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DELIVERING SUCCESS THROUGH EXCELLENCE

An Analysis of the Quality and Performance of Department for Employment and Learning Programmes and Provision

2nd Report, March 2011 Prepared by: Analytical Services, Department for Employment and Learning

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Executive Summary

Introduction

- E 1. The top priority of the Executive's Programme for Government (PfG) 2008-11 is to grow a dynamic, innovative economy. Within this wide remit, the Department for Employment and Learning has a central role to play in promoting learning and skills, preparing people for work and to support the economy.
- E 2. To this end the Department utilises a wide range of education, training, skills, innovation and employment provision which is delivered through a diverse network of providers ranging from colleges and universities to the Employment Service, training organisations and voluntary groups.
- E 3. In order to maximise the impact of Departmental services, it is essential that the quality, performance and purpose of the Department's wide ranging provision is clearly understood and is of a high standard. Its strategy for quality improvement, 'Success through Excellence', underscores its commitment to raising standards.
- E 4. The following document is the second detailed analysis of the Department for Employment and Learning's quality and performance. The first report 'Department for Employment and Learning Quality and Performance: A Baseline Analysis' was published in May 2010 and provided a quantitative assessment of the Department's funded provision and programmes. That initial report considered the Department's performance against its own key targets and Programme for Government (PfG) commitments.
- E 5. This year's report, seeks to build on the previous baseline analysis. It sets out the steps that the Department has taken to address the issues identified in the first report, provides an update on performance right

across the Department for Employment and Learning's key programmes and provision and, reflecting on that analysis, identifies what further challenges are emerging or remain. A particular focus has been placed on the analysis of Science, Technology, Engineering and Mathematics (STEM) areas which are of strategic importance to the Department and to Northern Ireland's future economic fortunes.

- E 6. This work is being developed to build the evidence base supporting policy development and service delivery within the Department for Employment and Learning. It seeks to support the Department's commitment to maintain and enhance the quality of the programmes it delivers as set out in its quality improvement strategy, Success through Excellence¹.
- E 7. Responding to the issues raised in the previous baseline report, the Department developed an Action Plan which was published alongside the initial report. The Action Plan has since been updated to include an assessment of progress on each issue. The updated Action Plan is included at **Annex 2** of this report.

Context for Analysis

E 8. Recent changes to Northern Ireland's economic, demographic and social backdrop are having a significant impact on Departmental provision. Current labour market conditions are offering particular challenges with more people out of work and out of work for longer. Local economists forecast that prospects for growth in Northern Ireland are generally weaker than the rest of the UK. The Northern Ireland economy has a significant exposure to constraint in public expenditure both directly, in terms of

¹ Success Through Excellence – A Quality Improvement Strategy for the Further Education and Training System in Northern Ireland January 2007.

potential public sector job losses, but also indirectly through the negative effect on consumer confidence.

- E 9. This coupled with the continuing decline in the young population (a key cohort for the Department for Employment and Learning) means that the Department may have to look more to the up-skilling of the existing workforce and to attract and retain polices to address skill needs in the longer term.
- E 10. Lower average income levels in Northern Ireland compared to the UK as a whole and the higher levels of dependency on benefits present particular barriers for the Department for Employment and Learning as it works to move people into employment, particularly in the current economic context. The lower wage environment creates the conditions for a stronger benefit trap to exist here compared to other parts of the UK.

The Skills Agenda

- E 11. The Programme for Government (PfG) sets a number of challenging skills targets for Northern Ireland. These include a focus on up-skilling the workforce at level 2 and above, level 3 and above and an expansion of enrolments in subject areas related to STEM.
- E 12. Analysis shows that the percentage of the Northern Ireland working age population qualified to level 2 and above and level 3 and above both remain on an upward trend. Nevertheless, attainment of these PfG targets remains challenging and an additional 15,000 level 2 qualifications and 14,000 level 3 qualifications would be required per year to meet the 2015 ambition.

Indicator	Recent Change	Long-Term Trend
Percentage	Between Q2 2009 and Q2 2010, it is	Between Q2 1997 and Q2 2010, the
of NI working	estimated ² that the percentage of the	percentage of the working age population
age	working age population qualified to level	qualified to level 2 and above has increased
population	2 and above has increased by 1.1	by 14 percentage points ³ although even
qualified to	percentage points and now stands at	stronger growth is required to meet the
level 2 and	67%.	related PfG target.
above		
Percentage	Between Q2 2009 and Q2 2010, it is	Between Q2 1997 and Q2 2010, the
of NI working	estimated ⁴ that the percentage of the	percentage of the working age population
age	working age population qualified to level	qualified to level 3 and above has increased
population	3 and above has increased by 0.9	by 10 percentage points 5 although even
qualified to	percentage points and now stands at	stronger growth is required to meet the
level 3 and	close to 50%	related PfG target.
above		
Number of	Between 07/08 and 08/09 there has	Between 03/04 and 08/09 the number of
post 16	been a 2% increase in the number of	STEM enrolments ⁶ has fallen by 11%
enrolments in	post 16 enrolments in STEM related	
STEM	subjects (at level 2 and above)	
related subjects in NI		

Table E 1: Trends in Key Skills Indicators

 ² Source: Labour Force Survey. This data is subject to sampling error and confidence intervals.
 ³ Ibid.
 ⁴ Ibid.
 ⁵ Ibid.
 ⁶ This includes post 16 STEM enrolments in HE,FE, Schools and Training Programmes.

E 13. Recently the Department has reviewed it's 'Success through Skills' strategy and the programmes developed and associated with it. As an outcome of this process a revised draft strategy, has been launched and consulted upon. It demonstrates clearly the need for a continued focus on skills development to deliver sustainable economic growth and prosperity within NI.

Higher Education

- E 14. The Department for Employment and Learning aims to promote and sustain the development of an internationally competitive HE sector in Northern Ireland, accessible to all who are able to benefit and meeting the needs of the Northern Ireland economy and wider society. To this end the Department is currently running a public consultation on the development of the first HE Strategy, the consultation began in January 2011 and is due to finish in April 2011.
- E 15. Recent research demonstrates the significant contribution of the local HE sector to the Northern Ireland and wider UK economies, adding over £1bn to overall output and generating £66m in export earnings.
- E 16. Student enrolments at Northern Ireland HEIs experienced a marginal increase between 2007/08 and 2008/09.
- E 17. In the academic year 2008/09, Northern Ireland's higher education age participation index (API) was 48.2%, which is higher than the Scotland API (43.0% in 2008/09), and also the more-wide ranging HEIPR used in England (45.5% in 2008/09).
- E 18. Northern Ireland continues to have a higher concentration of STEM enrolments (48% of total enrolments) compared to GB HEIs (41%).

Indicator	Recent Change	Long-Term Trend
Overall	Enrolments at NI HEIs remained broadly	Enrolments at NI HEIs grew by 14% over 10
Enrolments	static between 2007/08 to 2008/09 - rising	years to 2008/09
	only marginally	
STEM	STEM enrolments remained fairly constant	STEM Enrolments at NI HEIs have increased by
Enrolments	over the year to 2008/09 (falling by only	23% between 98/99 and 08/09
	0.2% compared with the previous year)	
Qualifications	The number of student qualifiers at NI HEIs	The number of student qualifiers at NI HEI has
	has remained fairly constant over the year	increased by 25% between 98/99 and 08/09
	to 2008/09 (falling by only 0.4%) compared	
	with the previous year.	
Widening	The proportion of young full-time first	Between 2002/03 and 2007/08 the proportion of
Access	degree entrants to NI HEIs by (NS-SEC)	young full-time first degree entrants to NI HEIs
	Classes 4,5,6 & 7 in 2008/09 ⁷ was 42%.	by (NS-SEC) Classes 4,5,6 & 7 has remained
		static at 41%.
	N/A	

Table E 2: Trends in Key HE Indicators

⁷ Due to a change in question by UCAS the 2008/09 figures for the percentage of entrants from NS-SEC classes 4 to 7 cannot be compared with previous years.

- E 19. Between 2007/08 and 2008/09 Northern Ireland enrolments in STEM subjects has fallen marginally in HE (-0.2%) although this compares favourably to a decrease of 3.0% recorded for the period 2006/07 to 2007/08.
- E 20. The number of student qualifiers has remained relatively constant falling by (<1%) in the year to 2008/09 but the overall number of qualifiers remains significantly up (+25%) on the decade earlier.
- E 21. In terms of social class, the proportion of young full-time first degree entrants to NI HEIs in 2008/09 from the NS-SEC Classes 4, 5, 6, & 7 remains well above the UK average of 32.3%.
- E 22. Northern Ireland HEI non-completion rates remain above (worse than) the UK average and the gap has increased over the last year.

Further Education

- E 23. FE is the main provider of professional and technical education and training in Northern Ireland. The sector plays an important role in raising skill levels in the region. The range of courses provided by the FE sector spans essential skills, professional, technical and academic programmes at levels 2 and 3 and above.
- E 24. Enrolments within the FE sector in the past year have remained steady. Within that wider picture, enrolments at Level 2 have increased by 3% over the year to 2008/09 while Level 3 enrolments have fallen by 4%.

Indicator	Recent Change	Long-Term Trend
Level 2	Level 2 Enrolments at NI FE Colleges	Level 2 Enrolments at NI FE Colleges grew by
Enrolments	have grown by 3% between 2007/08 and	76% between 98/99 and 08/09
at NI FE	2008/09	
Colleges		
Level 3	Level 3 Enrolments at NI FE Colleges	Level 3 Enrolments at NI FE Colleges grew by
Enrolments	have decreased by 4% between 2007/08	21% between 98/99 and 08/09
at NI FE	and 2008/09	
Colleges		
STEM	Compared to the previous year STEM	STEM courses recorded a 15% increase
enrolments	enrolments at NQF level 2 and above	between 98/99 and 08/09
(NQF level 2	have grown by 5% in 08/09	
and above)		
Retention on	The retention rate on Further Education	The retention rate on Further Education
Further	courses has increased over the last year	courses has decreased slightly from 91% in
Education	and now stands at 89% in 2008/09	1998/99 to 89% in 2008/09 ⁸
Courses		
Achievement	The achievement rate on Further	The achievement rate on Further Education
on Further	Education courses has increased over	courses has remained relatively static
Education	the last year and now stands at 70% in	between 1998/99 and 2008/09 falling by 1
Courses	2008/09	percentage point over the period ⁹

Table E 3: Trends in Key FE Indicators

 ⁸ It is important to note that the FE sector has grown substantially since 1998/99 becoming a more diverse sector with increased participation of those from disadvantaged backgrounds.
 ⁹ Ibid.

- E 25. Enrolments on STEM courses at Level 2 and above have increased by 5% over the last year and now account for about a third of all FE enrolments on courses at these levels.
- E 26. The FE sector in Northern Ireland continues to attract a significant proportion of its enrolments from harder to reach groups, particularly those from the most deprived areas of Northern Ireland.
- E 27. Current retention rates (ie the extent to which those enrolled remain on their course) and achievement rates (the extent to which those who complete their course gain a qualification) are slightly up on those recorded in previous years at 89% and 70% respectively.
- E 28. In terms of the success rates (which are calculated as the retention rate multiplied by the achievement rate) at NI FE colleges, typically 60% of FE students who embark on a course gain an award from their studies. This is broadly in line with Wales and Scotland but below England.

Training for Success / Apprenticeships

- E 29. Department for Employment and Learning funded training delivers a wide spectrum of provision to meet the needs of individuals and employers alike.
- E 30. Overall occupancy on Department for Employment and Learning Training Programmes has remained buoyant in the period to September 2010 particularly for females and those aged 25 and over.
- E 31. Over the last 4 years there has been a steady increase in occupancy on Department for Employment and Learning training programmes, totalling 21% over the period.

E 32. The information available indicates that STEM occupancy between 2008 and 2010 has remained fairly constant.

Indicator	Recent Change	Long-Term Trend
Overall	Preliminary figures for September	Occupancy has grown by 26% between
	, , , , , , , , , , , , , , , , , , , ,	
occupancy on	2010 indicate a 2.6% increase in	2000 and 2010
Department for	occupancy compared to the same	
Employment	period a year earlier	
and Learning		
training		
programmes		
Number of	There has been an increase of 8%	The number of certificates has increased
Level 2 and 3	in the number of certificates issued	marginally since 07/08 (<1%)
certificates	to participants in Department for	
issues by the	Employment and Learning Training	
Department for	Programmes between 08/09 and	
Employment	09/10	
and Learning		
Successful	The rate at which candidates	The rate at which candidates successfully
completion of	successfully complete training has	completed training has increased from 90%
training on	increased over the last year from	in 2007/08 to 98% in 2009/10
Bridge to	78% in 2008/09 to 98% in 2009/10	
Employment		
programmes		

Table E 4: Trends in Key Training Programmes

E 33. In relation to the Bridge to Employment programme which has been included in this Quality and Performance analysis for the first time, overall activity (numbers of projects and numbers started training) have fallen through the downturn. However the proportion of trainees successfully

completing training and being offered employment has increased between 2007/08 and 2009/10.

Essential Skills

- E 34. The Department for Employment and Learning launched the Essential Skills for Living Strategy and action plan in April 2002. Essential Skills for Living aims to improve adult literacy and numeracy (including Information & Communication Technology (ICT)) in Northern Ireland.
- E 35. There has been a very significant increase in enrolments on Essential Skills courses since the introduction of the Essential Skills for Living Strategy. Recent data suggest that the enrolment levels continue to increase each year. Younger age cohorts (16-25 year olds) continue to account for the bulk of enrolments and there are more males than females.
- E 36. Essential Skills providers have, on the whole, been successful in attracting a disproportionately large number of enrolments from the more deprived areas of Northern Ireland.
- E 37. The data indicate that since the implementation of Essential Skills provision in October 2002 to the end of 2008/09, retention and achievement rates have stood, on average, at 84% and 58% respectively.

Indicator	Recent Change	Long-Term Trend
Enrolments	The number of enrolments on Essential	Enrolments on Essential Skills course has
on Essential	skills courses has increased by 35%	increased almost nine fold from 4,008 in
Skills	from 26,706 in 2007/08 to 36,027 in	2002/03 to 36,027 in 2008/09
courses	2008/09	
Retention on	The retention rate on Essential skills	The retention rate on Essential skills
Essential	courses has increased over the last	courses has increased from 85% in 2003/04
Skills	year and now stands at 89% in	to 89% in 2008/09
Courses	2008/09	
Achievement	The achievement rate ¹⁰ on Essential	The achievement rate on Essential skills
on Essential	skills courses in 2008/09, at 47%, was	courses has increased from 44% in 2003/04
Skills	lower than that recorded in 2007/08	to 47% in 2008/09
Courses		

Table E 5: Trends in Key Training for Essential Skills Indicators

Employment Agenda

E 38. Increasing employment is at the heart of the Executive's Programme for Government. 'Growing a Dynamic Economy' is the Executive's overarching aim and there is a key goal to increase the employment rate.

¹⁰ The inability to match individuals with Essential Skills qualifications issued by awarding bodies to the enrolment data from the providers of Essential skills reduces the robustness of achievement rate analysis by academic year.

PSA3 focuses on increasing employment, subject to economic conditions. On a wider perspective, at the centre of the "Welfare to Work" agenda, as in the rest of the UK was, and is, assisting welfare clients (by identifying, and helping them to deal with, their barriers to work) to move towards and into employment.

