector. While national differences and institutional self-reporting make direct comparison difficult, the percentage of academics with a PhD is still quite low (see Table 1). Yet even these levels are straining traditional collegial relationships and creating a culture clash between departments within the institutions and between staff. Departments offering vocational programmes are likely to recruit individuals with high levels of practical and professional skills whereas other departments, in the same institution, offering more academic or advanced level programmes, are likely to require a PhD and research experience. In these circumstances, it is not uncommon for different attitudes and assumptions about academic work to emerge, not just between individuals but also in discussions about priorities, and academic procedures and policies.

Table 1 Indicative research competence of UAS academic staff

Country	**Percentage of academic staff with a PhD**	**Comments**
Belgium	10% (2004) (Estimation)	Based on total teaching staff
Finland	6.4% (2004)	Based on total teaching staff
Ireland	9-11% (2007)	IOTI 2008:17[1]
Netherlands	3.7% (2007)	Based on total teaching staff
Norway	20% (2008)	Based on permanent academic staff
Portugal	11% (2005)	Public institutions only
Switzerland	16% (2008)	Includes only professors and researchers, excludes teachers (most of them external)

[1] This reflects the percentage of 'academic staff in research' which is the closest data available in Ireland

Because reputation is often closely aligned to institutional and personal status, academic nomenclature is important. Many countries continue to use language which appears closer to the secondary sector from which many UAS emerged. Unlike the university sector which has been subjected to greater globalising and homogenising processes over the decades, there is no agreed terminology, appointment process or criteria for appointment for most UAS. Portugal uses the generic term 'professor' to refer to all academic staff, but the Czech Republic and Germany use professorial or 'docent' – which often refers to teaching staff usually not holding a PhD – for higher grades, while entry grades are referred to as teacher and lector. Finland, the Netherlands and Ireland use the term lecturer, albeit in the latter there are different pre-noms to indicate the level, e.g. assistant or Lecturer 1, 2 or 3, respectively. There is no apparent correlation between qualification level and terminology, as the Finnish example illustrates, but there is arguably a perceived differentiated status being conferred upon UAS academics. These subtle distinctions can influence academic behaviour and institutional culture – and importantly how UAS academics are viewed by university peers.

Despite retaining many of the virtues of public or civil service employment, most countries lack a promotional or US-style tenure track process which provides a transparent career path with standardised procedures clearly indicating what it takes to be successful (Enders & de Weert 2004: 12-14). Many countries, e.g. Germany and the Czech Republic, have quite rigid systems which invest considerable professional status and benefits in professorial staff while restricting opportunities, including progression and promotion, to younger academics. In others, such as Portugal and Ireland, career grades and promotional processes are determined by the government and national negotiations. There are a restricted number of posts per institution, and new appointments or promotional opportunities only arise once a vacancy occurs. The new position is then advertised openly. In Ireland, promotion beyond senior lecturer requires stepping outside of teaching and research to take up a management type position, e.g. Head of Department or Head of School – in other words, there is no academic career path. These mechanisms have contributed to a structure with little opportunity to appraise and reward individual performance – contributing to difficulties recruiting and retaining ambitious academics (Taylor et al. 2007). In sharp contrast, Norway and Belgium both have career tracks. Norway's policy of treating universities and university colleges equally has resulted in a common career structure (1995) with promotion to professorship based on research competence (Olsen, Kyvik, & Hovdhaugen 2005, see also Chapter 12). While the senior lecturer and lecturer are predominantly teaching positions with the possibility of doing some research, permanent academic positions are associate professor and professor, which combine teaching and research positions.

Permanent contracts appear to be quite common in most UAS. Two thirds of UAS academic staff in Belgium and Finland are permanent while the proportion is closer to 90% in the Netherlands and Norway (Enders 2001: 14) and 94% in Germany (RIHE 2008:142). Portugal

is exceptional in that only 6% of academic staff in polytechnics, compared to 59% in universities, are permanent (Taylor et al. 2007). In contrast, most Finnish junior academics work on short term contracts because their funding comes from external sources (Välimaa 2001: 83, 85), while there has also been widespread use of temporary or contract appointments – some on a semester or hourly rate, in the Czech Republic and Ireland, respectively. Recent EU Directives on Part-time and Fixed Term employment have sought to eliminate the worst excesses by harmonising employment conditions between part-time, temporary and full-time permanent appointments (EU 1997, EU 1999).

