

## LTSN Centre for Bioscience

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### Learning, Teaching & Assessment issues for the Teaching of Biosciences in Wales

#### Background

Wales has thirteen Higher Education Institutions (HEIs) of differing sizes and profiles. All of these except the University of Glamorgan are either part of, or associated with, the University of Wales. The largest HEI in Wales is Cardiff University, which is 32nd in size in the UK. The largest post-1992 institution, University of Glamorgan, is 23rd out of a total of 35 "new" universities. The Welsh HEIs provide education to over 100,000 students (almost half coming from outside Wales). All subjects, with the exception of veterinary science, can be studied in Wales. The average number of full-time equivalent students per HEI is about 5,900 compared with a UK average of about 8,500. Whilst the HEIs are small compared with those in England, the sector plays an important role in the economic and cultural life of Wales.

In 2002, the Welsh Assembly Government (WAG) published *Reaching Higher*, a 10-year strategy for higher education in Wales. The twin priorities of the strategy are widening access and the reconfiguration of the Welsh HE sector.

#### Funding of HE in Wales

HEIs in Wales receive funding from the Higher Education Funding Council for Wales (HEFCW) on both a *per capita* and initiative-led basis. The cost of HE in Wales is high compared to other parts of the UK because the sector consists of a relatively large number of very small, widely dispersed institutions (see below). In its funding allocations for 2004/05, HEFCW has maintained the resource for teaching in real terms at 2003/04 levels and supported growth of 1.7% in full-time student places.

An important funding issue is the likely introduction of variable fees in English universities. The WAG has pledged not to introduce top-up fees before 2007/08, if at all, and has promised that Welsh HEIs will not be financially disadvantaged compared with English universities as a result. Details of the sum involved to compensate Welsh HEIs for the loss of variable fee income have not been announced, nor is it clear at this stage where the funding will come from. This is making it difficult to plan finances and inform students about fees. It is clear that without additional funding for Welsh HEIs the quality and competitiveness of the sector, and hence its ability to compete nationally and internationally, will be compromised.

A developing problem for T&L in Wales is that of staff retention. In England, Universities have been awarded an extra £50m in 2004/05 for Rewarding and Developing Staff. HEIs in Wales are already seeing some of their best staff approached by English universities able to offer them higher salaries. Such an exodus would result in a deterioration of the currently high quality of the student experience in Wales.

## **Quality Assurance**

Following a period of consultation with the Welsh HE sector, the *Handbook for Institutional Review: Wales* was published in November 2003. The method has been developed to provide comparability of judgements with other countries in the UK, whilst recognising the context of quality assurance in Wales, including the requirements of the Welsh Assembly Government. Thematic trails will be used to test how well institutional procedures work and how effective they are in practice. Review teams will gather information at the level of individual disciplines, programmes and/or academic departments. The information base for each review will be a self-evaluation document produced by the institution. Students will also have an opportunity to make a written submission to the review team.

The Welsh scheme diverges from the English model in two key respects. In England, there will be detailed audit trails structured around samples of 10% of subject provision in each HEI. This will allow general statements to be made about subject areas across England. This approach would be feasible for bioscience teaching in Wales, since the subject area is widely taught throughout the sector. However, it is felt that the scale of provision for other subject areas makes it unrealistic to proceed meaningfully in this way. Therefore, no specific information will emerge from Institutional review concerning bioscience provision in Wales. The second area of divergence is that publication of summaries of external examiners' reports will not form part of the Welsh process.

## **Widening access**

Welsh HEIs already outperform UK averages in attracting a wide social mix of students and in working with groups and communities that are under-represented in HE. In 2001/02, 91% of full-time students at Welsh HEIs attended state schools, compared to a UK average of 80%, while 15% were from low participation neighbourhoods compared to a UK average of 13%. Nevertheless, there remains a great disparity between the numbers of students admitted to HE from privileged and from disadvantaged homes. The cultural and logistical barriers to widening access that operate in the UK apply equally in Wales, and are compounded by the fact that Welsh HEIs are widely dispersed with relatively poor transport infrastructure. Distance-learning through ICT is likely to become an increasingly important factor to encourage participation in HE from geographically isolated communities.