- E 39. The PfG goal to increase employment in part reflects Northern Ireland's long history of being a region of low employment and high unemployment. Although employment levels (and labour market participation) rose until very recently, and unemployment fell to historically very low levels, employment levels still remained low by UK standards. In 2005 the working age employment rate in NI was 66/67%¹¹, still some 5 or 6 percentage points behind the UK rate and the lowest of any UK country or region.
- E 40. In general, employment rose steadily until late 2007 when the rise levelled off at an employment rate of around 69%. Since mid-2008, however, the impact of the current recession is clear. Employment fell substantially from the peak although there has been a modest recovery in the more recent past. A converse pattern had been observed for unemployment: it fell during the period to the recession and has since risen sharply.
- E 41. There are three key Employment PSA targets deliverable by March 2011: the **Into Employment** target, to assist 70,000 working age benefit claimants to move into employment, subject to economic conditions; the **Employers Online** target, to increase the use of e-vacancy by 25%; and the **Modernised Service** target, to deliver a modernised employment service.

¹¹ All rates here are measured using Labour Force Survey (LFS) data. These will be subject to sampling error and also will fluctuate seasonally within any one year. The definition of working age has been changed to 16-64 for both males and females. The PfG Goal was set prior to the change in definition and the target thus relates to a working age population of 16-59 (female); 16-64 (male).

- E 42. The **Into Employment** target is on track for achievement with over 69,000 people having moved from welfare into work from the start of the period (April 2008) to June 2010 the target is 70,000.
- E 43. The **Employers Online** target is proving more difficult to achieve with only slight movement towards the target of 43% (base 35%) if this is measured over the whole period. However there have been encouraging moves in recent months with more than 40% of vacancies being registered online.
- E 44. The **Modernised Service** target is not quantifiable. The initial phase of modernisation process delivered flexible citizen-focused provision through the introduction of a number of initiatives, such as Pathways to Work and Steps to Work; the second phase focuses on internal modernisation to ensure an improved service is delivered to clients by, for example, the development of technology-enabled business processes and the implementation of a Whole Systems Thinking approach to services to Job Seekers.
- E 45. **Steps to Work** is the Department's main adult return to work programme. Its aim is to assist people who are unemployed or economically inactive to find and sustain employment. Participation is mandatory for all those on Jobseeker's Allowance (JSA) aged between 18 and 24 who have been claiming for 6 months or longer and those aged 25 and over claiming JSA for 18 months or more. Steps to Work also offers access to provision for voluntary participants aged 18 or over (16 or over for lone parents) for those on Incapacity Benefit, Employment and Support Allowance, Income Support, other benefits, and those economically inactive not in receipt of benefits.

Indicator	Recent Change	Long-Term Trend
Employment	The employment rate has fallen since the	Employment rates rose throughout the last
Rate	onset of the recession, although there	decade until the recession - but forecasts
	has been a marginal improvement over	suggest that it will take nearly a decade to
	the past year	recover the pre-recession position
Into	Numbers have held up despite the	The PSA target of 70,000 people moving
Employment	recession putting downward pressure on	from welfare into work is on track for
	vacancies	achievement (over 69,000 by June 2010)
Employers	In recent months the figure has risen to	The overall percentage of vacancies
Online	around 40%	registered through Employers Online has
		only risen slightly as measured over the
		whole period to just over 35% (target 43%)
Steps to	Baseline established - Steps to Work	Steps to Work is a new programme so
Work	had 33,334 starts over the period with	longer term trends are not applicable at this
	21% of leavers entering unsubsidised	point
	employment	
	N/A	N/A

 Table E 6: Trends in Key Employment Agenda Indicators

E 46. From September 2008 to June 2010, 33,334 participants started Steps to Work. The majority of participants who started were mandatory, accounting for 71% (23,522 participants) of all starts. Despite the difficult labour market conditions, between September 2008 and December 2009 Steps to Work assisted a total of 4,006 participants to find work with 3,173 entering unsubsidised employment over the period – 21% of all leavers. More than four-fifths (83%) of those who found unsubsidised employment sustained that employment for 13 weeks or more.

The Innovation Agenda

- E 47. The recent Independent Review of Economic Policy (IREP) commissioned by the Department of Enterprise, Trade and Investment (DETI) and Invest NI and chaired by Professor Barnett was published in September 2009. The report acknowledges the importance of effective innovation and knowledge transfer to Northern Ireland's future prosperity.
- E 48. In order to enhance innovation capacity the Department seeks to: support the local universities' research capabilities and research quality; exploit fully the contribution that the local universities and Further Education colleges can make to the economy and, in particular, increase their responsiveness to the needs of business and the community.
- E 49. Northern Ireland regularly outperforms the rest of the UK in a number of HE Innovation and R&D indicators including the number of spin-out firms and the extent of research collaboration.
- E 50. This year the Department looks set achieve its PfG target to increase by 300 the number of PhD research students at local universities.
- E 51. Research graded at the highest level from the Research Assessment Exercise (RAE) has been increasing across both QUB and UU and both universities have improved their overall position in the wider UK HEI context.

E 52. While there was a marginal decline in the proportion of full cost recovery provision at FE (an indicator of community and business interaction) in the last year, levels remain high by historical standards.

Indicator	Recent Change	Long-Term Trend
STEM PhD	Between 07/08 and 08/09 STEM	Between 98/99 and 08/09 STEM
enrolments at	enrolments in PhDs at NI HEIs have	enrolments at NI HEIs have increased by
NI HEIS	increased by 15%	68%
Income from	Between 07/08 and 08/09 Income from	Income from Collaborative Research has
Collaborative	Collaborative Research has increased	increased by 203% between 03/04 and
Research at	by 26%	08/09
NI HEIS		
Number of	Between 07/08 and 08/09 the number	Between 02/03 and 08/09 the number of
Spin-off	of Spin-off companies fell by 5%	Spin-off companies has increased by 26%
Companies	although this may have been	
originating	influenced by the current economic	
from NI HEIs	downturn	
FE Cost	Between 07/08 and 08/09, cost	Between 02/03 and 08/09, the cost recovery
Recovery	recovery provision in FE (which	provision in FE has increased by 10% on
Provision	provides an indicator of FE interaction	aggregate
	with the business and the community)	
	remained fairly constant	

Table E 6: Trends in Key Innovation indicators

E 53. An evaluation in to the Connected Programme (a joint initiative between Queen's University Belfast, the University of Ulster and the Association of Northern Ireland Colleges (ANIC)) established that in its first two full years of operation, it met the majority of its targets including the number of added value engagements, number of projects delivered and the value of projects delivered.

Final Remarks

- E 54. This report, the second in the Department for Employment and Learning's Quality and Performance series, seeks to provide an assessment of Departmental funded provision and programmes. The analysis points to a continued hostile operating environment. Unemployment remains on an upward trend and more people have been out of work for longer. Employment numbers, are a long way off pre-recession peaks and the region is particularly exposed to constraint in public expenditure. Nevertheless, there is continued consensus amongst economic commentators that innovation, skills and employment will be crucial to driving future economic growth and prosperity.
- E 55. It finds that performance in many strategically important areas has been improving. The proportion of the working age population qualified at level 2 and above and level 3 and above continues to increase although the attainment of related PfG targets in these areas remain challenging. In several number of the Department's key work areas the number of enrolments on STEM subjects has increased in the 2008/09 year and early indications suggest that this growth will be continued into 2009/10, reversing a long term trend of decline.
- E 56. In broad terms, the Department for Employment and Learning skills provision continues to be successful at engaging with those from the more

deprived areas and, where comparable data exist, the Northern Ireland performance on this measure tends to be significantly ahead of other parts of the UK. The evidence on quality of skills provision from a range of sources suggests that the areas assessed have been improving, although there are opportunities identified for further enhancement.

- E 57. Despite the economic downturn over 69,000 people having moved from welfare into work from the start of the period (April 2008) to June 2010 and the associated PSA target is on track for delivery.
- E 58. In relation to innovation and R&D this report has presented a positive picture of strong and growing engagement between HE, FE and the Business community. Again on many of the key indicators of HE research commercialisation Northern Ireland compares favourably with other UK countries.
- E 59. Set against this positive picture, the report points to a number of remaining challenges for the Department. In particular, there continues to be wide variability in the rate at which individuals successfully complete the course for which they had enrolled and attain the associated qualification. For example, having embarked on a course, some social groups are more likely to attain a qualification successfully than others and retention and achievement rates continue to vary markedly across education and training providers and across subject areas.
- E 60. Achievement of the employers online PSA target, which seeks to increase the use of e-vacancy by 25%, remains challenging despite recent increases in the proportion of vacancies being registered online.
- E 61. As a response to the first baseline analysis of the Department's quality and performance and the issues it raised, the Department developed an

action plan to ensure the programmes it delivers and the provision it sponsors is of a high quality. The Action Plan was published alongside the above report.

- E 62. The Department is committed to monitoring implementation of the Action Plan on a regular basis and it has been reproduced at **Annex 2** of this report with a statement of the progress that has been made set alongside each action. Nevertheless, many of the actions which are being undertaken are ongoing and are not due to be completed until the end of this financial year. It is too early to assess the full impact they are having at this stage but evidence from this updated report indicates that the issues which the actions are designed to tackle remain very relevant. These include: increasing the skills levels of the workforce, particularly in STEM areas; addressing variability in retention and achievement rates within and across programmes; addressing barriers to employment; and supporting knowledge transfer from the Northern Ireland research base.
- E 63. Implementation of the above Action Plan will continue to be monitored as this Quality and Performance work develops and the actions will be refined to take account of the outcomes of these reports. This body of evidence and associated actions are designed to bolster the Department's efforts to maintain and enhance the quality of the programmes it delivers.

1. Introduction

- 1.1 Last year, the Department published its first wide ranging analysis of Departmental programmes and provision. Entitled 'Department for Employment and Learning Quality and Performance: A Baseline Analysis 2010', the report provided an overview of the Department's objectives, its commitments and the context within which it operates.
- 1.2 The report also identified the central challenges for the Department and provided an analytical overview of the Department's key work in the areas of Skills, Employment and Innovation/R&D.
- 1.3 This year's report, the second in the Department's Quality and Performance series, seeks to build on the previous baseline. It sets out the steps that the Department has taken to address the issues identified in the first report, provides an update on performance right across the Department's key programmes and provision and, reflecting on that analysis, identifies what further challenges are emerging or remain.
- 1.4 This iteration of the report goes further than its predecessor. It includes analysis of additional employment programmes, such as Steps to Work and Bridge to Employment. It augments the quantitative analysis with qualitative evidence where possible. A particular focus has been placed on the analysis of Science, Technology, Engineering and Mathematics (STEM) areas which are of strategic importance to the Department and to Northern Ireland's future economic fortunes.
- 1.5 This work is being developed to build the wider evidence base supporting policy development and service delivery within The Department for Employment and Learning which includes the report of the Department's Quality and Improvement Adviser which is published separately. This body of evidence is designed to support the Department's commitment to

maintain and enhance the quality of the programmes it delivers as set out in its quality improvement strategy, Success through Excellence¹².

Scope and Approach

- 1.6 The following report begins by setting out the Department's high level aims, objectives and Public Sector Agreement (PSA) commitments (Section 2). It considers recent changes to the wider economic, social and demographic context within which the Department operates (Section 3). It examines progress since last year's report towards attaining those high level commitments and provides a quantitative and qualitative overview of the Department for Employment and Learning's core delivery programmes on skills, employment and innovation (Sections 4, 5, 6 and 7). The report considers key quality and performance indicators for each programme area and examines the progress that has been made since last year's assessment. It seeks to compare the Northern Ireland position with similar provision elsewhere where possible. The report provides an update on the actions the Department has taken to address the quality and performance issues raised in last year's baseline report and to promote progress. A full copy of that action plan is included at **Annex 2**.
- 1.7 While this paper does not provide an analysis of the Department for Employment and Learning's entire suite of programmes¹³, it does focus on the areas that account for the vast majority of Departmental expenditure. Furthermore, the coverage of this report has been widened out with analysis of Steps to Work and Bridge to Employment included for the first time.

¹² Success through Excellence – A Quality improvement strategy for the Further Education and Training system in Northern Ireland January 2007.

¹³ Examples of programmes or activities not yet assessed within the report include Management and Leadership activities, Careers Service provision and the Department's role in the area of Employment Rights.

1.8 This analysis seeks to provide the Department for Employment and Learning's Board and wider stakeholders with a clear indication of the position of the Department across its main (in terms of investment) areas of activity, how the challenges the Department faces have been changing and identify what progress is being made to deliver upon its commitments.

2. Departmental Aims, Objectives and Commitments

2.1 Before turning attention to the updated analysis of the Department's programmes the following provides a recap on the organisation's aims and objectives so that there is a clear understanding of what the Department is working to achieve. The Department's aims and objectives are set out in detail in the Department for Employment and Learning's Corporate Plan and the Executive's Programme for Government. They are summarised below.

Departmental Aim and Vision

2.2 The Department's vision is to develop a dynamic, innovative and sustainable economy where everyone achieves their full potential. The Department seeks to deliver this through the realisation of its aim which is, to promote learning and skills, to prepare people for work and support the economy.

Targets and Commitments

- 2.3 The Department has committed to meet a number of key targets. These are set out in the Executive's Programme for Government (PfG) as Public Service Agreements (PSAs). A full list of the Department for Employment and Learning's PSA commitments and PfG Key goals are contained at Annex 1 of this report.
- 2.4 At a high level, the key areas of focus are:
- 2.5 **PSA1 Productivity Growth -** improve Northern Ireland's manufacturing and private services productivity (this area includes the Department for

Employment and Learning's commitments to the innovation and research and development (R&D) agendas);

- 2.6 **PSA2 Skills for Prosperity -** ensure the people of Northern Ireland have the right skills to deliver economic prosperity now and in the future and increase skills and career choices in STEM subjects; and
- 2.7 **PSA3 Increasing Employment -** subject to economic conditions, increase employment levels and reduce economic inactivity by addressing the barriers to employment and providing effective careers advice at all levels.
- 2.8 The Department's PSAs provide a robust framework for shaping the following baseline analysis. This report considers in more detail the progress that has been made towards achieving these high level commitments. It assesses how specific Departmental programmes have been contributing towards overall performance within the changing social, economic and demographic context which is discussed in the next section.

3. Context for Analysis

3.1 Last year's baseline analysis of Quality and Performance presented a detailed examination of the economic, demographic and social context within which the Department operates. It pointed to how this wider operating environment, and changes to it, can impact significantly on the work of the Department. **Box 3.1** below summarises the key messages from last year's report. The remainder of this chapter considers how the wider operating environment has been changing since the last report was written and assesses how that is impacting on the Departments programmes.

Box 3.1: Context for Analysis – Recap of Key Issues Economic Context

- Seismic changes in Northern Ireland's economic fortunes are emerging as a consequence of the global economic downturn with falling output, decreasing employment and increasing levels of unemployment.
- Economic environment placing increased demands on the Northern Ireland Employment Service and more individuals seeking to up-skill and re-skill through the downturn.
- Much consensus amongst researchers and commentators that skills and innovation will be central to driving future prosperity in the region accompanied by a risk of reduced engagement from employers in this agenda in the short term as their priorities shift in response to the downturn. The affordability of up-skilling/re-skilling is also likely to be an issue for individuals through the downturn.

Demographic Context

- A protracted decline in the young population in Northern Ireland is likely to have an impact on the demand for Department's education and skills programmes from that segment of the population.
- Northern Ireland's population is ageing.

Box 3.1 Continued:

Demographic Social Context (continued)

• While the pension age is set to rise, the above factors are likely to lead to constrained growth in numbers of working age and this emphasises the need to up-skill and re-skill those already in the workforce.

Social Context

- Greater dependence on social security benefits than most other parts of the UK.
- Evidence of pockets of severe deprivation and a community that bears the scares of historical unrest.