Traditionally, the participation of women in academic life has been low, particularly in the higher grades. According to Enders and de Weert (2004: 16), the overall

> *percentage of women [in higher education] dwindles by career stages, particularly in the tenured positions. Their progress in a scientific career is slower compared to men and their numbers start to rarefy climbing the ladder of responsibilities. It is clear that much talent is getting lost.*

This trend is apparent in the countries under consideration here but again the pattern is more complicated. In Norway, 46% of academic staff in the state colleges are female, but only 17% of the full professors and 30% of associate professors were women. The same pattern can be found in Belgium (Flanders): 49% of staff are female but only 8% of the full professors and 11% of the assistant professors. Comparable figures for the largest Institute of Technology in Ireland, shows females comprise 34% of the total academic population but 24% at Head of Department/School and Director (VP) level (DIT 2008). Yet, a recent survey of challenges to research at the same IoT also indicated that gender was not a prominent concern. Below the macro level, divergence is more apparent and discipline related. With feminisation of disciplines, e.g. media, social sciences, nursing, art and design, languages, many UAS ironically have a positive track record. In Portugal, male academics constitute 58% of the total workforce (2002) but 78% of engineering academics while females are 65% of those in education faculties (Taylor et al. 2007).

The Teaching and Research Environment

Given the history and mission of UAS, the emphasis has been and continues to be on practice-based vocational/professional teaching and learning at the bachelor or sub-degree level although this is changing and more postgraduate programmes are being offered. Class-sizes have tended to reflect this, but student/staff ratios have usually been higher in UAS compared with universities. In Belgium, the ratio is broadly similar across all HEIs. Ireland is atypical, with a significantly lower student/staff ratio in UAS than universities, although the gap is likely to be reduced under new (2008) funding arrangements. At the same time, student contact levels and workloads have usually been higher across the UAS sector than in

universities. Despite greater emphasis on research which has impacted on and altered promotional criteria, workload patterns have remained relatively static and/or grade related. While university academic staff teach, on average, only 40% of the time, UAS academic staff can teach as much as 90% of the time (Belgium, Germany and Ireland). This represents approximately 16-18 plus teaching hours per week (Ireland) compared with research-oriented universities which average 6 hours per week (Portugal); others teach somewhere between these two bands (see Enders & Teichler 1997, Adams 1998, Gellert 1994).

While the level of interest in research and the time spent varies across countries, different institutions within each country and between different academics, the key distinction between universities and UAS is that the latter do not have an explicit allocation of research time. The Czech Republic allows teaching load to reduce with increasing academic rank whereas Finland, Ireland, the Netherlands and Belgium allow decisions to be made at institutional or sub-institutional level as long as the budget allows. This is not without problems; for example, Belgium trade union pressure to reduce the number of contract positions has discouraged academics temporarily swapping teaching or research time. The need for greater flexibility is increasingly manifest as institutions struggle to develop the appropriate research environment. Reforms in Finland introduced at the beginning of 1999 aimed to make the allocation of teacher's time between academic tasks and duties more accommodating. In the Czech Republic, teaching time decreases with academic rank, while Dutch academic staff who belong to a knowledge (or research) centre can get reduced teaching loads. Belgium provides opportunities for a professor to leave his/her position for some years to conduct research and come back later. It is also not uncommon for external research funds to be used to buy-out teaching time or make changes in the timetable.

Only the Norwegian government has stipulated that undertaking research is neither an individual duty nor right, but an institutional responsibility. Hence university colleges are required by law to determine the annual work programme for each individual in accordance with competences albeit all academics have a responsibility to keep 'themselves abreast of developments in their own field and those skills in which students are to be trained'. These guidelines were challenged in 1995 when a common career structure across the universities and state colleges was introduced. However, the Norwegian Parliament stated it was 'reasonable that academic staff who work within the same field and at the same level, over time shall have the same working conditions independent of institutional type' (see Chapter 12).

