

The Regional Mission of Higher Education in Northern Ireland

**A report for the Department for Employment and Learning,
Northern Ireland**

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Executive Summary

Regions everywhere are coming to regard universities as core resources for their economic and social development. Whether it be through the spinning off of new businesses, the bringing into the higher education system of those young people from disadvantaged backgrounds, or the sheer dynamic effects of concentrating young people and their spending power in inner city areas, universities are being seen as important inputs to economic change and to the renaissance of urban areas.

Much of the debate over the regional contribution of universities has been drawn initially from the experiences of a handful of research universities in spinning off new businesses and being at the heart of new technology-based industrial complexes. However, the debate has shifted on as a result of a wider recognition that universities can and do play a much wider role in society, and that these roles have a particular regional expression across most of the domains of government¹. In addition to the static and dynamic effects of universities on the regional economy, there are contributions to the built environment, on cultural development, on social development, and on governance. A recent exercise sponsored by HEFCE² has mapped out the regional contributions of HEIs across seven main themes. This report applies this approach to the universities in Northern Ireland.

Description and Character of Higher Education

The higher and further education system in Northern Ireland consists of two campus-based universities, the all-Ireland office of the Open University, two university colleges with a primary focus on teacher training and 16 colleges of further and higher education. Altogether these provide around 55,000 student places in higher education, (12,000 pursuing Higher Education courses in FE Colleges) and around 150,000 in further education. The two campus-based universities, Queen's and The University of Ulster are both pre-1992 universities. Together with the Open University, the three universities have some 43,400 students, 19,900 at QUB 20,100 at UU and about 3,400 at the Open University. In addition there are roughly 2,300 students at Stranmillis and St Mary's University Colleges.

In the recent Research Assessment Exercise (RAE2001) both the NI universities saw a significant improvement in their performance – moving up the aggregate league table. Queen's University has similarities to the Russell group universities – essentially the old civic universities and research leaders, usually with medical schools. Queen's is however relatively small compared to members of that group with a lower than average representation of grade 5 departments in RAE terms. The University of Ulster is less research intensive than Queen's and is equivalent to a mid-ranking Robbins-period (1960s) university, although with a profile markedly more research focused than the former polytechnics. Overall then Northern Ireland's two institutions tend to sit in the middle rankings of UK universities, neither being research leaders, nor among the teaching-oriented new universities. This does however give the province a distinctive HE sector, with both institutions having therefore to cover a broader mission than most universities elsewhere in the UK.

¹ Goddard et al, Universities and communities, CVCP, London

² Charles and Benneworth, The Regional Mission, UUK, London

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Both universities take their regional mission very seriously and have created regional development offices in recent years to co-ordinate their regional outreach activities. These offices have been particularly active in ensuring strong participation in the region's Structural Funds programmes, developing specialised facilities and services for local industry, and in the new Higher Education Reach-out schemes.

Overall, the core public support for the two universities was £123 million in 2000/2001. This amounts to broadly the same level of expenditure per capita as England as a whole. However, if the comparison is made at regional level, the only English region to have a significantly higher level of expenditure per head than Northern Ireland is London.

QUB and UU Income 2000/2001 (£000s)

	QUB	UU
Government Grants	60,805	62,474
Academic fees and support grants	27,064	20,847
Research grants and contracts	23,282	9,782
Endowment income and interest receivable	3,020	1,154
Other services rendered	9,380	3,323
Residences and catering operations	4,393	3,704
Other operating income	12,395	7,160
Total	140,339	108,444

Whilst Queen's is an old 'redbrick' university, the University of Ulster (UU) is a more recent institution, established in 1984 following the merger of the New University of Ulster and the Ulster Polytechnic. QUB is mainly based in South Belfast with a new outreach campus at Armagh. UU has four main campuses, at Coleraine (the headquarters), Jordanstown, Belfast and Magee College in Londonderry. The two university colleges, Stranmillis and St Mary's are primarily teacher training institutions, whose degrees are validated by Queen's.

The Open University in Ireland is an important component in meeting the educational and training demands of the region. The Belfast Regional Centre has 46 members of staff with responsibility for the whole island. The Open University in Ireland maintains a network of 360 associate lecturer staff, to guide and support the 7500 students, of which over half are in Northern Ireland.

Northern Ireland has 16 colleges of further and higher education providing a combination of primarily vocational FE, but with around 12,000 students in higher education, the sector is equivalent in scale to another small university.

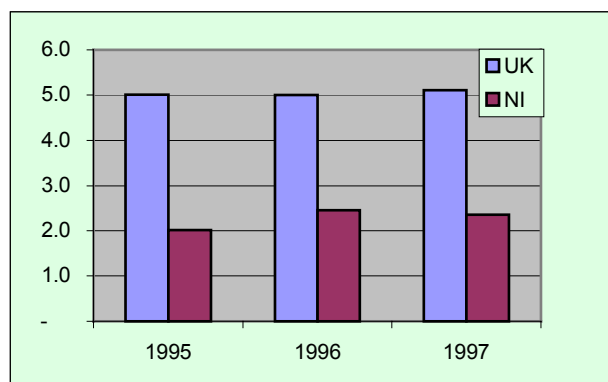
Dynamic impacts on the competitiveness of the regional economy

Universities contribute to regional competitiveness in many ways, through the provision of technical skills, through the provision of knowledge that can be applied in product and process innovation, through new business ventures that emerge from the knowledge and people in the university, and through the opportunities and experiences exchanged as part of the social capital and networking within which the universities are embedded.

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The regional innovation system in Northern Ireland is traditionally weak, suffering from the combination of a manufacturing sector that combines externally-owned branch plants and SMEs in mature industries, and a higher proportion of activity in the primary sector than other UK regions. Although growth in regional GDP in recent years has been high, and the region is no longer the poorest in the UK, it remains structurally weak. Northern Ireland continues to have a relatively low level of business R&D. The aggregate level of R&D in Northern Ireland also hides the fact that most of this is due to a relatively small number of large firms.