The Economic Context – An Update

- 3.2 Since the 2010 Quality and Performance report was penned, global economic growth has returned to positive territory. Official data highlight that the recession in the UK came to an end in Quarter 3 2009 and would suggest that the recovery is gaining some traction. UK unemployment has been on a falling trend, down over a 100,000 over the last year and employment has been increasing.
- 3.3 While quarterly GDP figures are not available for Northern Ireland, most independent commentators suggest that the local economy has also exited recession and latest data do confirm that manufacturing and private service sectors grew during the first quarter of 2010. The number of redundancies, while still significant, has begun to tail off from the peak levels experienced at the height of the downturn (the number of redundancies has fallen by 36% between July 2009 and July 2010). The

numbers of recorded vacancies also show signs of growth increasing by 19% over the period June 2009 - June 2010. Nevertheless, Northern Ireland's economic recovery can be portrayed as more fragile than the UK's. The latest figures show that claimant count unemployment in Northern Ireland has continued to rise (albeit more modestly) since the beginning of 2010. All other regions of the UK have experienced declines in claimant numbers over the same period. The employment rate¹⁴ in Northern Ireland has increased over the last year and now stands at 66.4% (Quarter 2, 2010) however it remains lower than the pre recession peak of 68.8% (Quarter 2, 2007) and the Programme for Government target level of 75%.

- 3.4 Local independent economic commentators are virtuously unanimous in pointing to weaker prospects for growth in Northern Ireland compared to the UK more generally. They emphasise the greater exposure of the Northern Ireland economy to contractions in public expenditure both directly, in terms of potential public sector job losses, but also indirectly through the negative impact cuts could have on consumer confidence and expenditure with the retail and construction sectors particularly at risk.
- 3.5 Figure 3.1 illustrates the significant impact of the downturn on Northern Ireland claimant count. Unemployment on this measure rose by around 145% between November 2007 (when unemployment in Northern Ireland began to rise) and August 2010. This level of increase was greater than that experienced by any other region of the UK over that period.
- 3.6 Unemployment amongst young people (age 24 and under) in Northern Ireland has increased even more dramatically, up by 171% between November 2007 to August 2010.

¹⁴ Source: DETI (<u>http://www.detini.gov.uk/deti-stats-index/stats-surveys.htm Table 2.12</u>) (Based on the 'new definition' of 16-64 for both males and females).

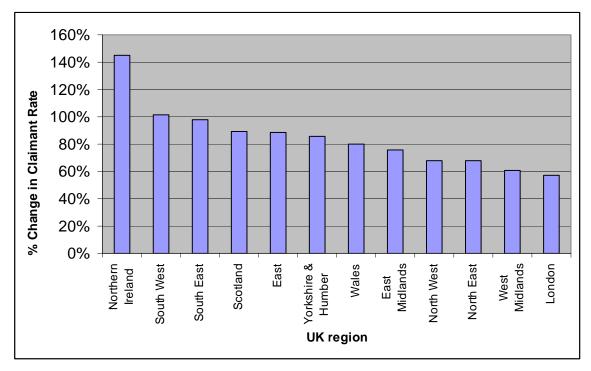


Figure 3.1 Percentage change in Claimant Count by Government Region November 2007 – August 2010

Source: DETI

- 3.7 Long term unemployed (those unemployed for more than one year) has also been increasing very significantly, albeit from a relatively low base. It has risen from 3,875 in July 2008 to 13,805 in July 2010, a rise of 256%. Over the same period, there has been an even greater percentage increase in the numbers of young people that are long term unemployed (24 and under) up 688% although again this increase is measured from a low base.
- 3.8 This turmoil in the labour market places additional pressure on the Northern Ireland Employment Service with little evidence that unemployment levels are likely to ease significantly in the next two to three years.
- 3.9 Nevertheless, forecasts up to 2020 suggest that the long term trends of reducing demand for low skilled workers and increasing demand for those

with higher skills will continue. These forecasts suggest that there is likely to be a particularly high demand for STEM and market facing creative arts and design qualifications over the next decade.

- 3.10 In addition, data suggest that there is an increased demand from individuals to up-skill or re-skill during the downturn. For example the number of Northern Ireland domiciled students applying to Northern Ireland HE institutions has increased by 17.1% between 2008 and 2010. This presents opportunities in terms of improving the skills of the working age population but challenges given the capacity and funding constraints faced by the Department and education and training providers. Individuals wishing to invest in skills are also likely to face affordability issues as access to private credit facilities becomes more constrained and expensive. Employers may be less inclined to invest in upskilling their workforce as their focus shifts from skills towards capital shortages. This draws into sharp relief the questions of who is best placed to fund investment in skills (eg individuals, employers or government), how can they be incentivised to contribute; what areas of skills investment are key to delivering economic success and when is the investment required?
- 3.11 Tough decisions lie ahead about how best to secure Northern Ireland's longer term economic success in a context of significant fiscal constraint. However, the evidence that investment in skills, employment and innovation are central to generating sustained economic growth is significant and expanding^{15/16}. This underscores the importance of the Department's contribution to the Programme for Government's economic ambition.

¹⁵ UKCES The Value of Skills: An Evidence Review, Evidence Report 22, July 2010.

¹⁶ IREP Independent Review of Economic Policy (DETI and Invest NI), September 2009.

Demographic Changes – An Update

3.12 As might be expected, the demographic issues facing Northern Ireland that are of relevance to the Department have not changed significantly since the last iteration of this report. The size of the young population continues to decline and, as a consequence, the number of school leavers (a key cohort for the Department) will get progressively smaller over the next ten years unless demographic trends are reversed by substantial inward migration. Indeed Figure 3.2 suggests the reverse may be true with reductions recorded in the number of migrant worker registrations from the 8 accession (A8) countries. Between Quarter 1 2009 and Quarter 1 2010 new registrations have averaged around 760 per Quarter, down 230% from the 2006 peak of 2,505 registrations. Migration patterns into Northern Ireland have been influenced by the economic downturn, which has resulted in fewer job opportunities in sectors often associated with migrant workers and by adverse movements in exchange rates making it less attractive to work here.

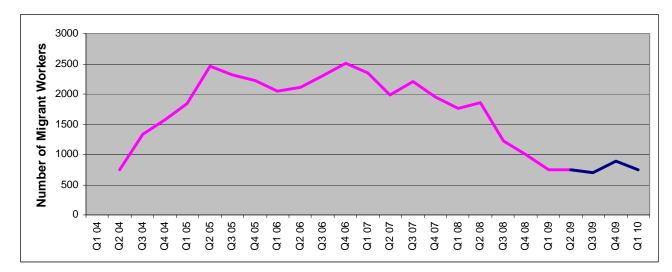


Figure 3.2 New migrant worker registrations from the A8 accession countries

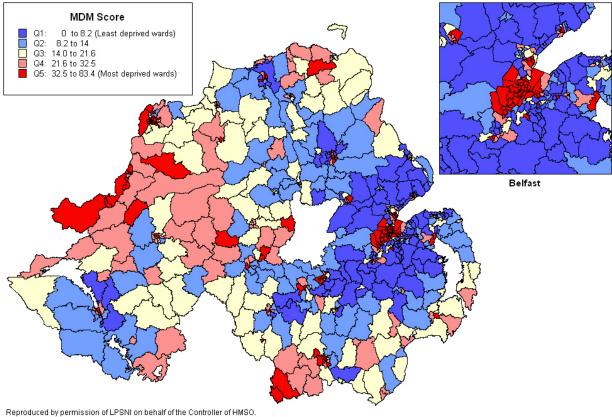
Source: Worker Registration Scheme (Q2 2004-Q1 2009), Local Government Authority Q2 2009 onwards.

3.13 The percentage of the population above the pension age continues to increase. The increases to the pension age for women initially and then for men will mitigate against this somewhat. However the gradual implementation of these changes could have profound effects on the ways individuals manage their working lives and thus on the Department as it responds.

The Social Context – An Update

- 3.14 Since the publication of last year's report the measure of deprivation across sub regions of Northern Ireland has been updated. Results from the Northern Ireland Statistics and Research Agency's (NISRA) Multiple Deprivation Measure (MDM) for 2010 are set out at Figure 3.3. It categorises Northern Ireland wards into 5 bands of deprivation or quintiles. The most deprived wards are coloured red whereas the least deprived areas are detailed in blue. A comparison with the previous (2005) MDM would suggest that the relative ranking of some areas have improved somewhat. In particular this includes areas within Fermanagh, South Tyrone, South Down, South Armagh and parts of the North Coast. Nevertheless, in general terms the west of Northern Ireland remains more deprived than the east and inner city areas, particularly in Belfast and Derry, remain in significant relative deprivation.
- 3.15 A more detailed examination of the MDM scores indicates a high incidence of poor educational achievement within the most deprived areas of Northern Ireland. This provides support for a continued focus on widening access policies to encourage greater uptake from underrepresented groups onto the Department's education and training programmes.

Figure 3.3: A Ward map of Northern Ireland illustrating NISRA's Multiple Deprivation Measure (MDM) score 2010



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- 3.16 In addition, lower average income levels in Northern Ireland compared to the UK as a whole and the higher levels of dependency on benefits present particular barriers for the Department as it works to move people into employment. The lower wage environment creates the conditions for a stronger benefit trap to exist here compared to other parts of the UK.
- 3.17 The extent and distribution of deprivation across Northern Ireland, coupled with the existence of religious polarisation amongst society, creates continued complexities for the delivery of the Department's skills and employment programmes.

Key Points

- 3.18 The work of the Department continues to be impacted significantly by the economic context with more people out of work, more out of work for longer and reduced employment opportunities. A significant new challenge is emerging for Northern Ireland in terms of the wider UK Government's plans for significant fiscal constraint. Northern Ireland, with its larger public sector, is likely to feel the impact to a greater extent with tighter public expenditure creating the potential for knock-on effects into the wider economy.
- 3.19 Looking forward, economic commentators suggest that the labour market will continue to feel the adverse effects of the downturn. However, there is also evidence which supports the continued importance of employment, skills and innovation to the prosperity of the region. That provides comfort that the Department's strategic direction, which seeks to help people move into employment and focuses on building the skills base and the capacity for innovation, is correct.
- 3.20 Nevertheless, the protracted decline in Northern Ireland's young population means that the region may have to look more to the up-skilling of the existing workforce and to attract and retain policies to address skill needs in the longer term. This is highlighted as a key focus for the new Northern Ireland Skills Strategy, Success through Skills 2. The balance of contribution to the cost of up-skilling, between employers, individuals and government, is also likely to come under scrutiny as budgets tighten across the board.

4. The Skills Agenda

- 4.1 Success through Skills, the Northern Ireland skills strategy, emphasises how central skills development is to underpinning the region's economic and social ambitions. It sets out Government's desire to ensure people are enabled to progress up a skills ladder in order to raise the skills level of the whole workforce; to help deliver high productivity and increased competitiveness; and to secure Northern Ireland's future in a global marketplace. Success through Skills and the Northern Ireland PfG set out a number of high level targets to measure progress towards this vision. These include:
 - increasing the proportion of the working age population who are qualified at skill level 2 and above to 80% by 2015;
 - Increasing the proportion of the working age population who are qualified at skill level 3 and above to 60% by 2015; and
 - increase by 5% the numbers studying STEM subjects in the post 16 cohort by 2011.
- 4.2 The Department has been reviewing the Success through Skills Strategy and the programmes that have been developed and implemented as part of it. As an outcome of that process a revised draft strategy, 'Success through Skills 2', was launched for public consultation. The new draft strategy has been informed by a wide range of relevant work and reports including: MATRIX, the Northern Ireland Science Industry Panel; the Report of the STEM Review; the All-Island Skills Study; the Varney Review of the competitiveness of the Northern Ireland economy; and the Independent Review of Economic Policy.
- 4.3 The new draft strategy demonstrates clearly the need for a continued focus on skills development to deliver sustainable economic growth and

prosperity. It provides forecasts of the overall skill levels that will be required to sustain the level of economic performance aspired to in the PfG. In keeping with the first Northern Ireland skills strategy, Success through Skills 2 emphasises the importance of increasing skill levels, particularly in STEM, via the following five key themes:

- Understanding the demand for skills;
- Improving the quality and relevance of education and training;
- Improving productivity by increasing the skills levels of the workforce;
- Tackling the skills barriers to employment and employability; and
- Engaging stakeholders.
- 4.4 In preparation for launch of the new skills strategy and in order to highlight the challenge that lies ahead, the following section considers the progress that has been made in delivering the above three overarching PfG skills targets. It compares Northern Ireland's performance with other parts of the UK and identifies what more remains to be achieved. In order to provide context, **Box 4.1** provides a review of the findings from the first baseline Quality and Performance report in relation to these overarching targets. Following on from that, **Box 4.2** sets out a summary of the actions the Department has taken to date to address the issues raised in that first report. A full update on those actions is set out at **Annex 2**.

Box 4.1: The Skills Agenda – A Recap of Issues raised in the 2010 Baseline Report

- The proportion of working age population qualified to level 2 and above and level 3 and above in Northern Ireland are similar to England (excl. London and South East) and Wales but lower than Scotland and London and the South East.
- The Northern Ireland PfG has set a number of very challenging overarching skills targets for Northern Ireland which require significant up-skilling of the workforce at level 2 and level 3 and an expansion of enrolments in subject areas related to STEM.
- The historic trajectory of attainment on these indicators, if continued, would not be sufficient to meet the targets that have been set. A step change in current performance would be required and the Department for Employment and Learning along with a number of other Northern Ireland departments has a vital role to play.
- An analysis of those who have not attained level 2 or level 3 qualifications in Northern Ireland indicates that younger cohorts tend to be much better qualified than older age groups, those in employment are much better qualified than the unemployed or the inactive and those without a disability are better qualified than those with a disability.
- The pattern of qualification attainment differs across Northern Ireland with the North West and South West areas having proportionately fewer working age people qualified to level 2 and above and level 3 and above than average.

Box 4.2: The Skills Agenda – An Update on Actions taken to address issues raised in the 2010 Baseline Report

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 4.1 are summarised below.

- A review of the approach to measuring Level 2 and Level 3 targets is well underway to ensure it captures fully the outputs of the education and training system. Which is being informed by a similar review undertaken of working age skills targets in England.
- As part of the implementation in Northern Ireland of the UK-wide reform of vocational qualifications, the introduction of the new Qualifications Credit Framework (QCF) will facilitate a much more flexible approach to the acquisition of qualifications.
- In the Further Education sector, interim targets have been agreed with Colleges to enable them to focus on the achievement of sector specific PSA targets for Level 2 and Level 3 outcomes.
- A Government STEM Strategy, 'Success through STEM', has been approved by the Executive and has been launched for public consultation in August 2010.

Increasing Skills at Level 2 and Above

4.4 The percentage of the Northern Ireland working age population qualified to level 2 and above remains on an upward trend¹⁷, rising a further 1.1

¹⁷ Source: Labour Force Survey (LFS). It is important to note that the annual changes quoted from the LFS are relatively small and are within the ranges of sampling error and associated confidence intervals.

percentage points between Quarter 2 2009 and Quarter 2 2010 (See Figures 4.1). The recent rise in Northern Ireland performance on this indicator has been greater than that experienced in Scotland (-0.5%) and Wales (0.3%) but lower than England (2.7%).

4.5 Nevertheless, meeting the level 2 PfG target (80% of the working age population qualified to level 2 and above by 2015) is increasingly challenging despite the continued upward trend in performance. Indeed Northern Ireland would need to produce approximately 15,000 additional working age people qualified to level 2 each year over and above historical trends if the 2015 target is to be met. Clearly, the outputs from the Department's education and skills programmes directly affect performance against this target and these are considered in more detail in the next section. However performance is also affected by the work of other departments, by investment and decisions made by individuals and employers and by the relative strength of the local economy which is a key factor if the region is to attract and retain sufficient numbers of people qualified to this level.