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

Table 2 Indicative percentage of work time spent on teaching (Average across all grades)[2]

Country	**Percentage of work time spent on teaching**	
	Universities	**UAS**
Belgium	40%	90%
Finland	43%	74%
Germany	40%	90%
Ireland	40%	80-90%
Netherlands	40%	60-80%
Norway*	42%	58%
Portugal**	6-9 hours per week	6-12 hours per week
Switzerland	40%	51%

* These percentages are self-reported by academic staff in mail-surveys. Teaching includes time for supervision of PhD students.

** Information on Portugese polytechnics and universities refers to the public institutions only.

The combination of high student/staff ratios and teaching loads has been blamed for why UAS academics do not/can not invest sufficient time in research. This may reflect different academic cultures and the way in which academic work is viewed. For example, colleagues in universities see themselves performing several inter-related tasks: teaching, research and service, but UAS academic staff do not always share this view. They were appointed originally to a teaching-only role in an institution which did not prioritise research or scholarship (see Berrell 1998). And, because many older academic staff were hired at a time when their institution was predominantly or only focused on vocational education, the new environment represents a substantial change in their working conditions. Many have a trade union attitude towards their careers and workloads, and enjoy relatively long summer holidays. This is the case in Belgium and Ireland. In the former instance, the law guarantees each university college teacher at least 9 weeks holidays, and seniority might expand this, whereas in Ireland academics finish work on the 20th June and do not return until 1st September. In Germany, professors and academic staff at *fachhochschulen* work 40 hrs per week compared to university professors who work 52 hrs per week. (RIHE 2008: 139).While there has been a noticeable cultural shift among some academics, the holidays carry little or no stipulation or expectation that this non-teaching period should be used for research – unlike colleagues in universities.

Due to their history and mission, UAS have inevitably had limited resources for research but now find themselves competing directly with universities because of changed circumstances. As such, they have been less attractive to research-active scholars, and have tended to spend

[2] The percentages are calculated using the following formula:
(1 hour teaching = 1 hour preparation / 40 hours per week)*100. This calculation was not deemed applicable to Portuguese institutions.

significant resources and time on staff development. This is due to the fact that many academic staff have neither the experience or research prerequisites and require much greater institutional support than colleagues in universities would require or expect. The acquisition of a PhD, however, does not alone guarantee the transition to research active status – thereby raising questions about whether the time and resources spent represents good value-for-money. Because of the arguably less favourable or more restrictive funding model under which UAS operate, there are also fewer resources available for research support, including sabbaticals. As the percentage of the government core grant declines across most European countries, academics are pressurized to earn a greater proportion or all of their research funding competitively. This is the case in Belgium, Germany, Ireland and Norway. In Ireland, because the government grant has (until 2008) been on the basis of teaching hours, there has been an institutional disincentive or penalty for encouraging too much research time.

Despite changes in policy and new demands on UAS institutions to develop research capacity and capability, there has been little additional or targeted funding given to them. German *fachhochschulen* were specifically excluded from competing for the Excellence Initiative. In contrast, Belgium *hogescholen* receive a special academisation grant, and targeted research funds have been available for Irish IoTs. UAS focus on teaching over research has also influenced the type and quality of the facilities which they have. Libraries, laboratories and office space are regularly cited as no longer fit-for-purpose (see Table 3). While it may seem reasonable to argue that if UAS want to devote resources to research, this must come from the teaching allocation, given their historic, mission, governance and funding circumstances this demand poses a particularly steep ‘barrier to entry’ at a time when competition is accelerating (Hazelkorn 2005).