Expenditure on manufacturing Business R&D as a proportion of gross value added for Northern Ireland and the UK, 1995-7.



Source: DTI Regional

Competitiveness Indicators.

The two universities are the prime public sector R&D resource in Northern Ireland. Both universities have respectable performances in research compared to other UK universities, although neither is in the research elite. Both universities saw significant improvement in the 2001 Research Assessment Exercise, and have the majority of their activity at the 4 and 5 level, equating to a combination of national and international levels of research excellence.

Contract research income for Queen's at £23.2 million in 2000/01 represented 16.6% of total turnover, whilst for The University of Ulster the figures were £9.8 million and 9%. This can be compared with that of other UK civic universities which provide a significantly bigger resource for their regions. Even combining the research income of the two universities (£33 million) would not give a particularly large civic university in UK terms.

University	Research income	Percentage of total income
Leeds	57795	22.3%
Liverpool	39738	22.2%
Newcastle	42061	24.6%
Cardiff	28114	19.5%
Glasgow	60022	25.6%
Aberdeen	25233	23.1%

Note: the figures for Cardiff exclude medicine, and adding the Welsh College of Medicine would increase the volume by half again, with a similar research intensity. All of the other universities have medical schools.

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In 2000/01 the Northern Ireland institutions were awarded £24.1 million core funding for research (QUB £14 million, UU £10.1 m). Again this compares unfavourably with other UK universities (Leeds with £28.4 million, or Newcastle with £21.5 million). Proportional to the population base Northern Ireland's spend is lower than England as a whole but is comparable with several English regions, for example, the North East, North West and Merseyside, East Midlands and West Midlands.

Despite these handicaps, the Northern Ireland universities have devoted considerable effort to engage with and support industry in the region, and in some areas have achieved national excellence in business interaction.

Research collaboration and commercialisation

The two universities have a large number of research centres and technology support units that have been developed often with the assistance of Invest NI or Structural Funds and with the aim of collaborating more closely with companies in Northern Ireland. One such mechanism for the development of such units has been the Invest NI-funded Technology Development Programme (TDP). Since 1994 eighteen centres of excellence have been supported of which ten are university-only and two are jointly managed by university and industry partners. Total project costs including another six industry-only centres have been in excess of £34 million.

A number of other research and technology centres within the region's universities have been established with the principal aim of supporting regional industry. Perhaps the most significant of Queen's centres of applied research and technology is the Northern Ireland Technology Centre, a centre with a staff of 33 dedicated to the transfer of best practice in design and manufacturing technology to all sectors of industry. The Centre is self-financing with income from industrial services providing 95% of its £2.5 million annual turnover.

Technology transfer and the commercialisation of knowledge

Northern Ireland Centre for Entrepreneurship (NICENT) is one of 12 Science Enterprise Centres established by DTI/OST in 1999, funded by a grant of £900,000 from OST, and an additional £300,000 from Invest NI. Established jointly by the two universities its aim is to embed a culture of entrepreneurship within the university community through integrating entrepreneurship training in programs of study and supporting potential entrepreneurs in science and technology. The Centre will help identify new ideas and inventions with commercial potential and to realise this potential and will also develop entrepreneurship in the curriculum

University consultancy activities

One additional means through which university expertise is deployed for the benefit of regional firms is through consultancy activities. Many of the research centres already described provide consultancy advice to local industry in Northern Ireland. An example of this is the Business Process Centre in NITC. This centre provides a variety of consultancy services. On a more generic level, the University of Ulster Knowledge Club provides support and advice for firms with interests in any technologies or expertise available from the University.

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Placements and personnel exchanges

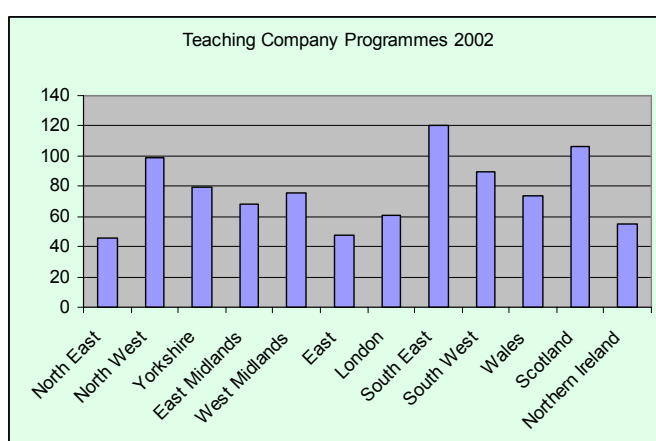
The exchange of knowledge between universities and industry or other external bodies must be seen as a two-way process, with universities needing to absorb external knowledge relevant to their missions. Such knowledge can only be effectively communicated via personal experience through the exchange of staff. The universities are also increasingly appointing people with experience in industry or other relevant external employment sectors, often in the vanguard of developing external relations of all kinds.

A key national programme for knowledge transfer, is the Teaching Company Scheme, a UK-wide initiative that places graduates in companies to undertake knowledge transfer activities with the support of a university partner. In Northern Ireland Invest NI provides part funding.