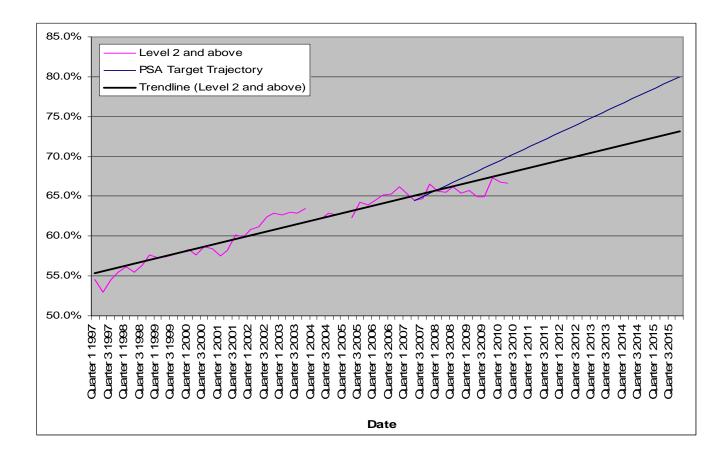


Figure 4.1 Northern Ireland Working Age Population Qualified to Level 2 and above

Who is Qualified to Level 2 and above?

- 4.6 As highlighted at the beginning of this section, a detailed analysis in last year's Quality and Performance report identified that certain groups and areas in Northern Ireland were more likely to have achieved at least a level 2 qualification than others. In summary, the analysis showed at level 2 and above:
 - females are better qualified than males;
 - the disabled are less qualified than those who are not disabled;

- those who are married are better qualified than those who are single;
- younger groups are generally better qualified than older age groups;
- the White population is better qualified than the non white population;
- the working age population in the South Eastern, Northern and Belfast Work Development Forums (WDF) areas are better qualified than the working age population in North West and South West WDF; and
- finally, those in employment are much better qualified than those who are unemployed or inactive.
- 4.7 While a full update of last year's analysis is not presented here, the overall picture remains broadly the same.

Increasing Skills at Level 3 and Above

- 4.8 The percentage of the Northern Ireland working age population qualified to level 3 and above stands at 49.5%, an increase of 0.9 percentage points over the period¹⁸ Q2 2009 to Q2 2010. This increase remains higher than that experienced in Scotland (0.6%) and Wales (0.3%), but substantially lower than the 2.9% increase in England.
- 4.9 Northern Ireland's historical trajectory on this indicator, if continued, would not be sufficient to meet the 2015 PSA target of 60% (See Figure 4.2). Indeed, Northern Ireland would need to produce approximately 14,000 additional working age people qualified to level 3 each year over and above historical trends if the 2015 target is to be met.

¹⁸ Source: Labour Force Survey (LFS). It is important to note that the annual changes quoted from the LFS are relatively small and are within the ranges of sampling error and associated confidence intervals.

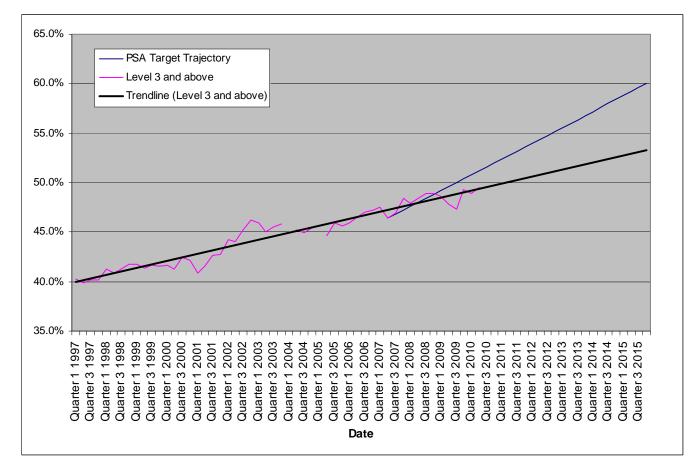


Figure 4.2 Northern Ireland Working Age Population Qualified to Level 3 and above

Where are the Qualifications at Level 3 and above?

- 4.10 In the Department's previous Quality and Performance (baseline) report, a detailed analysis was included which focused on the characteristics of people who had attained Level 3 Qualifications or higher. This identified certain groups and areas in Northern Ireland which were more likely to have achieved a level 3 qualification than others. In summary, the analysis showed that in terms of qualifications at Level 3 (or above):
 - males are better qualified than females;

- the disabled are less qualified than those who are not disabled;
- those who are married are better qualified than those who are single;
- older groups in general are less qualified than younger age groups;
- the White population is slightly better qualified than the non white population;
- the working age population in the South Eastern, Northern and Belfast Work Development Forum (WDF) areas are better qualified than the working age population in the South West and North West WDFs; and
- those in employment are much better qualified than those who are unemployed or inactive.
- 4.11 While a full update of last year's analysis is not presented here, the overall picture remains broadly the same.

Increasing the numbers studying STEM subjects

4.12 The Department is also focused on increasing the numbers of people studying STEM subjects. Indeed it has recently launched a STEM Strategy for consultation. **Table 4.1** examines the total number of enrolments in the post 16 cohort studying STEM subjects at Schools, FE, HE & Training at Level 2 or above.

Year	Number of post 16 enrolments in					
	STEM subjects (at Level 2 and above)					
2003/04	82,377					
2004/05	81,902					
2005/06	78,887					
2006/07	73,840					
2007/08	71,280					
2008/09	72,997					

- 4.13 Data for the latest year (2008/09) show that the long term decline in the number of post 16 enrolments at Level 2 and above in STEM related subjects has been reversed with an increase of 2.4% recorded in the year to 2008/09. While it is too early to judge whether this growth is the start of a long term renaissance, it is encouraging to note that preliminary data for the 2009/10 academic year also provides cause for optimism.
- 4.14 In HE, accepted UCAS applicants on STEM courses at Northern Ireland institutions in 2009/10 have increased by 4.3% compared with 2008/09.
- 4.15 It should be noted that Northern Ireland is not the only area that has experienced a protracted decline in STEM enrolments. For example STEM enrolments in FE have fallen by 20% in GB between 2003/04 and 2007/08. In addition, Northern Ireland enrolments at Northern Ireland HE institutions are much more heavily concentrated in STEM areas, with 48% of all Northern Ireland HEI's students enrolled on a STEM related course in 2008/09. This compares favourably to England, Scotland and Wales (40%, 47% and 38% respectively).

Key Points

- 4.16 The percentage of the NI working age population qualified to both Level 2 and above and Level 3 and above continues on a general upward trend. However this remains insufficient when set against the challenging PfG targets. An additional 15,000 qualifications at Level 2 and above and 14,000 at Level 3 and above would be needed annually over and above what is already being produced if the 2015 PfG targets are to be met.
- 4.17 STEM enrolments grew in 08/09, with data for 09/10 also giving further cause for optimism.
- 4.18 The overall picture remains broadly the same as last year in terms of those that are qualified to Level 2 and above and Level 3 and above. At Level 2 and above, females continue to out perform males whereas the opposite is true for those qualified to Level 3 and above. Younger groups are better qualified than older groups at both qualification levels and the working age population in the South Eastern; Northern and Belfast Workforce Development Forum areas continue to be better qualified than their counterparts in the South West and North West.
- 4.19 The Department has developed and consulted on a number of key strategies including Success through Skills 2 and the STEM Strategy, Success through STEM. These retain the focus on up-skilling the workforce and enhancing the flow of STEM qualifications. The above analysis provides further evidence of the need for government, businesses and individuals to continue to work collectively to up-skill in these areas if Northern Ireland's economic aspirations are to be realised.

5. Departmental Skills Provision and Programmes

5.0.1 This section provides an updated analysis of the quality and performance of Further Education (FE), Higher Education (HE), Essential Skills and a number of the Department's Training Programmes. It considers trends in participation and outputs from this provision. It focuses particularly on those elements which are closely related to Programme for Government skills targets including those that relate to STEM areas. It examines retention and achievement rates and how these differ across subject areas, providers and, where the data allow, equality categories. It assesses how that picture has been changing over the last year and builds in, for the first time, an analysis of the qualitative evidence on the performance of these sectors which is drawn from recent research reports, assessments¹⁹ professional quality and evaluation outcomes. Benchmarking of performance with comparators within and outside the region is provided where possible.

5.1 Higher Education

- 5.1.1 In relation to Higher Education (HE), the Department for Employment and Learning aims to promote and sustain the development of an internationally competitive sector, accessible to all who are able to benefit, given the funding available, and meeting the needs of the Northern Ireland economy and wider society. This aim is particularly relevant to the Northern Ireland Executive's ambition to grow a dynamic, innovative economy.
- 5.1.2 The Department is currently in the process of developing the first HE Strategy for Northern Ireland which will cover the period up to 2020. Sir

¹⁹ The report of the Department's Quality and Improvement Adviser for the year to August 2010 has been produced separately by the Department. It sets out the outcomes of ETI inspection activity which are also very relevant to this Quality and Performance agenda.

Graeme Davies, Vice Chancellor of the University of London has been appointed as Chair of the Steering group. The HE Strategy will seek to address the five key areas of: the economy; society/people; learning, international and finance/governance. A public consultation on the HE Strategy began in January 2011 and is due to finish in April 2011.

- 5.1.3 Recent Universities UK funded research²⁰ has sought to quantify the positive effect Higher Education is having on the Northern Ireland economy and across the UK. It suggests that in 2007/08, Northern Ireland Higher Education Institutions (HEIs) generated international revenue of around £32 million for the region from a range of activities including the tuition fees of international students²¹, international education and research contracts. When combined with the estimated off-campus expenditure of international students (£34 million) this represents a total of £66 million of export earnings.
- 5.1.4 It was also noted that 6,900 full-time equivalent (FTE) jobs exist within the Northern Ireland University and Teacher Training Colleges sector. Institutional expenditure was estimated to have generated a further 6,800 additional FTE jobs in other parts of the economy, mostly in NI.
- 5.1.5 Finally, the research calculated the multiplier effect of UK HEI spending on wider UK output. It found that for every £1 million of Northern Ireland HEI expenditure, a further £1.31 million is generated in other UK industries, of which £0.85 million is in industries located in Northern Ireland. The report estimated the total output generated by Northern Ireland's HEIs in 2007/08 to be £1.08 billion.

²⁰ Kelly et al. (2009) 'Making an impact: Higher Education and the economy - A summary of the impact of higher education institutions in Northern Ireland'.

²¹ International students relates to those students whose permanent domicile is recorded as outside the UK.

5.1.6 These are significant sums, however the key contribution that Northern Ireland's HEIs make to the local economy is derived from the research and innovation activities they undertake and the additional human capital which they impart to students. An analysis of the research and innovation activities of HEIs is presented at **Section 7** of this report. The following focuses on the teaching and learning aspects of HE in Northern Ireland. However before moving to that, **Box 5.1.1** recaps on the key findings from last year's Baseline Quality and Performance report into HE. Following on from that, **Box 5.1.2** sets out a summary of the actions the Department has taken to date to address the issues raised in that first report. A full update on those actions is set out at **Annex 2**.

Box 5.1.1: Higher Education – Recap of Key Issues raised in the 2010 Baseline Report

- The number of enrolments at Northern Ireland HEIs has grown considerably over the last decade (although at a lower rate than Scotland, England and Wales).
- The baseline report found a particularly notable decrease in part-time enrolments.
- Northern Ireland was found to have a high concentration of STEM enrolments, which accounted for nearly half (48%) of total enrolments at Northern Ireland HEIs in 07/08. However, in keeping with many other countries and regions, there had been a decrease in STEM enrolments at Northern Ireland HEIs in recent years.
- The data for 2007/08 showed that 28% of NI domiciled students left the region to study in GB.
- The Baseline Analysis found Protestants were proportionately much more likely to migrate to GB for HE than Catholics.
- Destination data showed that the vast majority of those Northern Ireland domiciled students that go to Northern Ireland HEIs remain in the region to take up employment. However, the majority of those Northern Ireland students who study at GB institutions do not return.
- Northern Ireland HEIs drew a relatively large proportion of young full-time first degree entrants from the lower socio-economic groups and performance on this measure was well above the UK average.

Box 5.1.2: Higher Education – An Update on Actions taken to address issues raised in the 2010 Baseline Report

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 5.1.1 are summarised below.

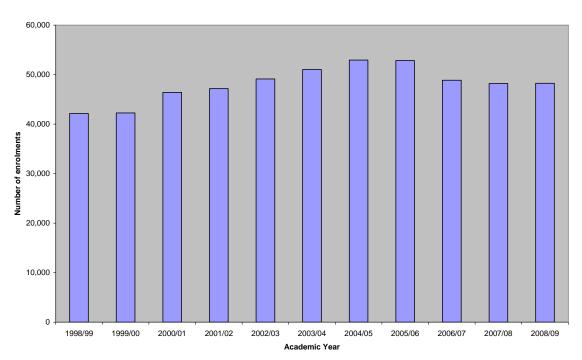
- Significant work undertaken to develop a Northern Ireland Higher Education Strategy and a draft has been launched for consultation. The consultation will examine the incentives for part-time study and how retention rates can be improved.
- Work on the development of a Widening Participation Strategy is currently on target. Separately, work has been commissioned to examine the effectiveness of spend of Widening Participation activities.
- The issues raised in the first baseline report are also a focus for accountability meetings held between senior representatives of the Department and the Northern Ireland Universities. The next round of accountability meetings are scheduled for Spring 2011.
- 5.1.7 The following provides an updated picture of performance in terms of enrolments, completion rates, qualifications gained and destinations of HE students. It benchmarks Northern Ireland against other provision in UK countries where possible. This section includes a particular emphasis on STEM enrolments given the Department's PSA commitment to increase by 25% the number of students (especially those from disadvantaged

communities) at graduate and postgraduate level studying Science, Technology, Engineering and Mathematics (STEM) subjects by 2015.

Enrolments

5.1.8 Between 1998/99 and 2008/09 the number of student enrolments at Northern Ireland HEIs has grown by 14.5% (from 42,135 to 48,240). This compares to increases of 31%, 31% and 25% at England, Wales and Scotland HEIs respectively over the same period (see **Figure 5.1.1**).

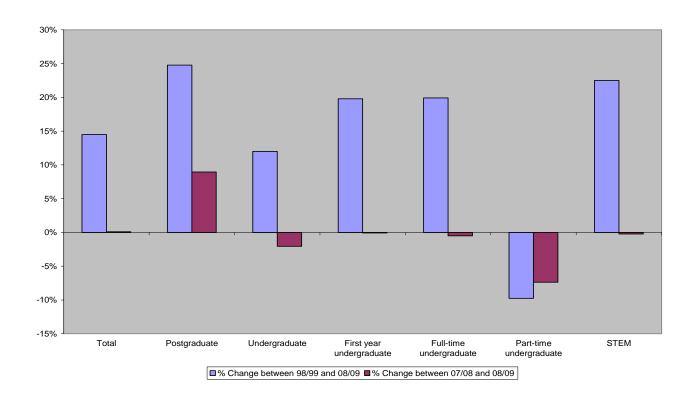
Figure 5.1.1 Enrolments at NI Higher Education institutions 1998/99 to 2008/09



5.1.9 There was a small increase in the number of student enrolments at Northern Ireland HEIs between 2007/08 and 2008/09 (48,200 in 2007/08 to 48,240 in 2008/09).

- 5.1.10 The largest subject areas at Northern Ireland HEIs in 2008/09 remain as Subjects allied to medicine with 8,225 enrolments, Business and administrative studies with 6,960 enrolments and Education with 5,515 enrolments.
- 5.1.11 STEM enrolments continue to account for almost half (48%) of total enrolments at Northern Ireland HEIs in 2008/09. This compares with 41% at GB HEIs.