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

Table 3 Comparison of resources for research

Country	Research facilities	Research funding	Staff development
Belgium	No office accommodation; most academics work at home. Research units comparable to university labs but too few. Libraries small.	'Envelope' of funds index-linked to unit costs and consumer prices. Lump sum plus other funding from competitive sources until 2013.	Education/research programmes available through university associations. PhD programmes available in universities.
Czech Republic	Disadvantage partially alleviated by focus on 'inexpensive' disciplines. Libraries not research focused.	No dedicated research funding available. Competitive project funding open to all HEIs.	National staff development framework, which leaves little leeway for institutions.
Finland	Because there are few science fields, main requirement is library services but this is poorly resourced.	Polytechnics receive project-based funding for joint ventures to gradually develop R&D.	Depends upon and varies between institutions
Germany	Less funding with comparably poorer facilities than universities.	Public funds generally a lump sum; most Länder have small output-based funding budgets of 2-3% total public budget.	No specific facilities in UAS.
Ireland	Relatively poor quality facilities and libraries.	Core grant based on teaching hours plus small dedicated head-start grant. Open competition for research funding with universities.	In service training is matter for institution. Support for PhD programmes, and research and supervisor training.
Netherlands	Infrastructure for research very limited.	Institutions funded via formula-based lump sum, but there are special schemes for research funding.	Institutional responsibility within national collective labour agreement. Regulations for study facilities and staff development.
Norway	Library and administration support good, but lab equipment poor.	Research undertaken within core annual budget but engage in contract research to maintain level of operations.	PhD and senior lecturer programmes. PhD programmes available in universities.
Switzerland	Reasonably good laboratory equipment, facilities and informatics equipment, as well as administrative support.	External funding through contract with companies and public institutions; UAS provides infrastructure and to some extent time for research.	Mostly on-site training to research, limited offer of courses.

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

Issues and challenges

If massification and expansion in the 1960s differentiated the second stage in higher educational development from its elite origins, then the late 1990s marked the beginning of the third stage. By then, it was clear that a broadly educated population could no longer be formed by and within universities alone. Similarly, Europe's continuing aim to be a/the leader in the global knowledge economy has highlighted the necessity to involve all HEIs in research, development and innovation (RDI) if this ambition is to be realised. These challenges are huge, particularly for UAS which, as already discussed, have emerged from and with a different tradition. Some governments, such as Norway have made research an institutional responsibility, while the Netherlands, Ireland and Belgium have targeted particular resources and/or policies to help give a head-start. But, the challenge is not just at the institutional level; more is expected of academic staff. The transition from vocational teaching to research-informed professional education requires a substantial transformation in academic culture.

Studies on developing a research culture have focused on the complex inter-relationship between attitudes and behaviour which is reinforced through the organisational culture. Pratt et al. (1999: 46) argue that it is not 'sufficient for a dean or department chair to try to change people's attitudes towards research...rather, whole sets of beliefs must be changed.' A recent qualitative study in an Irish IoT questioned academic staff on performance measures and found the majority (9/17) cited student numbers as the main performance measure despite research (cited by 2/17) being a key element of the institutional strategy (Lillis 2007: 3) . To be successful in cultivating a research ethos requires alignment and shared beliefs across the organisation, concerning academic work and requirements for performance and success in order to create the kind of environment that leads to high research productivity.

Challenges for staff and institutions

Despite introducing new appointment and promotional criteria and procedures, the percentage of academic researchers with a PhD in the various UAS remains low. All UAS provide staff development opportunities but such processes may not be sufficient or always suitable to overcome these difficulties. Indeed, the time spent acquiring the appropriate research qualification – in other words a PhD – could be counterbalanced by a recruitment strategy both in terms of time spent and money. Even if UAS are successful in recruiting a significant number of younger, more active and internationally engaged researchers, the strategy could destabilise the organisation: older, existing staff may feel aggrieved that they have been overlooked or marginalised while the latter may feel restricted by the prevailing culture or critical of the pace of change, e.g. inadequate physical environment, the quality and/or quantity of research space. Many of the former may also be concerned about how the changes and new demands will impact on her/his own workload, position, promotional and career

opportunities, and the balance between teaching and research. This person is likely to be a product of the institution's history and a potential contributor to its future, but her/his willingness to engage in research may also be contingent upon the supports and rewards that the institution offers (Hazelkorn 2005, 2008). The lack of sufficient resources restricts an institution's ability to respond appropriately and speedily – a situation often aggravated by perceived lower status of UAS vis-à-vis universities which has hampered its ability to earn funding via philanthropy or partnerships. But regardless, the real challenge is to find the appropriate balance between staff development and recruitment, without severely unsettling the body politic. This can be difficult as the requirements and expectations of the different academic staff can be in conflict.