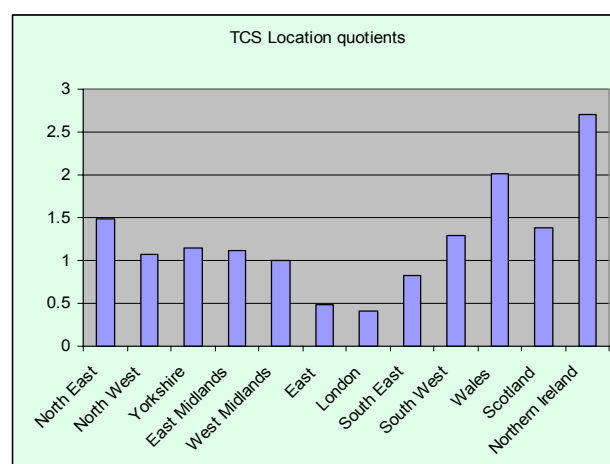
The Northern Ireland TCS Centre is one of 19 Regional TCS Centres throughout the UK, and is located on sites at The Queen's University of Belfast and the University of Ulster at Magee, Londonderry. TCS has been particularly successful in Northern Ireland, with Queen's University having the largest number of TCS Partnerships of any university in the UK, with 35 in 2002. The University of Ulster is also very successful with 21 programmes.

Northern Ireland has a total of 55 firms participating in the scheme, virtually, all of which are linked with Queen's or The University of Ulster. Whilst there are only two UK regions with lower absolute numbers of TCS programmes, the small economic base of Northern Ireland means that when calculated as a location quotient Northern Ireland has 2.7 times the national average share of projects, the highest share of all UK regions by a considerable margin.

Teaching company scheme projects in Northern Ireland compared with other UK regions 2002.



Source Teaching Company Directorate



Science parks and spin-off firms

The universities also contribute to a regional system of innovation through the support they provide to encourage the formation of new firms, both through incubator facilities such as science parks and through spin off companies established with university intellectual property. Both universities are involved in science park developments. Ulster, with several parkland campuses has been developing science

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parks on each of its campuses. Queen's has been unable to develop a science park on its urban campus, but is involved, along with UU, in the development of the Northern Ireland Science Park. The Science Park will consist of a main development, Titanic Technology Precinct, in the Belfast area with linked sites elsewhere in Northern Ireland.

The University of Ulster's Science Research Parks aim to create clusters of knowledge-based companies on each of the four main University campuses. It is anticipated that the close interaction between the companies and University research personnel will develop an innovation community within the clusters providing enhanced opportunities for both tenants and the University's technology and knowledge transfer activities. For example, the University of Ulster's Science Research Park at its Magee campus has now been in existence for over three years and is already providing stories of success.

QUBIS Ltd was established by Queen's in 1984 to commercialise the University's research and development activities through the formation of spin-out businesses. The University, through QUBIS Ltd, takes an equity holding in the new spin-out venture in return for an investment of cash and/or intellectual property. The immediate objective of QUBIS Ltd as a holding company is to establish an ongoing stream of dividend, or other income, from its investments. All investments are undertaken for the medium to long term. The combined turnover of the QUBIS Ltd portfolio companies for 2001 exceeded £31m. Export sales outside Northern Ireland account for over 95% of this figure. The University of Ulster's Technology Transfers Holding Company, UUTECH, was established in 1997 and to date has generated 18 spin out companies.

The activities of QUBIS and UUTECH have been given additional support by the University Challenge Fund (NI), a £2.75m fund set up jointly between Queen's and the University of Ulster. The fund has received investments of £500,000 from Queen's and £250,000 from UU.

Impact on urban and rural regeneration

Research on Regeneration Issues

The universities of Northern Ireland house a number of departments, centres, groups and individuals who contribute to research and knowledge generation focused upon a rich variety of regeneration issues.

National Economic Regeneration Issues: The Northern Ireland Economic Research Centre (NIERC) in Queen's is an inter-disciplinary research organisation conducting policy related research on the Northern Ireland economy. Further research into national economic regeneration issues is provided by the Irish Economies Research Group within the School of Management and Economics at QUB.

Urban Regeneration and Planning: The Centre for Research into Property and Planning, University of Ulster undertakes work on the encouragement of private finance within urban regeneration. The Environmental Department at Queen's has worked on imaging and selling the city of Belfast in a comparative context. The Department of Environmental Planning provides advice and analysis of planning and development control.

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Rural Regeneration and Development: The Gibson Institute, QUB, is a new research and teaching centre focusing upon the promotion of vibrant rural communities and rural regeneration. The Centre for Cross Border Studies at Queen's University has recently produced mapping studies of sectors involved in rural economic regeneration.

Community and Social Regeneration: The School of Sociology and Applied Social Studies at the University of Ulster has research groups which focus on issues of social and community regeneration: the Community Studies Group and the Social Work Research Unit. Within the School of Policy Studies, the Centre for Voluntary Action Studies (CVAS) aims to develop links with policy makers and administrators in the voluntary and community sector as well as in government. Community regeneration themes have also been pursued at QUB with the School of Management and Economics involvement within the Credit Union Research Forum. Issues of socio-economic restructuring, and the living experiences of low income families are covered by the 'Sociology of Economic Life' research stand within the School of Sociology and Social Policy. In the School of Management at Queen's, the Information Systems Research Group has undertaken a longitudinal evaluative research project focusing upon the development of Community Information Networks within Northern Ireland.

Higher education institutions' involvement in regeneration projects

The University of Ulster's involvement in the regeneration of Enniskillen and Fermanagh county serves as a good example of universities acting as direct partners within local and regional regeneration formulation and implementation. The Fermanagh-University Partnership Board, building on a relationship with Fermanagh District Council, involves organisations across the public, private and voluntary sectors. The 'Higher Bridges Project' provides the focus for the initiative, based in Enniskillen, it hopes to create a bridge between the communities in the area and regional higher education and to promote the area as a centre of excellence, including the refurbishment of the derelict Orange Hall building in the town as an Interactive Technology Centre (INTEC), and the construction of a new £3million Education, Arts and Community Centre, with a 70 bed residential facility, art gallery, conference and training rooms, crèche and café.

The universities' research expertise also provides the platform for regeneration guidance and evaluation such as the preparation of the sub-regional planning strategy for Greater Belfast involving QUB's Environmental Planning Department and Ulster's Urban Institute. The Department of Agricultural and Food Economics at Queen's plays a significant role in rural regeneration.