Figure 5.1.2 Percentage change between i) 1998/99 and 2008/09 and ii) 2007/08 and 2008/09 in various enrolment categories



5.1.12 The number of STEM enrolments at Northern Ireland HEIs has increased from 18,775 in 1998/99 to 23,000 in 2008/09 – an increase of 23%. Between 2007/08 and 2008/09 there has been a marginal decrease in STEM enrolments (-0.2%). However, data for 2009/10 show that there

has been a 4% increase in the number of accepted applicants on HE STEM courses compared to the same position in 2008/09. A more focused analysis of STEM enrolments and outcomes is included in **Box 5.1.3** below with further details included at **Annex 3**.

- 5.1.13 The above analysis relates solely to enrolments at Northern Ireland HEIs. However, there has been a long history of outward migration of Northern Ireland domiciled students to take up HE outside the region. The latest data (2008/09) show that 28%²² of Northern Ireland domiciled students left the region to study in GB. This figure has remained fairly static over the last decade.
- 5.1.14 According to the Higher Education Authority (HEA) in 2008/09 1,040 students from NI where enrolled at HEIs in the Republic of Ireland (ROI). This represents around 6% of the NI domiciled student population that were enrolled at either a GB HEI (excluding the Open University) or ROI institution, Between 2004/05 and 2008/09, there has been a 15% decrease in the number of students from NI enrolling on HE courses at institutions in the ROI.
- 5.1.15 Overall, participation in HE by Northern Ireland domiciled students has been growing significantly. The Age Participation Index (API) which measures the participation rate of young people entering HE stood at 48.2% in 2008/09 a rise from 41.2% in 1998/99. There is no single common measure of HE participation across the UK. 2000/01 was the last year England calculated the API, it now calculates the Higher Education Initial Participation Rate (HEIPR) which is a more wide ranging measure and includes, in addition to the API, part-time students and students up to the age of 30. Northern Ireland and Scotland continue to calculate the API

²² This percentage is calculated by dividing the total number of NI domiciled students at GB HE institutions (excluding the Open University) by the total number of NI domiciled students at UK HE institutions (excluding the Open University).

Box 5.1.3: A Focus on STEM at Northern Ireland HEIs

- HE STEM enrolments remained fairly static over the period 2007/08 to 2008/09. However this masks a 3% decline in STEM undergraduate enrolments at the NI HEIs counterbalanced by an 11% increase in postgraduate STEM enrolments. This can be explained, to an extent, by the 100 additional PhDs in economically relevant areas which were funded by the Department in 2008/09.
- In 2008/09, Queen's University of Belfast had the largest share of enrolments in STEM areas (52%), with the biggest subject area being Subjects allied to medicine. The majority of STEM students were studying full-time (77%) and were female (57%).
- QUB recorded a 2% increase in STEM enrolments between 2007/08 and 2008/09. UU, on the other hand experienced a 3% decrease.
- Between 2007/08 and 2008/09 enrolments on Computing Science, Agricultural Related subjects and Subjects Allied to Medicine all experienced a decline – 8%, 5% and 3% respectively. Ironically, given the downturn in the construction industry, the biggest increase was seen in Architecture, Building & Planning enrolments (+12%), followed by Medicine and Dentistry (5%) and Physical Sciences (3%).
- The non-continuation rate in HE for STEM subjects (ie those not continuing after their first year of study) was 10.4% in 2008/09. It was highest in Engineering & Technology (17.9%) and Computing Science (15.9%). Medicine & Dentistry (1.1%) and Subjects Allied to Medicine (7.6%) recorded the lowest noncontinuation rates.
- In 2008/09 72% of STEM full-time qualifiers from the NI HEIs were in employment six months after graduation. This had decreased from 79% in 2006/07. This reflects the weakening labour market over the period with unemployment amongst recent STEM graduates increasing from 4% to 9%. Unemployment rates were highest among Computing Science (14%) and Architecture, Building & Planning (12%) graduates.

(although the methodologies used are slightly different). The Northern Ireland API is much higher than that for Scotland (43.0% in 2008/09) and also the more wide ranging HEIPR used in England (45.5% in 2008/09). Wales does not currently calculate a specific age participation or initial entry rate and therefore its current measure of participation is not comparable to Northern Ireland.

Socio Economic and Religious Background of Students

- 5.1.16 The proportion of young full-time first degree entrants to Northern Ireland HEIs in 2008/09 from the National Statistics Socio-Economic Classification (NS-SEC)²³ Classes 4, 5, 6 & 7 continues to be well above the UK average (32.3%).
- 5.1.17 The corresponding figures for England, Wales and Scotland HEIs are 32.4%, 32.5% and 28.2% respectively.
- 5.1.18 The Department does receive summary information from the Higher Education Authority (Republic of Ireland) on those who leave NI to study in the ROI. However, this information is not available on the same basis as the HESA data for UK Higher Education Institutions and does not contain breakdowns by either community background or socio economic group and therefore a full analysis of those NI domiciled students who study in ROI cannot be made.
- 5.1.19 The proportion of young full-time first degree entrants to STEM related courses at Northern Ireland HEIs in 2008/09 from the National Statistics Socio-Economic Classification (NS-SEC) Classes 4, 5, 6 & 7 was 43.2%.

²³ The question asked of UCAS applicants regarding Socio Economic Classification (SEC) changed in the 2008/09 academic year to take account of changing age legislation and therefore analysis of SEC will not be directly comparable to previous years.

- 5.1.20 In 2008/09 the percentage of young full-time first degree entrants from NS-SEC Classes 4, 5, 6 & 7 to Queen's, St Mary's, Stranmillis and University of Ulster were 32.9%, 46.8%, 27.9% and 49.4% respectively.
- 5.1.21 The Higher Education Statistics Agency (HESA) publishes annually an assessment of HEIs and how they are performing on a number of indicators compared to similar (benchmark) institutions across the whole of the UK. In terms of enrolments from NS-SEC Classes 4, 5, 6 & 7, both QUB and UU do significantly better than their benchmarks. The HESA publication showed that both QUB and UU did significantly better than their benchmarks whereas St. Mary's was recorded as being above, but not significantly above, it's benchmark (on the other hand, Stranmillis was recorded as being below but not significantly below it's benchmark).
- 5.1.22 There has been minimal change in relation to the religious background of students compared to the previous year. Data from the Department of Education indicate that of those Northern Ireland school leavers who entered UK HE institutions in 2008/09, and who stated their religion, 37.7% declared their religion as Protestant and 53.8% as Catholic. Of those Northern Ireland school leavers who entered HE in GB in 2008/09, 43.6% declared their religion as Protestant and 43.0% as Catholic. For those who entered HE in Northern Ireland 35.8% declared their religion as Protestant and 57.6% as Catholic.
- 5.1.23 The Department commissioned research²⁴ to ascertain what factors influence the decisions of year 14 pupils towards Higher Education. The work found that of those who applied for a University place through UCAS, 40.9% were 'determined stayers' (i.e. all their choices were for NI

²⁴ Osborne et al. (2008) 'After School: Attitudes and Perceptions of Northern Ireland School Leavers towards Further and Higher Education, Training and Employment'.

institutions) and 9.1% were categorised as 'determined leavers' (i.e. all their choices were for institutions in GB). This varied by religion with those from the Catholic community much more likely to be 'determined stayers' and those from the Protestant community more likely to be 'determined leavers'.

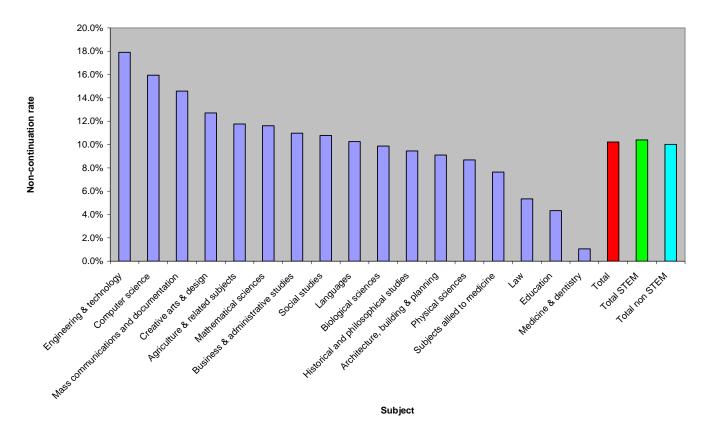
5.1.24 As part of the research, year 14 students indicated that positive "pull" factors were the most significant in influencing their choices of university. These included whether they regarded the institution as being 'the best place for my course' (80.7% considered this to be important), 'liking the institution' (85.5%), 'liking the location' (84.8%) and it having 'a good reputation' (87.2%). More negative "push" factors like "not wanting to stay in Northern Ireland" were cited much less frequently by students.

Non-continuation rates at Northern Ireland HEIs

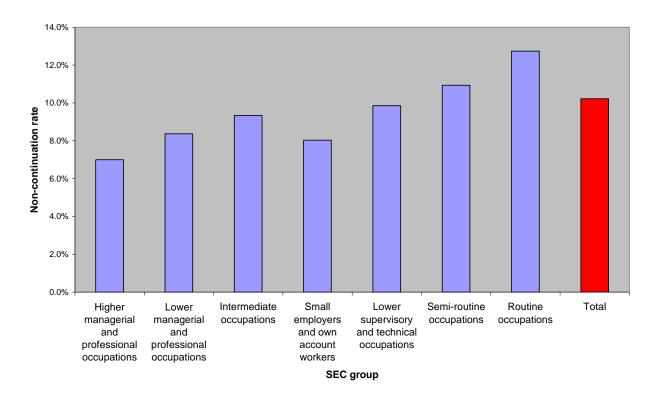
- 5.1.25 The following considers the extent to which students who enter Northern Ireland HEIs do not continue their studies beyond the first year. It should be noted that non-continuation data are only available for UK domiciled full-time first degree entrants at Northern Ireland HEIs. The latest data relate to students who entered first degree courses in 2007/08.
- 5.1.26 Of all full-time first degree entrants to Northern Ireland HEIs in 2007/08, 10.2% were no longer in HE in 2008/09. This compares to the UK average non-completion rate of 8.6% and represents an increase on the previous year's figure (2006/07) of 9.2%.
- 5.1.27 The corresponding figures for all full-time first degree entrants in 2007/08 for England, Wales and Scotland HEIs were 8.4%, 9.2% and 9.9% respectively.

5.1.28 There is much variation in non-continuation rates across a range of variables. Non-continuation rates vary markedly across subjects from a high of 17.9% for Engineering & technology to 1.1% for Medicine & dentistry.

Figure 5.1.3 Non-continuation following year of entry by subject at NI HEIs: Full-time first degree entrants 2007/08



5.1.29 Students from the more affluent socio economic background (defined here as SEC groups 1 to 3) have a non-continuation rate of 8.4% compared to 10.1% for SEC groups 4 to 7. Figure 5.1.4 Non-continuation following year of entry by SEC group at NI HEIs: Full-time first degree entrants 2007/08



- 5.1.30 'Protestants' have a non-continuation rate of 9.1% which is lower than 'Roman Catholics' (11.2%)²⁵.
- 5.1.31 Female non continuation rates at 9.4% are lower than for males (11.4%).
- 5.1.32 Young students (aged from 18 to 21) have an average non continuation rate of 9.9% which is lower than for more mature students (age over 21) with a corresponding figure of 11.7%.
- 5.1.33 HESA also considers how Northern Ireland HEIs are performing against comparable (benchmark) institutions across the UK in terms of noncontinuation rates. QUB, St. Mary's and UU have shown a slight increase

²⁵ These data relate to NI domiciled students at NI HEIs only.

in their drop out rate from the previous year (2006/07), whilst the noncontinuation rate at Stranmillis remained the same and better than its benchmark (see **Table 5.1.1**)

	2005/06 entrants	Benchmark	2006/07 entrants	Benchmark	2007/08 entrants	Benchmark
NI	11.3	N/A	9.2	N/A	10.2	N/A
The Queen's University of Belfast	7.5	6.8	6.3	7	7.1	6.1
St Mary's University College	5.2	7	7	6.2	7.7	6.9
Stranmillis University College	2.2 (+)	7	4.2	6.5	4.2	6.3
University of Ulster	15.2 (-)	10	12.4	10.5	13.2	9.7

Table 5.1.1 Non-continuation rates comparison across NI institutions

- 5.1.34 In addition to considering non-continuation rates beyond the first year of an HE course, HESA assesses (on the basis of previous performance) what proportion of entrants to HE are expected to complete their course and gain a qualification. On this basis HESA calculates that Northern Ireland HEIs are projected to perform on a par with the UK average of 77.9%, with 77.1% of full-time students starting first degree courses in 2007/08 expected to gain the degree for which they enrolled.
- 5.1.35 The Department commissioned a report²⁶ to investigate how student noncontinuation rates are influenced by a student's personal characteristics and circumstances.

²⁶ Bailey and Borooah (2007) 'Staying the Course: An Econometric Analysis of the Characteristics Most Associated With Student Attrition Beyond The First Year of Higher Education'.

- 5.1.36 The study found that in terms of gender, the probability of women progressing from their first year of HE was 3.7 percentage points higher than that for men and students from a professional social class were 4.1 percentage points more likely to progress than students from unskilled/semi-skilled environments.
- 5.1.37 The report concluded that the students with the highest "survival rate" (96.1%) would be female, protestant students, from a professional background, taking social work and non-nursing health-related courses, whereas male, catholic students, from an unskilled background, studying engineering had an expected 'survival rate' of 65.2%.

Quality of HE Provision in Northern Ireland

- 5.1.38 Established in 1997 to provide an integrated quality assurance service for UK higher education, the Quality Assurance Agency (QAA) is an independent body funded by subscriptions from universities and colleges of higher education, and through contracts with the main higher education funding bodies including the Department for Employment and Learning. The QAA's mission is to safeguard the public interests in sound standards of HE qualifications and to inform and encourage continuous improvements in the management of the quality of HE.
- 5.1.39 The QAA's core business is to review and report publically on the quality and standards of the UK's higher education. They carry out external quality assurance and offer guidance on maintaining and improving quality assurance processes and developing course delivery.
- 5.1.40 Latest institutional audits for both QUB (2009) and Ulster (2010) have resulted in confidence judgements for both the soundness of each institution's present and likely future management of the academic

standards and management of the learning opportunities available to students.

Student Assessments of NI HEIs

- 5.1.41 The National Student Survey (NSS) is a national initiative, conducted annually since 2005. It is administered across all publically funded Higher Education Institutions (HEIs) in England, Wales, Northern Ireland, and participating HEIs in Scotland.
- 5.1.42 The survey asks final year undergraduates and students in their final year of a course leading to undergraduate credits or qualifications to provide feedback on their courses in a nationally recognised format. The results give an insight into how students assess the quality of their course and the institution they attend and are therefore relevant to this report.
- 5.1.43 Overall, results from the fifth National Student Survey (NSS) in 2010, show that 83 per cent of respondents in Northern Ireland were satisfied with their course as opposed to 82 per cent across the United Kingdom.
- 5.1.44 At Institutional level St Mary's University College registered a satisfaction rate of 94% and was placed in the top 5 rated UK colleges. QUB and UU recorded student satisfaction rates at or above the national average (85% and 82% respectively). Stranmillis College's student satisfaction rate was lower at 73%. However it is worth setting this outcome against the retention figures presented earlier (Table 5.1.1) where Stranmillis College performed significantly better than its benchmark and other Northern Ireland HEIs. Additionally, as with other higher education institutions in Northern Ireland, both St Mary's University College and Stranmillis College were rated at equal to or higher than their United Kingdom counterparts in all of the key assessment areas.

Qualifications

- 5.1.45 Between 1998/99 and 2008/09 the number of student qualifiers at Northern Ireland HEIs has witnessed a 24.9% growth (from 11,625 to 14,525). However, over the last year the level of qualifications has remained relatively static falling by 0.4% over the period (from 14,585 in 2007/08 to 14,525 in 2008/09).
- 5.1.46 Of the 14,525 qualifiers from Northern Ireland HEIs in 2008/09, 3,890 were at postgraduate level and the remaining 10,635 were at undergraduate level.
- 5.1.47 Largest subject areas are Subjects Allied to Medicine (3,040 qualifiers), Business and administrative studies (2,300 qualifiers) and Education (1,410 qualifiers).
- 5.1.48 STEM qualifiers account for 47% of total qualifiers at Northern Ireland HEIs in 2008/09.