The actual work environment is often cited as another constricting factor but the situation is not necessarily straight-forward. According to Bland and Ruffin (1992) one factor present in high performance research environments is 'appropriate rewards' and peer recognition. While it is unclear the extent to which the lack of a clear career path or specific contractual arrangements actually discourage UAS academics to be research active, the work environment is generally perceived as being more restrictive and less welcoming and rewarding to openly ambitious individuals than would be the case in universities. Rigid career structures are also seen to contribute to difficulties recruiting and retaining ambitious and prolific academics. Ultimately, it may be the intangible reputational and status factors, which are associated with UAS positioning nationally and globally, which influence and impact most on institutional and academic behaviour.

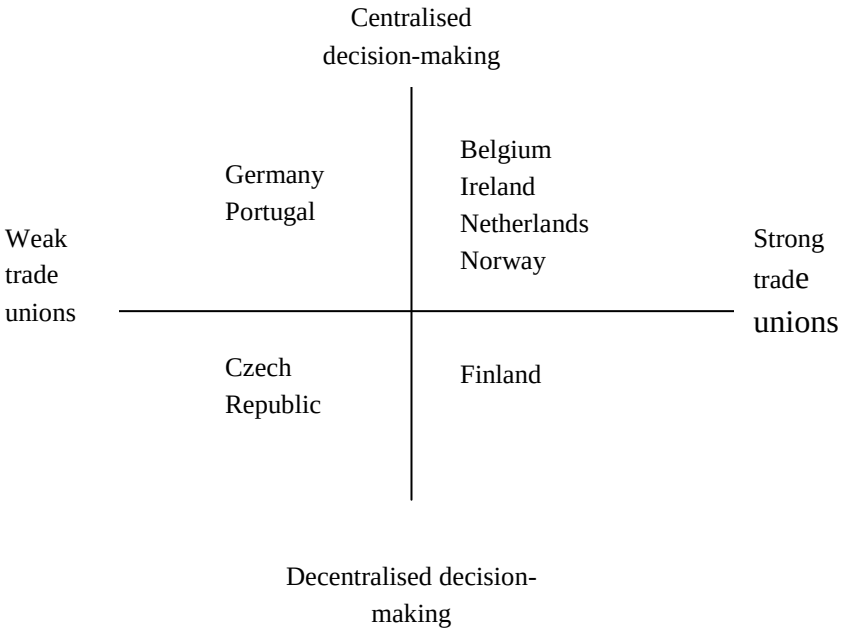
Many UAS staff complain about the lack of esteem for research or sufficient research time. While there is little doubt that the resources available are more limited, the issue may be one of better use of resources and time management. As Pratt et al. (1999: 51) observe, 'it was possible, during the 26 weeks of the teaching year, to arrange their teaching in a way that left one day each week free of teaching commitments as a "research day"'. Likewise, the time spent on holidays by Irish IoT academics is peculiar to their historic position and would be more akin to secondary teachers than university colleagues. Some individuals have sought to resolve tensions between 'excessive' teaching workloads and research by seeking to buy themselves out of teaching through competitive grants or pursuing research-only positions. Ironically, this solution could be the Achilles heel of the teaching-research nexus, breaking the link between teaching and research by encouraging special arrangements for research-active staff.

The trend towards greater institutional autonomy, making institutions and academic staff more accountable, increasing academic productivity and creating greater flexibility in the academic workforce has been evident in the university sector for some time as a result of competitive and marketisation pressures but has been evolving more slowly in UAS. This is

Published in Svein Kyvik & Benedetto Lepori (eds) (2010)*The Research Mission of Higher Education Institutions outside the University Sector*. Dordrecht: Springer. The original publication is available at www.springerlink.com

largely due to their governance model, which has emerged as part of a top-down binary structure of mission differentiation. Germany, Portugal, Belgium, Ireland, the Netherlands and Norway retain much of this tradition, with a strong centralised decision-making structure (see Figure 1), albeit there is some variation in trade union strength. This scenario has hindered the ability of these institutions to develop human resource strategies and policies appropriate to their institutional challenges. Changes could benefit academics who wish to excel not least because existing policies have tended to dampen down dynamism and personal ambition by treating all academics equally and rewarding seniority rather than merit. New policies challenge this notion. Resolution of these tensions could involve reaching a new understanding of what constitutes academic work, with the respective trade union, which could have implications for institutional mission. Yet, doing nothing is not an option because it is uncertain how new ambitions can be realized without such action.