The Blackwater River Agency for Community Enhancement and the Rural Development Council jointly commissioned BRACE 2000, a research-led rural development strategy with the expertise of the Department of Environmental Planning (QUB) and the School of Public Policy, Economics and Law (Ulster). The strategy was concerned with the environment, community enhancement and infrastructure. The project is now being implemented particularly in Caledon where a cross community group has been successful in having a number of regeneration projects accepted for funding. The BRACE model is now being widely adopted in rural development across Northern Ireland.

The University of Ulster's Magee Campus is involved in the 'Step Up' scheme, a £200,000 Northern Ireland Higher Education Council initiative, which aims to

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encourage school children from disadvantaged backgrounds in the North West to attend university.

Higher education institutions' stewardship and regeneration

Reflecting the continual growth and success of the universities of Northern Ireland, both universities are directly contributing to the physical regeneration of sites within Northern Ireland via a series of high level capital projects.

The Queen's University has, for example, recently conducted a major refurbishment of its Lanyon Building, one of the most recognisable landmark buildings in Belfast. The refurbishment included a highly acclaimed transformation of the Great Hall, which won a major architectural award from the Royal Institute of British Architects.

Building upon the £50million invested within capital projects over the last ten years across its five campuses, the University of Ulster is engaging upon a new ten year capital development programme. Within the Belfast area, the programme will lead to regeneration activities at York Street and Jordanstown. The York Street projects will transform Belfast's cathedral gardens into a new campus focused upon the replacement of the University of Ulster's School of Art and Design. The development will include an arts and cultural centre, a management centre, a design research centre and multi-media library. Over the last decade, the Magee Campus (Londonderry) has been the main beneficiary of university led regeneration and expansion. With the acquisition of the Aberfoyle Estate the campus area was increased by fifty per cent. The £2.7 million Technology and Software Incubator Centre sited at Magee Campus, is directed towards the economic development of the North West. The proximity and involvement of the two universities has been a major factor behind the development of the new Science Park on the 23 acre Titanic Quarter of Queen's Island in East Belfast.

Students and local and regional regeneration

The student community within Northern Ireland's universities provides an important and valued contribution to issues of regeneration. The Science Shop initiative provides an opportunity for community and voluntary groups to access the knowledge and information resources of the University of Ulster and Queen's. Acting as a point of contact between community groups and the universities, the scheme connects community groups requiring research with students and staff willing to engage or suggest relevant proposals for community-based projects. Requests are accepted for research on all subjects including environmental issues, community health issues, information technologies, social policy, local history and legal issues.

Voluntary action by students also plays an important role in the regeneration of local communities. The Student Community Action group at Queen's University encourages the student population to get involved with a variety of projects and charities in the local community. Similarly, in 2001 students took to the streets of Belfast in an attempt to make the city a cleaner place to live as part of the Angel Network. Comprising students from across the universities, the network assists local projects in an attempt to build relationships between students and local communities. One such project was the participation within a massive clean up campaign in the Holylands area of the city, and a further project included students mentoring children with emotional and behavioural difficulties.

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Graduate labour markets and access to learning

Statistics from the DETI indicate that overall the stock of graduates in Northern Ireland more than doubled from 60,000 in 1990 to 123,000 in 2001, with 40,000 of this increase occurring since 1995. As a result the proportion of the working age population who are graduates has risen from 7% in 1990 to 12% in 2001. This is slightly less than the proportion of persons of working age in the UK as a whole who are graduates (15%). Out of the 123,000 graduates of working age in Northern Ireland at Spring 2001, 90.1% were in employment, which is higher than the UK figure of 88.7%. However there has been a consistent differential in the employment rate of graduates and non-graduates over the period with the non-graduate employment rate in Northern Ireland being the lowest of all UK regions.

Recent Graduates

Of the 5,000 who graduated between 1997 to 2001, 83% were in full time employment and 62% in employment deemed to be permanent. Approximately 70% of recent graduates worked in the private sectors, high proportions of which were in service occupations. Although a fairly high proportion of new graduates secured employment in managerial, professional and associate professional occupations there was some evidence of graduates working in non-graduate occupations. Research by the NIERC on the 1997/98 graduate cohort indicated that approximately 26% of recent graduates entering employment locally entered occupations which would normally be considered to be non-graduate. Although graduate under-employment is certainly not unique to Northern Ireland, the situation appears particularly problematic for students graduating in the Arts, Social Sciences, Science and Business. This raises questions concerning the need to re-orient the education system towards technical areas where a gap in the availability of skilled labour has been identified. In effect it requires HEIs to monitor skills needs and sector change much more effectively and to take labour market intelligence into account in planning at a central and departmental level. In contrast, recent research (Harmon and Walker, 2000) identified that Higher Education adds significantly to NI domiciled graduates' earning power and that these returns have been sustained for a significant period and are particularly strong for females.

First Destinations

Statistics from DEL on the First Destinations of Northern Ireland domiciled students gaining HE qualifications from UK HEIs during 1999/00 show that of those students who attained a higher education qualification at a Northern Ireland institution in 1999/00 and had first destination data returned, 79% remained in Northern Ireland to take up their first activity, 8% went to Great Britain, and 10% went to the Republic of Ireland. Of those graduating from Northern Ireland who were not from the region, 36% remained in the region to undertake their first activity, of those who were from Northern Ireland 85% remained in the region. Of those students who studied at higher education institutions in Great Britain, 27% of those whose location of activity was known returned to Northern Ireland.

These figures correspond to earlier work carried out by Newcastle University using HESA data to examine the early career paths of 1998 university graduates. In this a higher proportion of graduates from Northern Ireland universities remained in the region following graduation, compared with graduates from other UK regions.