## **Links with Further Education colleges**

Some 6,000 Welsh HE students currently study in FE colleges under franchise arrangements. Welsh HE and FE institutions are working together to strengthen widening access partnerships to ensure a seamless progression into HE. Through the *Reaching Wider* initiative, now in its second year, HEFCW is supporting four HE/FE regional partnerships involving every HE in Wales to pioneer large-scale and innovative projects aimed at widening access. The partnerships are building on existing good practice, and focusing their efforts on some of the most deprived communities in Wales.

### **Welsh-medium education**

Delivery of HE through the medium of Welsh accounts for less than 2% of the total, despite the growing number of Welsh speakers emerging from secondary schools. It was hoped that WAG would make funding available in 2003/04 to enhance Welsh medium provision in HE. The proposal was for a postgraduate scholarship scheme designed to increase the potential supply of academic staff able to teach through the medium of Welsh. This took the form of an additional year, beyond the normal period of a research studentship, during which the student would undertake Welsh medium teaching and develop new Welsh medium provision equivalent to at least one 20-credit module. However, in the event the funding was not forthcoming. As an interim measure, HEFCW made available a limited amount of £25K to part-fund two Welsh Medium teaching Fellowships, and this scheme is being extended for 2004/05. Since these Fellowships must serve the needs of all disciplines in several HEIs, their impact on Welsh medium provision in the biosciences is likely to be limited.

Canolfan Edward Llwyd (Centre for science through the medium of Welsh) was launched in May 2002. With funding from HEFCW, the Canolfan works to support and develop the use of Welsh modules for scientific and technical subjects. These include a Welsh-medium module in 'Topical issues in Science' which is delivered at Bangor, Aberystwyth and Swansea. Teaching is via video presentations, with tutorial back-up at each institution. Other collaborative modules in core bioscience subjects (e.g. cell biology) are being planned.

### **Employability**

A new EU-funded programme was introduced this year to help Welsh graduates increase their employment prospects. 'Graduate Opportunities in Wales – GO Wales – is providing resources to Welsh HEIs to develop services supporting graduate employability and to businesses to employ and develop students and graduates. GO Wales encourages joint working across the HE sector, with five strands of activity each led by a single institution. These include work experience (Swansea), giving students subsidised placements in small and medium-sized enterprises across Wales; and 'e-employability' (Bangor), which will develop and apply ICT to increase the range and scope of employability provision. GO Wales is a very positive development in the Welsh HE sector and has the potential to have a major effect on the employability of bioscience graduates.

### **Third mission and entrepreneurship**

A permanent and sustainable stream of third mission funding is being introduced by HEFCW from 2004/05, with the aim of stimulating and directing the application and exploitation of knowledge to the benefit of the culture and economy of Wales. The Welsh Development Agency (WDA) is working with Welsh HEIs to improve their capacity to engage with innovation, technology transfer and entrepreneurship. Recent developments include the development of a Bioscience Incubator Facility within the School of Biological Sciences at Bangor to stimulate business spin-outs and commercialisation activities in North Wales.

## **Reconfiguration**

The *Reaching Higher* review questioned whether the Welsh HE sector is sustainable in its current form. Wales has a disproportionate number of small institutions, all of which have to meet certain fixed costs and offer competitive salaries. There is a danger that less popular and least cost-effective disciplines will be dropped, regardless of the skills needed in Wales, and students will have to leave Wales if they wish to study certain subjects. Increased collaboration between geographically clustered institutions is being strongly encouraged and eventual mergers are possible. The biosciences are widely taught throughout the Welsh HE sector, and it will be a time of rationalisation and restructuring in merged institutions. It will be a challenge for HEIs to continue to deliver high quality courses during this period of major disruption.

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