Figure 1 Regulating employment relationships



Source: Adapted from Kahn-Freund (1977).

While it is neither possible nor desirable to convert all academic staff into active researchers, it is vital to embed research activity as a professional norm within the institutional culture from the moment of appointment and certainly prior to promotion. Most UAS appear to be following this pattern, focusing on staff development initiatives developing appropriate facilities and other incentives in order to attain high performance. Organisationally they are preferencing interdisciplinary and collaborative teams in order to build sustainable critical mass. However, UAS struggle to attain the necessary balance of cultural coherence, not least because their governance structure retains many historically restrictive practices and comprise

many inherited staff recruited for a different purpose with a different vision of the institution and their academic work. Their ability to present a clear, unfettered vision and mission is not always possible, contributing to confused and conflicting messages.

The challenge is to develop a research policy and agenda mapped against its own mission and competences, rather than sending mixed-messages to academic staff by seeking to ape the agenda of traditional universities. But this means making choices in ways they may not previously have encountered or anticipated. What is the best way to motivate, mentor and facilitate research-active faculty while ensuring that teaching-focused academic staff do not feel marginalised? What is the appropriate balance between recruiting new academic staff or helping existing academics develop research competence? Should research be a key criterion in appointment and promotion or would it be better to establish dual or parallel career paths, and if so, what impact would this have on the institutional mission? Because funding is limited, is it best to support research active staff or try to boost the performance of the greatest number?

Challenges for government

Drawing on the experience of UAS across Europe, it seems clear that while there are distinct national contexts and circumstances which cannot be ignored, there are sufficient similarities to suggest that the experiences cross national boundaries and operate almost irrespective of the political party in power. UAS face many challenges associated with their status and their late entry into the research world. Creating the appropriate research environment and culture is dependent upon a cluster of factors and is not simply the result of a single aspect or condition of employment. A key ingredient is the role of policy, but it is not clear the extent to which governments fully understand what a strategy for diversity of mission actually entails. Many governments continue to use language which unwittingly confers differentiated status.

At its simplest, many governments have historically used regulatory mechanisms to enforce differentiation between vocational and academic education. When that model was no longer fit-for-purpose, some governments, e.g. the UK, sought to reconstruct a new binary between teaching and research institutions. Underpinning some of the indecisiveness is the realisation that global competition for research excellence – as exemplified by worldwide rankings – is pushing up the cost of the reputation race. Given mounting pressures on the public purse, governments are struggling with whether to concentrate research activity in a few universities or to recognise and support research excellence wherever it occurs. But another problem arises over confusion about what constitutes research. While advocating the importance of applied research, policy and evaluation language privileges expensive basic scientific discovery conducted in research-intensive universities and ignores the intellectual and strategic importance of collaborative and interdisciplinary work focused on useful application

conducted by UAS with external partners including the wider community (Gibbons et al. 1994).

As higher education systems, nationally and internationally, become more competitive, barriers to entry are rising. Experience strongly supports the view that challenges experienced by UAS, and their staff, are not likely to be overcome by conventional means. In other words, without active and selective use of policy instruments, UAS will find it increasingly difficult if not impossible to overcome barriers to entry because 'the pecking order of research activities is not easy to change' (Hazelkorn 2005: 138). Such actions should include removing many of the legislative and other constraints which currently curtail or restrict the operation and development of UAS. Finland stands out with the greatest percentage of PhDs, the most time for research and a legislative expectation that teachers and students participate in research while Norway has a common career structure with similar conditions of employment; UAS in the Netherlands have a distinctive research function supported by all major stakeholders with the capacity to award end of year bonuses, albeit they have the lowest number of academic with a PhD. National comparisons are complicated, but evidence suggests a strong correlation between institutional autonomy, performance pay, flexibility in salary negotiation and national support for research with research productivity. This would correspond with the conclusions of a recent report which argued that research productive institutions enjoy considerable institutional autonomy (Aghion 2008: 50) to define goals, allocate research time and resources, and reward research performance.