Destinations

- 5.1.49 HESA collects a wide variety of data on the destination of students after they leave Higher Education.
- 5.1.50 First degree graduates who left Northern Ireland HEIs in 2008/09 and who were recorded as being in full-time paid employment in the UK reported a median salary of £19,000. The Northern Ireland figure is unchanged from the previous year which is likely to be a reflection of the economic downturn and the slackness in the labour market which was discussed

earlier in this report. The equivalent figure for graduates from all UK HEIs was £20,000²⁷.

- 5.1.51 In 2008/09, 94% of leavers from full-time first degree courses at Northern Ireland HEIs (whose destinations were known and reported as being in employment in the UK) remained in Northern Ireland to take up employment and 95% of full-time postgraduate leavers remained in Northern Ireland to take up employment. The corresponding figures for 2002/03 were 93% for both full-time first degree and full-time postgraduate leavers.
- 5.1.52 The HE enrolments section above noted that many Northern Ireland domiciled students leave to study outside the region. A number of those students do return to take up employment in Northern Ireland. Looking just at Northern Ireland domiciled full-time first degree leavers from Northern Ireland HEIs, 95% (94% in 02/03) of those who had gained employment in the UK had remained in Northern Ireland to take up that employment. However, only 42% (41% in 02/03) of Northern Ireland domiciled full-time first degree leavers who studied in GB took up employment in Northern Ireland.
- 5.1.53 Looking at student outcomes from the employer perspective, the NI Skills Monitoring Survey (2008) found that, in terms of preparation for work, 82% of employers indicated that the graduates they had hired had been either "very well or well prepared for work". Conversely, 14% of employers cited graduates as being either "poorly" or "very poorly" equipped for employment. Smaller employers with establishments of 5-10 staff were more likely than larger employers to report that graduates were poorly prepared for work.

²⁷ Salary figures relate to first degree graduates (both full-time and part-time) reported as being in fulltime paid employment in the UK in 2008/09.

Key Points

- 5.1.54 Recent research demonstrates the significant contribution the local HE sector makes to the Northern Ireland and wider UK economies, adding over £1bn to overall output and generating £66m in export earnings.
- 5.1.55 Student enrolments at Northern Ireland HEIs experienced a marginal increase between 2007/08 and 2008/09.
- 5.1.56 In the academic year 2008/09, Northern Ireland's higher education age participation index (API) was 48.2%, which is higher than the Scotland API (43.0% in 2008/09), and also the more-wide ranging HEIPR used in England (45.5% in 2008/09).
- 5.1.57 Northern Ireland continues to have a higher concentration of STEM enrolments (48% of total enrolments) compared to GB HEIs (41%).
- 5.1.58 Between 2007/08 and 2008/09 Northern Ireland enrolments in STEM subjects has fallen marginally (-0.2%) although this compares favourably to a decrease of 3.0% recorded for the period 2006/07 to 2007/08.
- 5.1.59 The number of student qualifiers has remained relatively constant, dropping 0.4% in the year to 2008/09 but remain significantly up (+25%) on the decade earlier.
- 5.1.60 In terms of social class, the proportion of young full-time first degree entrants to NI HEIs in 2008/09 from the NS-SEC Classes 4, 5, 6, & 7 remains well above the UK average of 32.3%.
- 5.1.61 Northern Ireland HEI non-completion rates remain above the UK average and the gap has increased over the last year.

5.2 Further Education

- 5.2.1 FE is the main provider of professional and technical education and training in Northern Ireland, and the sector plays an important part in raising skill levels in the region. The range of courses provided by the FE sector spans essential skills, professional and technical and academic programmes at levels 2 and 3 and HE courses. The Department is responsible for the policy, strategic development and financing of the statutory FE sector.
- 5.2.2 A number of key PSA targets have been established to monitor the performance of the FE sector and these are set out in detail at Annex 1. They include targets which require an increasing focus on priority skill areas, level 2 and level 3 enrolments and attracting greater proportions of students from more deprived areas. Last year's Quality and Performance report included a detailed analysis of long term trends in enrolments and retention/achievement rates (which relate to the retention of students on courses and subsequent achievement of qualifications) across the Northern Ireland FE sector. A summary of the key findings are set out in Box 5.2.1 below. Following on from that Box 5.2.2 sets out a summary of the actions the Department has taken to date to address the issues raised in last year's (Baseline) report. A full update on those actions is set out at Annex 2.
- 5.2.3 The following provides an updated analysis of these key issues.

Box 5.2.1: Further Education – Recap of Key Issues raised in the 2010 Baseline Report

- There has been a significant rise in the number of enrolments in Northern Ireland FE over the last decade. This compares with a fall of 10% in FE enrolments in England over the same period.
- Despite this long term upward trend, enrolments fell by 6% between 2006/07 and 2007/08 (first year of college mergers).
- The majority of FE students were found to come from deprived areas.
- Retention and achievement remained fairly constant at 88% and 68% respectively over the last ten years but this must be interpreted against the growth in enrolments noted above which has resulted in much greater outputs (8,000 extra qualifications in 2007/08 compared to 1998/99).
- Just over a quarter of successful leavers from full time FE enter HE.

Box 5.2.2: Further Education – An overview of progress against the Departmental Action Plan

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 5.2.1 are summarised below.

- The Department is seeking to increase the proportion of Departmental funded FE provision that is at Level 2 and Level 3, and agrees targets with individual FE colleges in this regard through the College Development Planning (CDP) process.
- The Department is about to establish a Department-wide project to consider and make recommendations that will maximise the impact on the Northern Ireland economy of public funding for vocation qualifications (VQs) in NI. This process will enable the Department to focus its funding increasingly on qualifications and skills that are required by employers in Northern Ireland.
- The Department intends to undertake an indepth statistical analysis to address the variability in success rates across colleges and to ascertain to what extent individual and institutional characteristics can effect this variability.

- 5.2.4 The 11 year post incorporation period (1998/99 to 2008/09) witnessed a 21% growth in Professional and Technical enrolments in the Northern Ireland FE sector (from 117,376 to 142,486). Looking specifically at the latest year, enrolments stayed constant between 2007/08 to 2008/09.
- 5.2.5 Level 2 enrolments at Northern Ireland FE colleges increased from 29,680 to 52,142 (76%) and level 3 enrolments increased from 31,475 to 38,074 (21%) between 1998/99 and 2008/09. Between 2007/08 and 2008/09 the number of level 2 enrolments increased by 3% but level 3 decreased by 4%.
- 5.2.6 STEM courses (across all levels) recorded a 15% increase during this 11 year period to 2008/09. A more focused analysis of STEM Level 2 and above enrolments and outcomes is included in **Box 5.2.3** below with further details included at **Annex 3**.

Box 5.2.3: A Focus on STEM at Level 2 and above at Northern Ireland FE Colleges

- Between 2007/08 to 2008/09 there has been an increase of enrolments in STEM subjects from Level 2 and above of 5%. This is encouraging given that there was a 10% decrease from 2006/07 to 2007/08 (the first year of the college mergers).
- STEM enrolments made up 33% of all Level 2 and above enrolments at the NI FE Colleges in 2008/09.
- The vast majority are part-time (79%) and male (62%).
- South West Regional College was the only College to record an increase of STEM Level 2 and above enrolments in both 2007/08 and 2008/09 whilst North West Regional College and Northern Regional College have both experienced two consecutive decreases over the same period.
- Between 2007/08 and 2008/09 Architecture, Building & Planning Level 2 and above enrolments experienced a decline of 6%. Encouragingly all other subject areas recorded an increase most remarked in Biological Sciences (23%) and Engineering and Technology (14%).
- In relation to outcomes, in 2008/09 there were 16,223 achievements at Level 2 and above gained in STEM subjects from within the FE sector - a 16% increase from the previous year.
- Retention and achievement rates (Level 2 and above) in STEM subjects are higher than those for non-STEM subjects (90%/73% compared to 88%/70% in 2008/09).
- In 2008/09, achievement rates (Level 2 and above) were highest at the South West Regional College (81%), in Agriculture & related subjects (90%), in full-time subjects (82%) and for those undertaking HE in FE (79%).
- Of those full-time achievers from Level 2 and above STEM subjects in FE in 2008/09, 46% progressed to full-time HE, 30% to full-time FE, with 1% recorded as unemployed.
 - 5.2.7 The subject areas of Education and Media & Communication attract the largest share of enrolments and together accounted for 34% of professional and technical enrolments in 2008/09.

5.2.8 The majority of FE participants continue to come from the more deprived areas of Northern Ireland with 23% drawn from the most deprived 20% of regions²⁸ in 2008/09.

Outcome statistics for FE

- 5.2.9 Typically 60% of all FE students gain an award from the course on which they are enrolled (average for period 1998/99 to 2008/09). Specifically, retention rates are around 88% and achievement rates in the region of 68% with the 2008/09 academic year slightly higher with 89% retention and 70% achievement. This indicates the FE sector has been able to maintain and slightly improve its performance post merger, which saw the number of FE colleges fall from 16 to 6.
- 5.2.10 When like for like calculations are conducted Northern Ireland FE retention/achievement rates align closely with Wales and Scotland but remain below those presented for England.
- 5.2.11 Retention (no. of final year enrolments who complete their programme of study) and achievement (percentage of final year completers who gain qualification) have remained fairly constant at 88% and 68% respectively over the last decade but this must be interpreted against the growth in enrolments which has resulted in much greater outputs (over 8,000 extra qualifications obtained in 2008/09 compared to 1998/99).
- 5.2.12 Retention/achievement rates for STEM and priority skill areas are slightly above the overall FE average rates.
- 5.2.13 Students gaining qualifications at NQF levels 2 and 3 are particularly of interest to the Department given its PSA commitments. In 2008/09 the FE

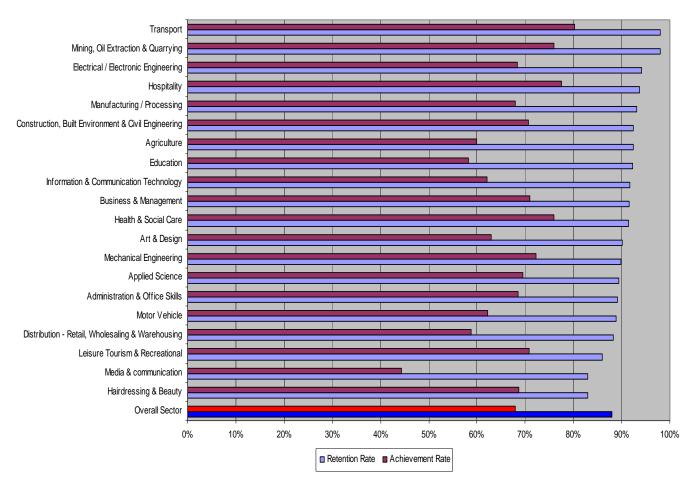
²⁸ Deprived regions are categorised according to the Northern Ireland Multiple Deprivation Measure.

sector produced an extra 8,000 qualifications at level 2 and 1,500 qualifications at level 3 in comparison to 1998/99 FE figures.

Variances in Retention/Achievement Data

- 5.2.14 The previous Quality and Performance report found that there is much variation in success rates across colleges, subject area, level of study and across the range of measurable student characteristics. Again it found that the extent of these variations has remained fairly consistent since 1998/99. A high level analysis of the data for 2008/09 would confirm this picture.
- 5.2.15 A number of key examples are set out below.
- 5.2.16 Retention/Achievement rates vary across subject areas ranging from 98%/80% for Transport studies to 83%/44% for Media and Communication (see Figure 5.2.1).
- 5.2.17 STEM subjects overall have retention/achievement rates which are slightly above the sector average although there are wide variations within each STEM area.

Figure 5.2.1 Average Retention and Achievement Rates by Subject Area from 1998/99 to 2008/09 in the NI FE Sector



- 5.2.18 The higher the level of study the better the outcome rates. Retention/Achievement is approximately 10% higher for HE level courses compared to Level 1 provision.
- 5.2.19 Students from the more deprived postcode areas typically register retention/achievement rates 8% lower than those from more affluent areas (see Figure 5.2.2).

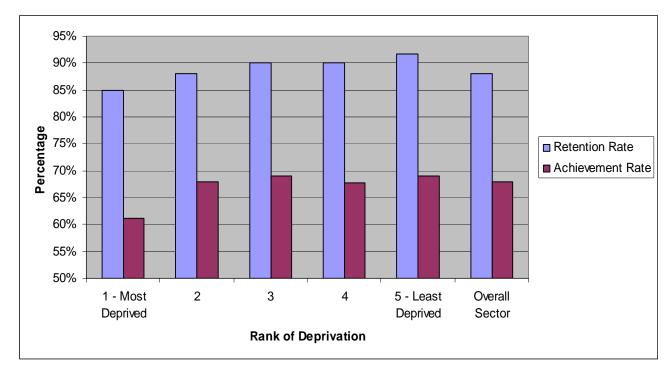


Figure 5.2.2 Average Retention/Achievement Rates by Deprivation Rank from 1998/99 to 2008/09

- 5.2.20 'Protestants' have retention/achievement rates 2%-3% higher than 'Roman Catholics'. Female retention/achievement rates are 1%-2% higher than for Males (see Figure 5.2.3).
- 5.2.21 Those in the '19 & Under' age cohort have average retention/achievement rates which are 3%-4% higher than those aged 20+.
- 5.2.22 Students with a disability have retention/achievement rates between 3%-5% below the mainstream student population average.
- 5.2.23 The previous iteration of this report recommended that a separate, more indepth, statistical analysis should be undertaken to consider the variance in success rates across the Department's programmes and how much of this variability can be explained by student and institutional factors.

5.2.24 This work is being taken forward and an econometric model is being developed. It is envisaged that the project will be completed early in 2011.

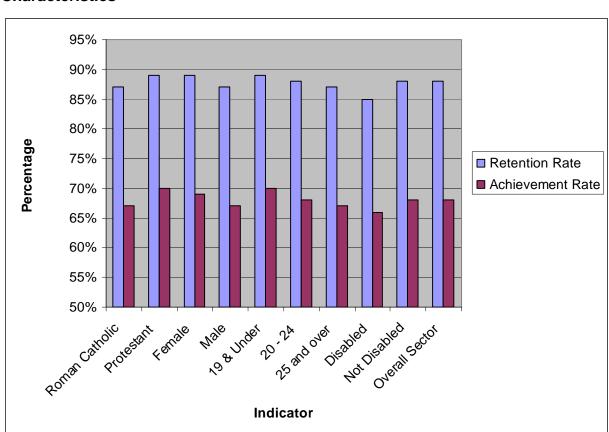


Figure 5.2.3 Average Retention/Achievement Rates by Student Characteristics

FE Destinations

5.2.25 Typically 28% of successful leavers from full-time FE courses progress to Higher Education the following academic year with a similar proportion entering employment.

Key Points

- 5.2.26 Enrolments within the FE sector in the past year have remained steady. Within that wider picture, enrolments at Level 2 have increased by 3% over the year to 2008/09 while Level 3 enrolments have fallen by 4%.
- 5.2.27 Enrolments on STEM courses at Level 2 and above have increased by 5% over the last year and now account for about a third of all FE enrolments on courses at these levels.
- 5.2.28 The FE sector in Northern Ireland continues to attract a significant proportion of its enrolments from harder to reach groups, particularly those from the most deprived areas of Northern Ireland.
- 5.2.29 Current retention rates (ie the extent to which those enrolled remain on their course) and achievement rates (the extent to which those who complete their course gain a qualification) are slightly up on those recorded in previous years at 89% and 70% respectively.
- 5.2.30 In terms of the success rates (the extent to which those who start a course gain a qualification) at NI FE colleges, typically 60% of FE students who embark on a course gain an award from their studies. This is broadly in line with Wales and Scotland but below England.
- 5.2.31 Younger aged cohorts continue to have higher retention/achievement rates than those aged 20+ and current retention rates (89%) and achievement rates (70%) are slightly higher than the average over the past 10 years (88%/68%).