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Table 1: Region of First Destination by Region of Study

Study Region	Region of First Destination											
	NE	Y&H	EM	EA	GL	SE	SW	WM	NW	W	S	NI
NE	.457	.106	.050	.025	.103	.085	.022	.036	.090	.005	.016	.007
Y&H	.028	.345	.080	.025	.118	.119	.026	.060	.124	.011	.011	.002
EM	.015	.054	.372	.033	.155	.155	.033	.098	.062	.015	.004	.002
EA	.009	.023	.044	.381	.225	.221	.031	.030	.021	.004	.011	.001
GL	.004	.009	.016	.020	.675	.204	.027	.019	.014	.006	.005	.001
SE	.006	.015	.026	.028	.243	.541	.071	.031	.021	.012	.006	.002
SW	.003	.010	.032	.021	.160	.179	.489	.046	.021	.033	.005	.001
WM	.011	.040	.060	.021	.138	.144	.040	.413	.108	.017	.007	.002
NW	.022	.059	.039	.016	.095	.089	.029	.064	.554	.017	.010	.053
W	.007	.025	.026	.015	.069	.124	.093	.074	.062	.496	.007	.003
S	.014	.015	.012	.011	.049	.042	.012	.011	.025	.005	.783	.022
NI	.003	.008	.006	.001	.010	.014	.002	.003	.013	.002	.014	.922

Source: Belt et al 2000

Widening participation

At the heart of the UK Government's plan for the creation of 'a learning society' is the desire to increase opportunities for people to learn partly by widening access to those who have been under-represented in higher education.

Table 3: Percentage of young entrants from Social Classes IIIM, IV or V.

	1997	1998	1999
UK	24.9	25.1	25.3
England	24.7	24.9	25.1
Scotland	23.8	24.1	24.5
Wales	26.1	26.4	25.9
Northern Ireland	32.8	33.6	33.7

Source: HEFCE 2001

Universities in Northern Ireland are attracting a greater proportion of their intake from social classes IIIM, IV or V than the UK average. Additional analysis has indicated that the performance of Queen's and Ulster are significantly better than the sector average although there is some variability between the two institutions: Ulster attracting 38% and Queen's 30% of students from those social classes deemed to be under-represented.

There are some differences in terms of social class among those applicants who accept places locally and in institutions in Great Britain. Equal proportions from the

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intermediate classes accept places locally or elsewhere in Great Britain but a greater proportion of those from the professional class leave Northern Ireland to study.

In order to overcome the obstacles to participation a number of initiatives have been launched by institutions in the region, aimed at attracting greater numbers of students from the underrepresented groups. These include targeting the disadvantaged with school compacts, the development of new campuses, partnership agreements with colleges and other special access initiatives.

Research carried out at the University of Ulster investigating cross community participation made a number of recommendations aimed at improving participation.

Graduate Employability

The Northern Ireland Skills Taskforce advocates the development of employability skills through work experience, sandwich placements and a stronger employer input into the curricula. The Northern Ireland Government also recommended that HEIs review their provision to ensure that they are taking account of the needs of the local labour market and equipping students with the skills that are deemed necessary for work. In a recent submission to the Higher Education Funding Councils (HEBI 2001) both universities indicated that departments consult with employers and other partners on the curriculum where relevant, and the development of generic skills are incorporated into course provision.

However despite these assurances other findings have indicated that there appears to be a lack of formal channels through which the needs of the labour market can be transmitted into the education and training sectors to ensure that course provision is driven by labour market needs.

Following the Priority Skills Report on the IT sector a number of initiatives have been put in place to ensure that the needs of the sector for new and experienced staff are met. This includes the creation of additional higher education places in computing and software engineering and the establishment of initiatives such as the Rapid Advancement Programme. The programme aims to produce a pool of IT professionals and to build on the graduates' academic achievements, providing them with IT skills relevant to Northern Ireland industry.

Encouragement of graduate entrepreneurship

In a recent study of graduates, 60% indicated that entrepreneurial skills, and 40% that knowledge of business, had received little or no attention during their studies. Respondents living in NI were less likely to have used and developed the range of enterprise/business related skills with the exception of working in a team. The Northern Ireland Centre for Entrepreneurship (NICENT) was established recently to address these issues. NICENT, which is a partnership between Queen's University and the University of Ulster, aims to embed a culture of entrepreneurship within the universities.

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Lifelong Learning

The universities in Northern Ireland make a significant and growing contribution to lifelong learning through outreach and vocational programmes and through flexible course delivery.

Work-based learning

In a recent survey to determine higher education and business interaction, both Queen's and the University of Ulster indicated that they offered courses that were specifically designed to meet the needs of a particular firm or group of firms at either or both undergraduate and postgraduate level. Both institutions also offer short bespoke courses for business on campus or at companies' premises.

The Cultural Agenda

Direct provision of cultural activity

Both universities make a considerable direct investment in the cultural life of Northern Ireland and have played an important role in Belfast's bid for European Capital of Culture in 2008.

Now in its 40th year, the Belfast Festival, based at Queen's University, is the second largest arts festival held within Great Britain and Ireland, attracting high quality international artists, and acting as a catalyst for new and bold initiatives through a programme of invited and commissioned events across all art forms. Research into the impacts of the 2000 festival highlights its contributions to the cultural life and local economy of Northern Ireland, with over £4.5 million spent as a result of the festival, 252 full-time annual equivalent jobs generated and the festival was experienced by 14,711 people, making a total of 37,715 visits

The Sonorities Festival of Contemporary Music in Belfast celebrated its 20th year in 2001 with one of the longest programmes in recent years. Recently, the festival has incorporated the activities of the new Sonic Arts Research Centre (SARC) at Queen's University, delivering a 'high-tech' theme to the festival in conjunction with hosting of the Sonic Arts Network Conference.