Conclusion

Global competition has pushed higher education to the centre of national economic and innovation strategies. The OECD (2009) have reiterated the importance of research and innovation as key to sustainable recovery from the current economic recession, encouraging governments to channel stimulus funds to R&D, entrepreneurs and education. Building research capacity and capability are no longer optional, and human capital formation is critical to success. This refers to not just the graduates but also the academic staff. But developing a research culture is a complex and lengthy process, and considerable challenge. The experience of European UAS and their academic staff is not unique, and replicates that of colleagues in other jurisdictions, most notably the UK and Australia. It may be nuanced by national circumstance, level of maturity, and cultural and political milieu, including party political and ideological perspectives, but UAS share a contested view of academic work and many characteristics of their employment conditions. The high teaching load and commitments plus basic facilities were appropriate when they were founded, but it is questionable whether they are fit for their new purpose. The situation is not however static. While university colleagues complain about research intensification and tighter regulation, UAS academic staff are moving towards greater flexibility under the auspices of institutional

autonomy. Some governments and institutions have begun to tackle these deficiencies with greater alacrity than others – with anticipated results. This suggests that policy is critical – and that institutional action is not sufficient in itself to enable UAS to overcome the barriers to entry. At the macro level, UAS and universities are converging in their governance and management models, and are likely to meet somewhere in the centre between regulation and autonomy, between rigid and flexible structures, and between research-intensive and teaching-intensive.

Acknowledgements

Special thanks are due to colleagues from contributing countries for all their help assembling the comparative information, and to Brian O'Neill and Kevin Lalor for their helpful comments and suggestions during the course of writing this chapter. All errors remain ours.

References

Adams, D. (2000). Views of academic work. *Teacher Development*, 4, (1), 68.

Aghion, P., Dewatripont, M., Hoxby, C., Mas-Colell, A. & Sapir, A. (2008). *Higher aspirations: An agenda for reforming European universities*. Brussels: Bruegel Blueprint Series.

Altbach, P.G. (2000). The deterioration of the academic estate: International patterns of academic work. In P.G. Altbach (Ed.), *The changing academic workplace: Comparative perspectives* (pp. 1-33). Boston: Centre for International Higher Education, Lynch School of Education, Boston College.

Berrell, M. (1998). The place of teaching research and scholarship in newly established universities. *Higher Education Management*, 10, 77-93.

Bland, C. & Ruffin, M. (1992). Characteristics of a productive research environment: literature review. *Academic Medicine*, 67, 385-397.

Enders, J. (2001). Between state control and academic capitalism: A comparative perspective on academic staff in Europe. In J. Enders (Ed.) *Academic staff in Europe* (pp. 1-23). Westport: Greenwood Press.

Enders, J. & Teichler, U. (1997). A victim of their own success? Employment and working conditions of academic staff in comparative perspective. *Higher Education*, 34, 347–372.

Enders, J. & de Weert, E. (Eds.) (2004). *The international attractiveness of the academic workplace in Europe*. Frankfurt am Main: Gewerkschaft Erzieung und Wissenschaft.

EU – European Council Directive 97/81/EC of 15 December 1997 concerning the Framework Agreement on part-time work, Retrieved: 29 September 2008.

EU – European Council Directive 1999/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work, Retrieved: 29 January 2008.

Farnham, D. (1999). Managing universities and regulating academic labour markets. In D. Farnham (Ed.), *Managing academic staff in changing university systems: International trends and comparisons* (pp.15-43). Buckingham: Society for Research into Higher Education.

Gellert, C. (1994). Diversification in the tertiary sector – new developments in the EU's member states. Introductory text for conference of the Federal Ministry of Education and Science, Bonn, unpublished.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. & Trow, M. (1994). *The new production of knowledge*. London: Sage.

Hazelkorn, E. (2005). *Developing research in new institutions*. Paris: OECD.