5.3 Training Programmes

5.3.1 Training delivery in Northern Ireland has developed significantly over the last number of years and the key changes were outlined in last year's Quality and Performance Report. It provided baseline information on the wide spectrum of Departmental funded training provision which is delivered in a flexible manner to meet the needs of individuals and employers alike. It found that that the outputs from this provision contribute to the attainment of PfG targets at NQF Levels 2 and 3 and to targets for STEM qualifications. Key findings from last year's report are outlined in **Box 5.3.1** below. Following on from that, **Box 5.3.2** sets out a summary of the actions the Department has taken to date to address the issues raised in that first report in relation to Training Programmes. A full update on those actions is set out at **Annex 2**

Box 5.3.1: Department Sponsored Training Programmes – Recap of Key Issues raised in the 2010 Baseline Report

- Occupancy numbers across the Department's training programmes were quite stable throughout the last decade. The departmental target of 10,000 apprentices by 2010 was achieved ahead of schedule in January 2009.
- Looking at a more recent period, the baseline report found that total occupancy on Departmental training programmes increased significantly (by 17.3% between September 2008 and September 2009).
- Female occupancy growth was particularly significant in recent years. This has been as a result of the changing composition of apprenticeship courses offered. Between September 2007 and 2009, for example, there was a marked increase in occupancy across the Health & Social Care/ Child Development & Well Being sectors whereas over the same period occupancy on Electrician and Construction courses had fallen.
- Changes to training provision, such as the introduction of All Age Apprenticeships, increased the scope for additional numbers of training participants.

Box 5.3.2: Department for Employment and Learning Sponsored Training Programmes - An overview of progress against the Departmental Action Plan

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 5.3.1 are summarised below.

- In order to bolster attainment at level 2 and level 3 and to ensure individuals are not prevented from attaining qualifications to reflect their skills and knowledge, Training for Success aims to target 16 and 17 year old school leavers (to under 24 in certain circumstances) with flexible menu of provision that allows young people to enter training at an appropriate level and to maximise their potential.
- To further contribute to level 2 and level 3 attainment the Teacher Education Programme, developed by the University of Ulster at the Department's request, is being rolled out across the suppliers of work-based learning and employment programmes.
- In order to support the STEM agenda, the Department is about to establish a Departmental wide project to consider and make recommendations that will maximise the impact of public funding on vocation qualifications (VQs) for the Northern Ireland economy. Public funding for VQs are likely to be focused increasingly on the skills and qualifications most needed by the NI economy.

Outline of Current Provision

5.3.2 The Department provides a guarantee of a training place to those in the16 and 17 year old age group (and either under 22 or 24 for those whoqualify under extended eligibility criteria) who have not secured

employment. Provision is therefore designed to assist individuals with a wide range of academic ability.

- 5.3.3 ApprenticeshipsNI enables learners, who have attained the minimum school leaving age and are in waged employment, to gain an industry recognised apprenticeship qualification. Apprenticeship Frameworks are designed by Industry for Industry. Qualifications are offered at Level 2 and at Level 3, and comprise a technical certificate, a National Vocational Qualification (NVQ) and Essential Skills qualifications.
- 5.3.4 The Programme-Led Apprenticeships provision was introduced as a temporary measure to respond to the current economic downturn. It is aimed at school leavers who were exceptionally hard hit in the declining jobs market. Programme-Led Apprenticeships aim to provide young people aged 16 and 17 years (or under age 22/24 for extended eligibility) with the opportunity to take part in a Level 2 Apprenticeship where the apprentice will work towards achieving an industry-approved Apprenticeship Framework. At 30 September 2010, occupancy was 5,050.
- 5.3.5 The Training for Success programme provides training for Learners who have not yet found full time employment and are not participating in a Programme-Led Apprenticeship. It is designed to enable learners to progress to higher level training, further education, or employment by providing training to address personal and social development needs, develop occupational skills, employability skills and, where necessary, Essential Skills. It is delivered through two components:-
- 5.3.6 Skills for Your Life to address the personal and development needs of young people who have disengaged from learning and/or have significant obstacles; and

5.3.7 Skills for Work – to help young people gain skills and a vocationally related qualification at Level 1 to be able to gain employment, to progress to Programme-Led Apprenticeships or ApprenticeshipsNI provision, or to Further Education.

Training Programme Occupancy

- 5.3.8 At 30 September 2010 (data are preliminary and could be subject to revision) total occupancy on Departmental training programmes was 18,068, including 17,856 Training for Success / Programme-led Apprenticeships / ApprenticeshipsNI and 212 Jobskills. Figures show that 38% of total occupancy is female.
- 5.3.9 Between 1999 and 2007, overall occupancy figures across the Department's training programmes remained fairly consistent, and within a range of around 14,500 to 16,000. Since 2007, there has been a steady increase in occupancy on Departmental programmes to just over 18,000 with growth generated by a broadening of provision including the introduction of all age apprenticeships (see **Table 5.3.1** below).
- 5.3.10 Between 2007 and 2009, the apprenticeships element of the above provision witnessed a particularly marked increase in occupancy driven by the introduction of Level 2 Apprenticeships in September 2007, along with All Age Apprenticeships [25+] and the introduction of provision for those working Reduced Contracted Hours from September 2008. The overall number of apprenticeships has fallen back somewhat but remains high compared to historical levels (see Figure 5.3.1) the above changes in policy have impacted positively on female participation rates and, at 30 September 2010, 46% of all apprentices are female.

Table 5.3.1	Overall	Occupancy	on the	Department's	Training	Programmes
1999 – 2009						

Year	Jobskills	Jobskills	TfS/PLA/Apps	Total
	95	99		
1999	8,925	6,780		15,705
2000	2,524	11,832		14,356
2001	893	14,307		15,200
2002		15,391		15,391
2003		16,249		16,249
2004		16,036		16,036
2005		15,930		15,930
2006		15,569		15,569
2007 ²⁹		9,957	5,019	14,976
2008 ³⁰		4,561	10,636	15,197
2009 ³¹		1,563	16,102	17,665
2010 ³²		212	17,856	18,068

- 5.3.11 A significant proportion of the increase in apprenticeship numbers since September 2008 has been amongst adults, particularly those aged 25 and over. Occupancy for those aged 25+ in ApprenticeshipsNI now stands at 5,134. This represents 50% of those who started an apprenticeship since September 2008.
- 5.3.12 The increase in apprenticeship numbers since 2007 has not been uniform across all sectors. For example, from September 2007 to 2010, there has been a marked increase in apprenticeship occupancy for Retailing; Health & Social Care/Child Development & Well Being; Administration and

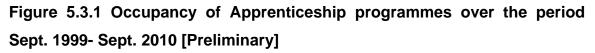
²⁹ The 2007, 2008 and 2009 figures have been revised.

³⁰ Ibid.

³¹ Ibid.

³² Figures extracted as September of each year.

Hospitality & Catering. However, occupancy has fallen in Electricians and Construction (see **Figure 5.3.2**).



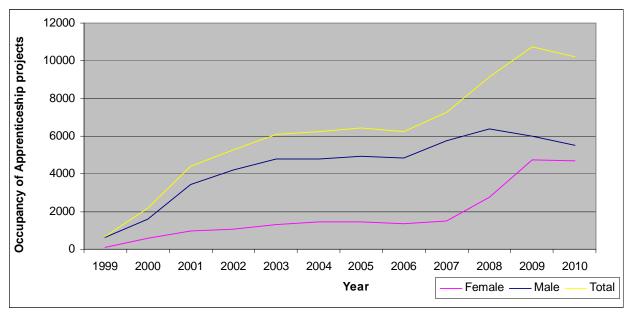
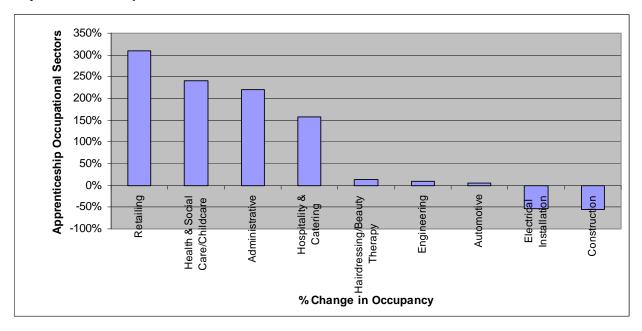


Figure 5.3.2 Apprenticeship Occupancy by Sector (% change Sept 07 – September 2010)



Achievements

- 5.3.13 The previous report, 'Department for Employment and Learning Quality and Performance: A Baseline Analysis' provided an overview of achievements on Departmental Training Programmes. The report focused on the Jobskills and Modern Apprenticeships programmes which have now been succeeded by Training for Success and ApprenticeshipsNI programmes.
- 5.3.14 Due to the limited amount of achievement data available from Training for Success and ApprenticehipsNI programmes, and the length of time required to gain a qualification from the programme it is too early to include an indepth analysis of these new programmes. Analysis will however be included in subsequent iterations in the Quality and Performance series when the achievement data for the new training programmes is available in a more comprehensive form, early next year.

STEM Occupancy

5.3.15 With regard to STEM, when the generic starts process was introduced for Training for Success (in 2008) there was no requirement to gather associated sectorial based management information. For that reason the recorded occupancy on STEM training programmes is likely to be an undercount. Nevertheless, the occupancy that has been recorded for STEM related training programmes has remained fairly constant between 2008 and 2010 falling by only 1% over the period (from 7,336 STEM occupants in 2008 to 7,235 in 2010.

Bridge to Employment

- 5.3.16 The Bridge to Employment (BTE) programme, provided predominantly through FE colleges, aims to provide assistance to inward investment companies and local companies who are recruiting new staff.
- 5.3.17 The programme provides support to the companies in a variety of ways to recruit people who are currently unemployed including assisting with vacancy advertising, providing customised training of job requirements and a range of other associated recruitment services.
- 5.3.18 Bespoke training courses are developed by Bridge staff in conjunction with the participating company to provide trainees with the skills needed to meet the recruitment profile of the business. Bridge to Employment programmes can be arranged for one company or a group of companies with similar needs. The average number of participants on a Bridge programme is 10.
- 5.3.19 Participating companies are expected to offer a job interview to all trainees upon completion of the training course. The programme is provided free of charge to the client company although they need to contribute some time to design and approve the curriculum as well as to interview candidates.

Direct Bridge

5.3.20 An alternative to the 'full' Bridge model outlined previously, Direct Bridge is implemented when an employer has a genuine need for employees but delivering the full programme to the required number of trainees would not represent value for money.

- 5.3.21 Direct Bridge is an opportunity for the employer to recruit unemployed people (who meet the Bridge criteria). The Department supports the initial training of the new employees, with a view of getting them productive in their job as soon as possible.
- 5.3.22 The new employee will not necessarily be fully trained, but as a result of programme will be sufficiently 'upskilled' to be on par with members of the workforce currently in employment. This enables Bridge trainees, in many instances, to be as desirable to employers as other applicants currently employed in the workforce.
- 5.3.23 Under Direct Bridge the company recruits in its normal way but is encouraged to consider unemployed people with lower entry skills than they would normally expect. The training required to bring these people up to the normal standard will be funded by the Department. The amount of support will be decided on the requirements of the company/job.
- 5.3.24 There has been an increase in the number of Direct Bridge courses due to the reduction in the number of employers conducting larger scale recruitment exercises. The development of this model has allowed the Department to respond in a flexible and practical manner to the changing needs of client companies.

Success of Bridge to Employment

5.3.25 The economic downturn has affected a number of Bridge projects. During 2008/09 there were a large number of Bridge projects which were in the late stages of development, however due to the worsening economic situation, the employers pulled out or delayed their recruitment plans.

- 5.3.26 More recently, the changing labour market has led to a surge in applications for Bridge to Employment vacancies. **Table 5.3.5** below shows that between the period 2007/08 and 2009/10, the success rate of people completing training on a Bridge to Employment programme has been gradually rising, increasing by 8 percentage points in total. During the same period, the number of course completers offered employment also experienced a rise, growing 13.5 percentage points.
- 5.3.27 2009/10 experienced a 52% rise in the number of Bridge projects on the previous year, however, as 2008/09 experienced a fall of 49%, the figure has remained fairly constant overall.

	2007/08	2008/09	2009/10
Number of Projects	51	25	42
No. started Training	679	424	389
Total Male	53%	50%	41%
Occupancy			
Total Female	46%	49%	59%
Occupancy			
Successfully	611	329	381
Completed Training	(89.9%)	(77.5%)	(97.9%)
No. Offered	503	325	365
Employment	(82.3%)	(98.7%)	(95.8%)
Total Amount Spent	£569,644.00	£247,288.26	£270,852.96
(Exc. Benefit &			
Travel)			

Key Points

5.3.28 Overall occupancy on the Department's Training Programmes has remained buoyant in the period to September 2010 particularly for females and those age 25 and over.

- 5.3.29 Over the last 4 years there has been a steady increase in occupancy on the Department's training programmes, totalling 21% over the period.
- 5.3.30 The information available indicates that STEM occupancy between 2008 and 2010 has remained fairly constant.
- 5.3.31 In relation to the Bridge to Employment programme which has been included in this Quality and Performance analysis for the first time, overall activity (numbers of projects and numbers started training) have fallen through the downturn. However the proportion of trainees successfully completing training and being offered employment has increased between 2007/08 and 2009/10.

5.4 Essential Skills

5.4.1 The Department launched the Essential Skills for Living Strategy and action plan in April 2002. Essential Skills for Living aims to improve adult literacy and numeracy (including Information & Communication Technology (ICT)) in Northern Ireland. Courses are free to participants, they are funded by the Department and delivered by accredited tutors working in FE Colleges, private training providers and community organisations. Box 5.4.1 below sets out the key findings from last year's Quality and Performance report, meanwhile Box 5.4.2 overleaf provides an overview of progress against issues raised in last year's report. The remainder of this section updates the position in relation to Essential Skills.

Box 5.4.1: Essential Skills – Recap of Key Issues raised in the 2010 Baseline Report

- Since the introduction of the Essential Skills for Living Strategy, there was a five fold increase in enrolments on Essential skills courses. Younger applicants (16-25 year olds) made up the majority of enrolments, with more males than females.
- Essential Skills programmes attracted a significant proportion of overall enrolments from the most deprived areas of NI. Over two thirds of Essential Skills enrolments are delivered within the FE sector.
- Success rates amongst providers of Essential Skills differed, with Departmental sponsored training programmes having a success rate of 53% while provision through the FE sector had a 46% success rate.
- DEL's Essential Skills programme exceeded the previous PSA target and has also already exceeded the current PSA target which was to ensure 42,000 adult learners will have achieved a recognised qualification in Essential Skills by March 2011. As at 30 September 2010 there have been 46,507 adult learners who have achieved a recognised qualification in Essential Skills.

Box 5.4.2: Essential Skills – An overview of progress against the Departmental Action Plan

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 5.4.1 are summarised below.