The universities' involvements with festivals are not confined to Belfast alone. The Magee Campus at the University of Ulster is involved with the Walled City Cultural Trail. Similarly in the Coleraine Campus hosts major events within the Coleraine Borough Council's Community and Arts Festival.

The universities of Northern Ireland provide public access to contemporary and fine artworks via exhibitions and galleries, including the Queen's University art gallery in Lanyon Building and the University of Ulster's permanent art collection displayed in many public locations throughout the four campuses. Coleraine Campus provides the home to the Octagon recital hall, the Diamond concert hall and the Riverside Theatre. Also the Great Hall, at the Magee College, features a range of arts events throughout the year, in partnership with the Londonderry community. The universities also hold a rich array of public lectures and a range of concerts and recitals.

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Higher educational and cultural capital

The Universities of Northern Ireland play a key role in supporting the collection and creation of new work. Many artists or writers for example have received commissions from the region's universities.

The mainstream research and teaching activities underpin cultural activities. The University of Ulster boasts one of the leading arts and design units in the United Kingdom, receiving a 5 in the latest RAE. The School of Art and Design is planned for an expansion of both buildings and student numbers within the arts led Cathedral Quarter of inner city Belfast.

Cultural Heritages

The universities provide an unrivalled research and teaching resource into the rich heritage and culture of Northern Ireland. The Institute of Irish Studies at Queen's University has become an internationally renowned centre of interdisciplinary Irish scholarship. Professor Brian Walker, who heads the Institute, is also the Chairman of the Arts Council of Northern Ireland. In 2001 the distinguished Irish poet Seamus Heaney opened the £3 million Academy for Irish Cultural Heritages at the University of Ulster's Magee Campus. The formation of the centre was one of six projects which received funding from the Government's Support Programme for University Research (SPUR), chosen due to its potential to develop its international research reputation. The Academy will help transform the way in which heritage and tradition are perceived in Ireland, and will explore the diversity of Irish culture, identity and heritage as well as aspects of the Northern Irish conflict and conflict resolution.

A key element of the cultural heritage of Northern Ireland is language. In 2001, the University of Ulster opened the world's first Institute of Ulster Scots Studies. The Institute is part of the Ulster Scots Agency's strategy to promote the study, conservation, development and use of Ulster-Scots as a living language; to encourage and develop the full range of its attendant culture; and to promote an understanding of the history of the Ulster-Scots.

Socio-political cultures

The universities also provide significant contribution in furthering the understanding and appreciation of the complex and changing socio-political culture of society within Northern Ireland. The Centre for Irish Politics was established at Queen's University in 1994, and has become a world leader in research upon Irish politics, and the troubles.

Collaborative and innovative work between the universities can be demonstrated by the ARK initiative. Established in 2000 by Queen's and The University of Ulster, this web resource allows access to a range of social and political material relevant to Northern Ireland. ARK also houses the CAIN web service, a partnership between the universities and Linen Hall Library which provides information and source materials on 'the troubles' in Northern Ireland from 1968 to the present day. Research themes within the centre contribute to a cultural understanding of tensions and policy making.

The role of religion within Northern Ireland is studied at the Centre for the Social Study of Religion recently established at Queen's Armagh Campus. Building upon the city's historic associations and resources, it is the first centre within Northern Ireland to focus upon religion and associated links to ethnic division and conflict in the

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region. Finally, the role of racism and racial harassment as a feature of Northern Ireland's employment culture and educational system has been researched by the School of Sociology and Applied Social Studies at the University of Ulster.

Creative economy

Universities play a vital role in supporting the creative industries of Northern Ireland, fostering talent and research within areas as diverse as Drama and Music to Software Engineering and Communications Technologies.

The opening of the £4.5 million SONIC Arts Research Centre (SARC) in 2001 places Queen's University Belfast at the leading edge of world development into music technology. Utilising expertise within three academic departments- music, electrical engineering and computer sciences.

2001 also saw the launch of the *Centre for Creative Industry (CCI)* at Queen's University, as part of the 'Unlocking Creativity- Making it Happen' development strategy for Northern Ireland. The first of its kind within Great Britain and Ireland, the centre fuses expertise from Management, Economics, Humanities and Engineering to better understand the organisation and management of the creative economy. The *Creative Enterprise Programme*, a major research initiative funded by the Department of Culture, Arts and Leisure and based at CCI, involves Queen's University and investigates the capabilities and development potential of the creative industries in Northern Ireland. The School of Art and Design at UU also makes major contributions to the creative economy.

Media, sport and student culture

The *Queen's Now* is a newspaper produced and distributed free with Northern Ireland's three daily newspapers in order to demonstrate the university's vital role in the educational, economic, social and cultural life of the region. Within the student community media skills and interests are developed via the production of student union magazines and newspapers.

The Queen's Film Theatre is Ireland's longest-established cultural cinema and attempts to show the 'best of the world of cinema, past and present'.

The universities play an important role in promoting sport within student culture but also with regard to the broader community. In 1999, the University of Ulster entered a partnership with the Sports Council for Northern Ireland in the development of the Northern Ireland Network Centre of the UK Sports Institute. The partnership represented an investment of £18million into Northern Ireland Sport, in order to give elite, international and national standard sports persons, priority and prime time access to first class facilities and support services. In 2000 the 'Future Youth Games' were held at the Jordanstown Campus, and promoted the acceptance of cultural diversity between young people of different traditions by promoting co-operation in education, sporting and cultural activities. The promotion of elite sports persons has also been supported across the universities since 1996 by the Guinness Bursaries for outstanding young athletes.

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Sustainability and the environment

Institutional sustainability strategies

Both universities are committed to the pursuit of sustainability as institutions. In the case of Northern Ireland, sustainability concerns focus much less on the preservation of the environment, and relate much more to the elimination of the barriers to social inclusion.