Hazelkorn, E. (2008). Motivating individuals: Growing research from a "fragile base". *Tertiary Education and Management*, 14, 151–171.

Huisman J, de Weert, E., & Bartelse, J. (2002). A European perspective on academic careers. *Journal of Higher Education*, 73, 141-160.

IOTI – Institutes of Technology Ireland (2008) *Framework for the Development of Research in the Institutes of Technology, 2008-2013*. Ireland: IOTI.

Jones, G. & Lengkeek, N. (1997). Research development: The experience of the new university', *Research and the new tomorrow* (pp. 223-239). Auckland: UNITEC Institute of Technology.

Kyvik, S., Skodvin, O.J., Smeby, J.C. & Sundnes, S.L. (2001). Expansion, reorganization and discontent among academic staff: the Norwegian case (pp. 217-232). In J. Enders (Ed.), *Academic staff in Europe.* Westport: Greenwood Press.

Lepori, B. & Attar, L. (2006). *Research strategies and framework conditions for research in Swiss universities of applied sciences*. Lugano: KTI/CTI.

Lillis, D. (2007) Reconciling Organizational Realities with the Research Mission of the Irish Institutes of Technology. *CHER.* Dublin.

Marginson, S. (2000). Rethinking academic work in the global era. *Journal of Higher Education Policy and Management*, 22, 24-35.

OECD (2009) Policy Responses to the Economic Crisis: Investing in Innovation for Long-Term Growth. Paris. Retrieved 23 October 2009, from http://www.oecd.org/dataoecd/59/45/42983414.pdf

Olsen, T. B., Kyvik, S., & Hovdhaugen, E. (2005). The promotion to full professor – through competition or by individual competence? *Tertiary Education and* Management, 11, 299-316.

Pratt, J. (1997). *The polytechnic experiment: 1965-1992*. London: The Society for Research into Higher Education & Open University Press.

Pratt, M., Margaritis, D. & Coy, D. (1999). Developing a research culture in a university faculty. *Journal of Higher Education Policy and Management*, 21, 43-55.

Rhoades, G. (1998). *Managed professionals: Unionized faculty and restructuring academic labor*. Albany: State University of New York Press.

RIHE (2008) The Changing Academic Profession in International Comparative and Quantitative Perspectives Report on the International Conference on the Changing Academic Profession Project, 2008. Hiroshima, Hiroshima University.

Scott, P. (1995). *The meanings of mass higher education*. Buckingham: Open University Press.

Slaughter, S. & Leslie, L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Baltimore: Johns Hopkins Press.

Taylor, J.S., Graca, M., de Lourdes Machado, M., & Sousa, S. (2007). Portugal: Adapting in order to promote change (pp.211-227). In W. Locke & U. Teichler (Eds.), *The changing conditions for academic work and careers in select countries*. Kassel: University of Kassel.

Taylor, J.S., Ferreira, J.B., Machado, M.L. & Santiago, R. (2008). *Non-university higher education in Europe*. Dordrecht: Springer.

Välimaa, J. (2001). The changing nature of academic employment in Finnish higher education. In J. Enders (Ed.), *Academic staff in Europe* (pp. 67-89). Westport: Greenwood Press.

Välimaa, J. & Neuvonen-Rauhala, M.L. (2008). Polytechnics in Finnish higher education. In J.S. Taylor, J.B. Ferreira, M.L. Machado, & R. Santiago (Eds.), *Non-university higher education in Europe* (pp. 77-98). Dordrecht: Springer.

Verhoeven, J.C. (2008). Questioning the binary divide: Non-university higher education in Flanders (Belgium). In J.S. Taylor, J.B. Ferreira, M.L. Machado, & R. Santiago (Eds.), *Non-university higher education in Europe* (pp. 43-75). Dordrecht: Springer.

Verhoeven, J. C. & Beuselinck, I. (1999). Belgium: diverging professions in twin communities. In D. Farnham (Ed.), *Managing academic staff in changing university systems: International trends and comparisons* (pp. 35-57). Buckingham: Open University Press.

Weert, E. de (2001). The end of public employment in Dutch higher education? In J. Enders (Ed.), *Academic staff in Europe* (pp. 195-216). Westport: Greenwood Press.