

CENTRE FOR BIOSCIENCE, THE HIGHER EDUCATION ACADEMY

Dr Aine M. McKillop, Country Consultant (Northern Ireland)

Student Population and Funding

In light of the significant changes in the public administration in Northern Ireland due to devolution, we are entering a period where the universities in Northern Ireland may need to establish new relationships and consider the future direction and potential developments in the bioscience area. Future enhancements and forward planning in the bioscience area needs to be mindful of the government agendas such as widening access, Leitch and the skills agenda, the sustainability agenda, work-based learning and employability. One of the guiding principles is ensuring that our universities provide excellent learning opportunities whilst following a student centred approach.

Universities in Northern Ireland continue to keep under review the impact of student fees. The introduction of fees may have important implications in terms of student recruitment and also have an impact on the expectations of students. It is as yet, probably too early to assess the impact of this development. The Maximum Aggregate Students Numbers (MASN) device that is operated in Northern Ireland continues to determine student numbers and thus the two universities continue to investigate opportunities that may also expand non-MASN provision.

Widening Access and Participation

Widening access and increasing participation in University education is particularly important in Northern Ireland in the context of the Higher Education (Northern Ireland) Order 2005. The record of widening access in Northern Ireland institutions is notable and it is important for the economy regeneration of the country. A consequence of widening access in higher education is the greater diversity in students, which ultimately has led to greater support needs. In order to improve the transition of students from schools and improve retention figures, universities have introduced strategies to increase student engagement and promote progression and achievement. Enhanced study skills programmes, longitudinal induction processes and improved studies advice systems are some methods currently used to support inclusivity and progression. In an effort to retain and support students, there is a need to introduce attendance monitoring and follow up of first year students. Student attendance continues to be a concern and attendance is now formally monitored. Staff value the impact of attendance monitoring in terms of student engagement and recognise it as an important process for identifying students with personal difficulties, however in all cases it continues to be extremely resource intensive.

Academics now realise that part of their role is to be involved in promotional and outreach activities and they are committed to disseminating the importance and relevance of science in schools. Student enthusiasm and awareness is needed in bioscience subjects to increase numbers of students opting for the core bioscience subjects. This is seen as increasingly important due to the changes in the Northern Ireland curriculum where science is no longer compulsory at GCSE level. This is significant at a time when Northern Ireland is under considerable economic growth in this area.

In Northern Ireland we have engaged effectively with the further education sector and objectives are underway for further development in this area. Efforts are being made to maximize the further education sector links, and to strengthen established consortiums.

Public Awareness and Regional Engagement

Scholars are now more aware than ever of the need to be involved in the marketing of higher education. In Northern Ireland we are fortunate in that we have very close links with the public, schools and colleges and the profile of the biosciences area has been raised throughout the country. Nonetheless there still needs to be a drive to increase awareness of the biosciences in schools and in the public to ensure there is clear information about the programmes available and to provide details of the research structures that exist. Importantly, academics do want to positively influence public awareness around the biosciences and this should ultimately lead to greater quality and relevance of information. Certainly in Northern Ireland, academics are engaged with the media much more than in the past and often can be heard on the Northern Ireland radio stations. However, greater communication with the public and private sectors is needed to establish more effective collaboration between all stakeholders i.e. the general public, employers and schools. Clear information needs to be communicated without overwhelming the public so that there is clear information on what the biosciences actually involve. One example from Northern Ireland is the Science in Society project which is now well established at the University of Ulster. It is a very successful lecture series which was established at the beginning of the 05/06 academic year and attracts audiences from 40 to 140. The project aims to promote discussion and understanding of science and its relevance to society and is geared towards 14-18 year olds and the general public as well as staff and students. The Science in Society website www.ulster.ac.uk/scienceinsociety/ features many hot topics in science, with links to related work at UU and beyond.

Knowledge and Innovation

The Higher Education Funding Council for England are designing a new system to replace the 2008 Research Assessment Exercise (RAE). Attempts are being made to make judgements on the quality of academics' research more objectively than the 2008 RAE. The proposed research excellence framework (REF) will judge research quality using metrics such as recording how many times academics' work is cited by peers and may also include conference proceedings as well as journal articles. The timetable for designing the new framework was recently extended by 12 months to allow sufficient time for the development of a more flexible approach to the assessment of research. It is intended that HEFCE will be reviewing new proposals for the REF in planned pilot exercises. With the results from the 2008 RAE due at the end of this year, institutions are preparing for the REF exercise that will replace the RAE and it is important that, as members of the HEA we keep abreast of ongoing developments. The importance of the research and technology transfer agenda in universities continues to have an impact and increase tensions for academics. Nevertheless, research in the biosciences helps academics keep abreast of the application of new discoveries and ensures that staff are working at the interface of science and technologies. The knowledge emerging from the new research institutions (set up during the 2008 RAE) will inform future teaching practices. Furthermore, there is now a culture of innovation in universities that needs to be exploited. The bioscience area would benefit greatly from further innovation and the application of bioscience knowledge and thus there is a drive in institutions to incorporate entrepreneurship in all programmes.

Ethical Approval and Research Governance

The impact of legislation and protocols relating to research governance and ethical approval of student research projects continues to be an issue of concern. Ethics and Governance approvals must be in place for research projects, consistent with the legal requirement of the UK Research Governance Framework. It has been increasingly difficult for both undergraduate and postgraduate research projects to proceed, as consideration must be given to preparation time for project proposal

submissions. Flexibility in postgraduate projects in facilitating the student project timetable has been needed. Additionally, the process has become more complex with the introduction of the Human Tissue Act and course teams will need to keep this under review.

Employability and Career Development

Work based learning continues to play an important part in programmes in Northern Ireland institutions, and academics continue to work closely with employers and professional bodies involvement with curriculum development and innovations. Views and comments received from companies, government agencies and other research institutions involved in the placement year of programmes are taken into consideration. Universities are committed to developing the skills, knowledge and personal attributes of students to promote greater employability.

Efforts in this area have benefited significantly from the e-learning platforms that are available at the University of Ulster and Queen's University, Belfast. E-learning and blended learning are valued approaches that enhance the student experience however we are aware that fee-paying students may in the future want more teaching contact hours. Research published by the Higher Education Policy Institute in 2007 found that teaching contact hours have risen across most subjects. Students called for smaller teaching groups and an increase in the number of teaching contact hours. They also rated extra training for academics even more highly, indicating that the quality of contact is most important. Due to the number of contact hours accumulated from laboratory classes in biosciences, students in these programmes would have increased contact time compared to other subjects. The average scheduled teaching hours in the biological sciences was 14.8 hours. It is difficult to draw conclusions from these results as the varying degrees of contact hours required in programmes is dependent on a number of factors including the subject area and educational objectives.