UU and Queen's University are members of Business in the Community (BitC), raising awareness of the environmental protection and equal opportunities agendas, but also in working on the BitC project "comm.unity" to increase access of excluded community across the "digital divide".

QUB is involved in a variety of sustainable development activities, including work on estates, energy and transport. QUB's institutional policy framework embodies a clear vision of the university as an exemplar of sustainable working practices, covering an equal opportunities policy, family friendly policies, environmental policy and environmental issues advisory group. QUB is a partner of the Forest of Belfast Initiative and is also working on a Travel Plan for staff and students, to reduce traffic flows around their historic campus. QUB has recently become involved with the Higher Education Partnership for Sustainability scheme (HEPS) and has committed itself to incorporating sustainable development into its institutional strategic planning approach, and is building a model for sustainable whole-life costing in university procurement. The QUB Vice Chancellor's Fund provides start-up funding for projects in which the university engages with local community groups.

Teaching

The universities contribute to sustainable development through their teaching. Apart from Scotland, Northern Ireland has the highest proportion of students studying in their home region and so these teaching programmes make a significant contribution to the creation of a cadre of highly-skilled and environmentally-conscious professionals.

The Open University has a well-developed set of modules for those interested in sustainable development, including a Diploma in Environmental Policy as well as a range of post-graduate diplomas in Development studies. The Open University qualification framework means that students studying in a wide range of disciplines are able to incorporate environmental and sustainable learning into their qualifications.

Both QUB and UU offer courses at a range of qualification levels which support the pursuit of sustainability. Both institutions have progression routes allowing those outside environmental disciplines to take courses with a sustainable development theme as part of other degree course.

Sustainability research and its application

A second role for universities is the deployment of university expertise to facilitate the implementation of sustainable development. There is a range of university research centres involved in the development of technologies which are "environmentally friendly", reduce resource waste and improve resource management. University staff

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also has a large presence in other regional fora concerning sustainable development, in particular Local Agenda 21 steering groups.

Social inclusion and sustainable development

A key challenge for supporting sustainable development in Northern Ireland is addressing some of the problems of social inclusion. Northern Ireland is unique within the UK because of the existence of a number of distinct and separate communities underpinned by a tense political dynamic. The barriers between these communities also pose barriers for the kinds of social mobility necessary to achieve sustainable social justice. There is a huge amount of ongoing research into the way that community relations are changing, and action research which is underpinning changes in social attitudes and behaviour.

Support for the Business community

Possibly the most notable success in sustainable technologies is in wave energy technologies, where QUB designed and installed a commercially viable wave-generating power system. However, there are many other research groups contributing to the development of sustainable technologies. Both Queen's and UU have dedicated research centres looking at developing and commercialising environmental technologies. At UU, the Centre for Sustainable Technologies provides a focus for these activities. The research covers the full spectrum of sustainability activities, from science and engineering (photovoltaics) through management (life-cycle energy chains) to the aesthetics and cultures of sustainability (architectural design). The University also has an Environmental Research Unit, whose members participated in the founding of Gendel Ltd. a high-technology UU spin-out with a portfolio of some twenty patents. Queen's University is host to the Queen's University Environmental Science and Technology Research (QUESTOR) Centre, which acts as a focus for research in support of sustainability.

Community Service

Universities are a useful resource for community groups: the presence of well-educated staff and students provides a cadre of potential volunteers, and the broader university community is closely interlinked with civil society. Some Student Union groups work closely with their 'local' counterparts for joint activities, events and campaigns (e.g. the QUB Greens and Belfast Friends of the Earth).

Supporting the decision makers and governance institutions.

As significant employers of knowledge workers, universities are a valuable resource for decision-makers. The universities have assisted with the development of the spatial planning framework and the statutory basis for sustainable development in Northern Ireland. Currently, work is progressing on the NI Sustainable Development Strategy. One of the factors delaying the launch of the SDS was the need to produce a comprehensive vision for the direction of Northern Ireland's development, which will be provided by *Northern Ireland 2025*, the Regional Development Strategy for Northern Ireland. The universities were involved throughout the process.

The universities also contribute in an *ad hominem* capacity to environmental public bodies, and both UU and QUB staff contribute as members of:-

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- The Environmental Sciences Association of Ireland,
- The Department for Agriculture and Rural Development,
- The Northern Ireland Human Rights Commission.

Contribution to regional decision-making capacity

Universities make a number of significant contributions to the decision-making process in the localities, regions and states in which they are located:

- As **users** of the governance system (e.g. in applying to local authorities for planning permission for campus development),
- As **stakeholders** providing formal representation from the education sector,
- As **experts** with particular contributions to make,
- As **community representatives** carrying a mandate to represent particular groups,
- As **businesses** with an interest in for example attracting inward investment, and
- As **public intellectuals** contributing to public life.

Universities as ‘experts’

One of the main impacts universities have is through the interactions they have with the Northern Ireland Assembly and Executive as experts. The Special Adviser to the NIA Education Committee is a QUB staff member, and QUB also provide the official statistician of the Northern Ireland Assembly. Experts from both universities also regularly submit evidence and reports to the various committees of the Assembly.

University staff contribute to public life, sitting on a variety of public boards in Northern Ireland, contributing their experience, derived from teaching, research but also university administration.

University research and Northern Ireland’s governance

The universities are all active in current research programmes looking at devolution. One of the main resources developed jointly by QUB and UU is the Online Research Bank (ORB), which provides a conduit to all social policy research undertaken of relevance to Northern Ireland. Both QUB and UU contribute to the ESRC *Devolution and Constitutional Change* programme. Staff from both universities are involved in the drafting of a quarterly report monitoring the progress of devolution. This work has also supported *Democratic Dialogue*, an organisation which styles itself as the first Northern Ireland think-tank, undertaking research into governance in NI.

The Institute of Governance, Public Policy and Social Research at QUB which was established in 2001 with an award of over £5million from the Government’s Support Programme for University Research, aims to make a significant contribution to the future of Northern Ireland through research on governance issues which will lead to more effective public policy making.

The similarities between Northern Ireland and South Africa in the transition to a socially-inclusive government are being studied by a team in UU looking at the role

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of the Victim's Commission and Policing in Northern Ireland, and its comparison with the South African Truth and Reconciliation Committee.

Universities as stakeholders in Northern Ireland's governance

The HEI sector has a degree of common interests and cohesion as a sector, and in response to the regional challenges raised in the Dearing Report, the universities have constituted a 'Standing Conference on Tertiary Education'. This body brings together the interests of higher and further education, to represent the sector. Both universities also have a number of representatives on the Regional Foresight Panel.

HEIs also contribute to formal institutions through the participation of university staff in the democratic process. The students' unions at Northern Ireland's universities all host branches of Northern Ireland's democratic parties. Many of the alumni of the universities have progressed into the national political arena; representatives from across the political spectrum have studied at the Northern Ireland universities.

HEIs, cross-community institutions and education for tolerance

The universities of Northern Ireland are committed to a non-sectarian approach to teaching and research. Both universities have a number of campuses across Northern Ireland, and linkages with colleges of further and higher education.

The political tensions in Northern Ireland are a barrier to the formation of a strong and open civil society, and understanding those tensions is necessarily a component of civil reconstruction. University-based research makes an important contribution to this understanding process, by providing insights into the Northern Ireland situation. There are a large number of research centres devoted to mapping the Troubles and the issues raised by peace and reconciliation. Universities have also been involved in founding more pluralistic organisations — the Centre for Research into Higher Education, Democratic Dialogue and the Standing Conference for Tertiary Education. UU has developed the Institute for Conflict Research (INCORE) jointly with the United Nations University whose research expertise draws on an understanding of not only the situation in Northern Ireland, but from similar conflicts around the world.

The universities also provide a territorial memory for the troubles with a genuinely cross-community dimension such as in UU's Conflict Archive on the Internet (CAIN), a resource which offers general social context alongside factual information, a virtual library of published work and a directory of researchers.

Educating the next generation across community boundaries

An important element of cross-community co-operation is the education system. There are a variety of additional dimensions to reducing sectarianism in education. This includes assisting with the development of policies for unified education, R&D to underpin those policies and training teachers to promote cross-community integration. Universities across Northern Ireland are active in all these fields, working with decision-makers to support the development of a single education system for Northern Ireland. Involvement has included for example active participation in the Post Primary Review Body, which examined the appropriateness of secondary education for Northern Ireland.

Northern Ireland has two main teacher training colleges, and both work to ensure that their initial teacher training promotes cross-community tolerance. St. Mary's

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College's Cultural Diversity Unit undertakes research into promoting diversity and tolerance through teaching. Similarly, Stranmillis College's Education for Mutual Understanding (EMU) programme deals with issues of citizenship for trainee teachers, and specifically addresses the issues that emerge from trainee teachers themselves originating from one community.

HEIs and cross-border co-ordination

Recent changes to the political situation in Northern Ireland have facilitated increasing cross-border co-operation and co-ordination. Universities are working with these cross-border institutions, particularly IntertradeIreland and the North/South Irish body. There is also considerable research being undertaken into cross-border relations, supporting more regional and local interactions. UU is promoting its Derry campus as a gateway into far North West Ireland and Coleraine as a gateway to the North Coast (including Donegal). The Queen's Armagh campus offers a number of courses with all-Ireland appeal including Irish Studies, conflict resolution and cross-border studies.

Given the emphasis on cross-border co-operation, the EU Commission-funded PEACE programme has a specific strand dealing with the creation of a unified educational space, as part of the "Cross-border co-operation" priority area. Northern Ireland's universities have been central to driving forward this agenda of cross-border educational participation and the constitution of an all-Irish university sector.

One of the cross-border institutions is the Food Safety Protection board, which uses scientific advice to promote public health and through the food chain. Northern Ireland universities provide representatives for both the scientific advisory board and the scientific committee.

Conclusions

Both Queen's University and the University of Ulster are extremely active in their regional missions, increasingly in collaboration with each other and with other higher and further education institutions in Northern Ireland and beyond. Both are developing a range of mechanisms and structures to enhance this regional role - The University of Ulster with its Regional Development Section and Queen's with its Research and Regional Services unit. At the same time the universities have been appointing staff specifically to develop the regional outreach and commercialisation roles, and co-ordinate these activities across the institutions.

In terms of the overall profile, the strongest role is in the access to educational opportunity and a focus on the social and community regeneration of Northern Ireland. Both universities have a student profile which shows a strong commitment to these roles, more so than many other 'old' universities. Northern Ireland is also unusual in its relative separation as a graduate labour market from the rest of the UK, as well as from the Republic of Ireland, and it is important in this respect that the universities and the colleges continue to offer the widest opportunity and yet also educate to the highest possible level in order to meet the development needs of Northern Ireland.

The other major element of regional development is the competitiveness and innovativeness of regional business. Here despite a research base that is relatively small, the universities have also been highly active, in collaboration with Invest NI, in

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developing a number of industry-oriented research and technology transfer centres. However Northern Ireland suffers for its small size and peripherality. In view of the weakness of the Northern Ireland regional innovation system what is most encouraging is the very strong commitment and performance of the universities to knowledge transfer to SMEs, especially in initiatives such as the Teaching Company Scheme, and more recently in stimulating entrepreneurship and spin off companies.

The communities of Northern Ireland have a great many problems, socially and culturally as well as in their urban environments. The universities have perhaps gone further than most others in the UK to take up that challenge. The number and diversity of initiatives is hugely impressive and many are highly innovative, even unique, within the UK. The universities can never solve Northern Ireland's problems, but they make a significant contribution to the collective effort.