- The Department is seeking to target harder to reach age groups and has implemented targets which focus on the delivery of provision on those aged 20+ which are now in place across the FE Sector and have been built into the college performance targets.
- In response to variances in success rates, each college has an agreed Essential Skills Action Plan in place to address quality of provision. This will be revised and updated at regular intervals.
- 5.4.2 The Essential Skills for Living Strategy is critical to the continued growth of the Northern Ireland economy. While now dated, the International Adult Literacy Survey (1996) showed that around 24% of the working age population of Northern Ireland (approximately 250,000 people) were operating at the lowest levels of literacy.
- 5.4.3 The Department commissioned research³³ to provide an update on the levels of literacy in Northern Ireland. The report estimated that between 1996 and 2009 literacy standards have improved faster in Northern Ireland than any other UK country. However, the need for intervention remains,

³³ Oxford Economics (2010) Study to identify how 'literacy' levels have developed over time.

as in global terms, the report indicated that Northern Ireland literacy standards continue to lag behind the best performers such as Sweden.

5.4.4 The Department has a particular focus on increasing the number of adult learners who achieve a recognised qualification in the Essential Skills of literacy, numeracy and ICT and this is reflected in its PSA targets which are set out at **Annex 1**. The following analysis considers the progress that has been made in enrolment numbers and achievements on Essential Skills courses.

Enrolments

5.4.5 Since the introduction of the Essential Skills for Living Strategy there has been close to a nine fold increase in the number of enrolments (from 4,009 in 2002/03 to 36,026 in 2008/09 (Figures are correct as at 11th February 2010). The most recent data suggest that the growth in enrolments is continuing on an upward trend (see Figure 5.4.1).

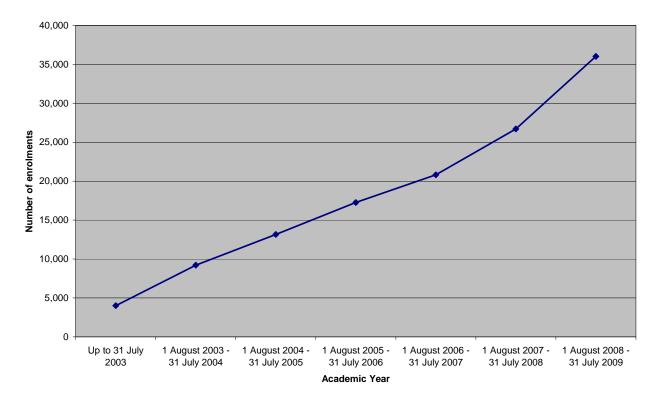


Figure 5.4.1 Number of Essential Skills Enrolments by Academic Year

- 5.4.6 Over the period since the introduction of the strategy almost three quarters of all participants have been between ages 16-25. This younger age group has been accounting for an increasing share of enrolments up until 2008/09. In the latest academic year 16-25 year olds accounted for around 74% of enrolments. This percentage has dropped from an all time high for 16-25 years olds of all Essential Skills enrolment at 85% in 2007/08.
- 5.4.7 The gender breakdown of enrolments has remained fairly evenly split over the first number of years of the strategy. In more recent academic years there has been a constant male majority, with 53% of enrolments being male in 08/09. The reverse is true of the FE Sector where 51% of enrolments on Professional & Technical courses were female in 2008/09.

- 5.4.8 Essential Skills programmes have attracted a significant proportion of overall enrolment from the most deprived areas of Northern Ireland. Almost a third (32%) of all enrolments came from the most deprived quintile of super output areas of Northern Ireland, ranked according to their Multiple Deprivation score.
- 5.4.9 Over two thirds (68%) of Essential Skills enrolments are delivered within the FE sector.

Success

- 5.4.10 The data indicate that since the implementation of Essential Skills provision in October 2002 to the end of 2008/09, retention and achievement rates have stood, on average, at 84% and 58% respectively.
- 5.4.11 The Department's Essential Skills programme has a good track record in terms of delivering key targets set. It surpassed the previous PSA target of achieving 18,500 learners by March 2007 with 22,162 attained. The Department has exceeded the current PSA target which was, by March 2011, to ensure that 42,000 adult learners will have achieved a recognised qualification in Essential Skills. At 30th September 2010, 46,507 adult learners had achieved an Essential Skills qualification.
- 5.4.12 Since 2003/04 there has been a steady increase in the percentage of Numeracy qualifications awarded in the Essential Skills sector. Meanwhile ICT has also experienced growth in the percentage of qualifications achieved since the course was rolled out fully (see Figure 5.4.2).

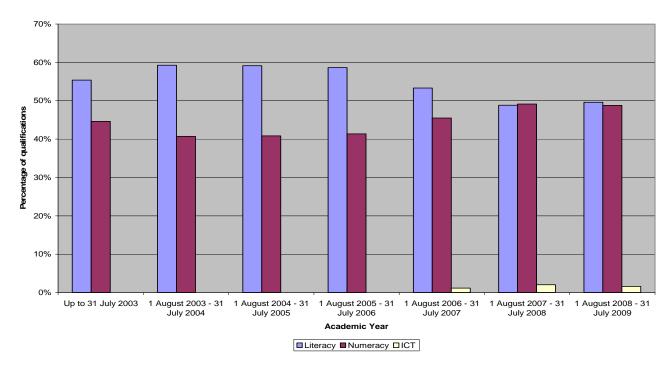


Figure 5.4.2 Essential Skills Qualification by Subject and Academic Year

Variances in Retention and Achievement Rates

- 5.4.13 Essential Skills in ICT has the highest retention rate (90%) followed by Numeracy (84%) and Literacy (83%). In regard to achievement rate Numeracy and Literacy have the same percentage (59%). Essential Skills in ICT has an achievement rate of 21%.
- 5.4.14 Retention and achievement rates amongst providers of Essential Skills differ. The Department's sponsored Training Programmes have a retention rate and achievement rate of 94% and 56%, respectively, while provision delivered through the FE College sector has an average retention rate and achievement rate of 82% and 56%, respectively. Further analysis would be required before conclusions on the effectiveness of provision could be drawn since, for example, different providers may be drawing in enrolments from vastly different background.

- 5.4.15 Student characteristics appear to have a bearing on success rates. The highest retention rate was for those in the 16-25 and 76+ age bands (85%), while the lowest retention rate was 81% within the 26-35, 36-45 and 56-65 age bands. The older age bands (56-65) had the highest achievement rate with 59%, while those in the 16-25 age band achievement rate was 58%. The lowest achievement rate amongst the age bands was the 76+ group (32%). Males have higher retention and achievement rates (86% and 61%, respectively) than females (81% and 54%, respectively).
- 5.4.16 A recent evaluation report, which independently assessed the Essential Skills for Living strategy, noted a number of positive wider impacts on individuals who had enrolled on the programme. The common themes emerging from participants' feedback included:
 - increased confidence;
 - improved employability;
 - better quality and security of employment;
 - more educational engagement and progression;
 - engaging with family members to provide additional educational support;
 - feeling more confident about themselves; and
 - greater engagement in society.

Key Points

5.4.17 There has been a very significant increase in enrolments on Essential Skills courses since the introduction of the Essential Skills for Living Strategy. Recent data suggest that the enrolment levels continue to increase each year. Younger age cohorts (16-25 year olds) continue to account for the bulk of enrolments and there are more males than females.

- 5.4.18 Essential Skills providers have, on the whole, been successful in attracting a disproportionately large number of enrolments from the more deprived areas of Northern Ireland.
- 5.4.19 The data indicate that since the implementation of Essential Skills provision in October 2002 to the end of 2008/09, retention and achievement rates have stood, on average, at 84% and 58% respectively.
- 5.4.20 In keeping with other types of skills provision, there is variation in the retention and achievement rates achieved by different providers, by subject of study and by student characteristics.

6. The Employment Agenda

- 6.1 Increasing employment is at the heart of the Executive's economic ambitions. Within the Programme for Government, 'Growing a Dynamic Economy' is the Executive's overarching aim and there is a key goal to increase the employment rate. PSA3 focuses on increasing employment, subject to economic conditions. On a wider perspective, at the centre of the "Welfare to Work" agenda, as in the rest of the UK was, and is, assisting welfare clients (by identifying, and helping them to deal with, their barriers to work) to move towards and into employment.
- 6.2 Although these policies were introduced by the incoming Labour Government in 1997, they were presaged in part by the replacement of Unemployment Benefit by Jobseeker's Allowance (JSA) in 1995 by the previous Conservative administration. JSA placed more requirements on those claiming unemployment-related benefits that people had to fulfil to continue to receive those benefits. At first, these were mainly related to increased jobsearch activity but Welfare to Work programmes such as New Deal also placed an obligation of some benefit recipients to undertake work-related activity eg work placements, jobsearch, training if they could not find a job hence the term "active labour market" policy.
- 6.3 These policies have developed significantly in the intervening years and provision is now available to assist not only the unemployed (ie JSA clients) move towards and into work, but also significant groups within those who are economically inactive. The importance of assisting individuals to overcome skills barriers to employment in particular is recognised in Success through Skills by the identification of those currently excluded from the labour market as being one of the strategy's three key target groups (the

other two being those already in work; and new entrants to the labour market).

- 6.4 The PfG goal to increase employment in part reflects Northern Ireland's long history of being a region of low employment and high unemployment. Although employment levels (and labour market participation) rose until very recently, and unemployment fell to historically very low levels, employment levels still remained low by UK standards. In 2005 the working age employment rate in NI was 66/67%³⁴, still some 5 or 6 percentage points behind the UK rate and the lowest of any UK country or region.
- 6.5 At the same time economic inactivity remained high by UK standards, consistently fluctuating around 29%. This was typically at least 6 percentage points higher than the UK average. Hence despite the relative successes in tackling unemployment which fell sharply from the late 1990s to an all-time low of 3.5% in 2007, engagement in the labour market remains an issue for a large proportion of the working age population.
- 6.6 As indicated above, this was reflected at the highest level in the Programme for Government with the adoption of a 75% working age employment rate³⁵ "goal" to be achieved by 2020. This represented an increase of some 5 or 6 percentage points over the position at the time that PfG was set. In GB, DWP has an "aspiration" to achieve a UK employment rate of 80%, also an increase of 5-6 percentage points over the rate at the time when the aspiration was set (74%-75%).
- 6.7 In PSA terms, this PfG 'goal' has translated into a specific target of "Increasing Employment" (Target 3). The target is:

³⁴ All rates here are measured using Labour Force Survey (LFS) data. These will be subject to sampling error and also will fluctuate seasonally within any one year. The definition of working age has been changed to 16-64 for both males and females. ³⁵ The PfG employment rate goal (and UK aspiration) were set prior to the change in the definition of the

working age population, and rates hence refer to a working age population of 16-59 (Female); 16-64 (male).

"Subject to economic conditions, increase employment levels and reduce economic inactivity by addressing the barriers to employment and providing effective careers advice at all levels".

- 6.8 Figure 6.1 shows the trend in NI's employment rate from 1997 to date. During the period 1997-2000, although there was some variation in the data, there was no crystallised rise in the employment rate. From 2000 onwards, apart from a temporary setback in 2003, the picture was one of a generally steady rise until late 2007 when the rise levelled off at an employment rate of around 69%. Since mid-2008, however, the impact of the current recession can be clearly seen. Employment numbers have fallen significantly since their peak in late 2007/early 2008. Such a precipitate drop is indicative of a very sharp decline on the demand side: and clearly the economic conditions have changed substantially since the target was set.
- 6.9 At the same time economic inactivity has remained stubbornly high, as shown in Figure 6.2. Although it fell a little over the past five years, it remained considerably higher than the UK average (or other UK regions) even at a time when employment was rising quickly. In latter years employment growth was being fuelled by further falls in unemployment, and by net inward migration. Throughout almost all of the period it fell between 28% and 32% a historical range that it has not broken out of for nearly three decades. Since the beginning of this year (2010) the inactivity rate has fallen steadily.

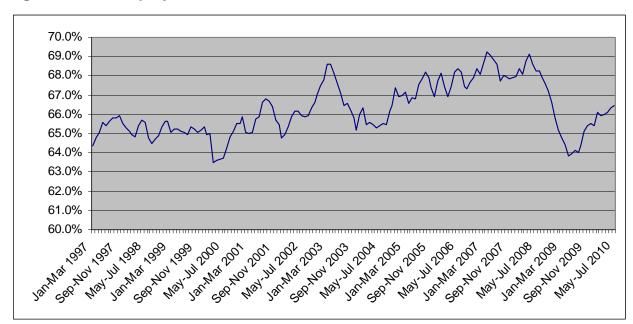


Figure 6.1: NI Employment Rate, 1997 - 2010

Source: LFS

- 6.10 It should be noted that not all economic inactivity is "bad". Non-working students are, for example, classified as being economically inactive and few would argue that increasing participation by young people in education and training is a bad thing. However levels of inactivity due to sickness and disability are particularly high in Northern Ireland with typically around 10% of the working age population in receipt of sickness-related benefits (eg, Incapacity Benefit/Employment and Support Allowance). The commensurate rate in GB is around 6%, although some countries/regions (eg Wales, 9%; North East, 8%) approach the NI rate.
- 6.11 In contrast to the sometimes confusing trajectories shown by employment and inactivity, the trend for unemployment, until the economic downturn, has been clear and unambiguous: downwards. It fell from around 9% in 1997 to 4% by 2007 (See Figure 6.3), where it remained until the current recession began in earnest. This group, of course, was the main target of the active labour market polices described above and which have been a key part of the Department's armoury over the past few years.

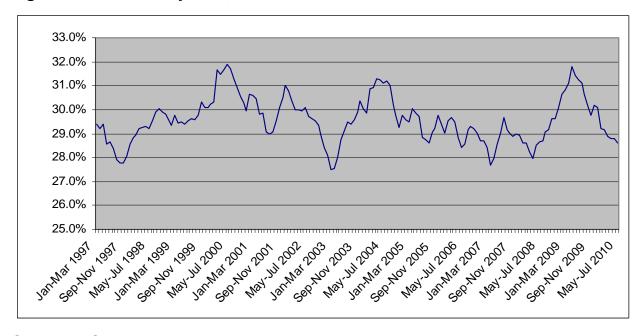


Figure 6.2: NI Inactivity Rate, 1997 - 2010

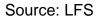
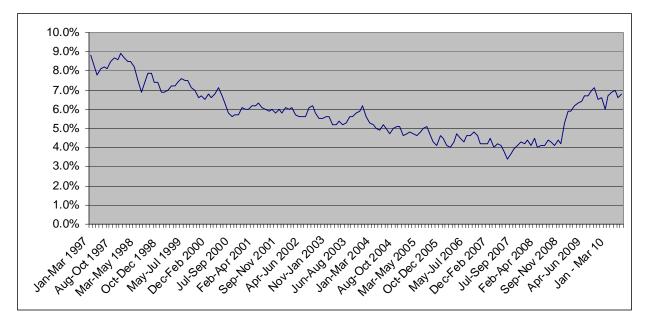


Figure 6.3: NI Unemployment Rate, 1997 - 2010



Source: LFS

6.12 The past decade or so has seen the introduction of a range of Welfare to Work programmes such as New Deal and a joint work-focused jobs and benefits service delivered with SSA in joint offices etc. Gradually the focus has been extended beyond the core JSA unemployed group to bring in those on other benefits ie those who are economically inactive including: Income Support (IS); Incapacity Benefit (IB); and Employment and Support Allowance (ESA). Unemployed people remain a priority group for the Department, and are likely to remain so for the foreseeable future particularly given the implications of the economic downturn for the NI labour market over the short to medium term.

Barriers to Employment for Unemployed and Inactive People

- 6.13 Unemployed and inactive people face a number of barriers to finding work. Whilst every individual's circumstances will be unique, and it is important not to over-generalise, there are a number of factors that often come together. This issue was considered by the Taskforce on Employability and Long-Term Unemployment³⁶ which identified four elements of employability.
 - Personal Circumstances, such as health, access to childcare, transport issues etc. We know, for example, that people with a disability are far less likely to be in employment than those without (see above para 4.9).
 - Personal Attributes, such as literacy, numeracy, skill levels. For example, as discussed above (para 4.9) we know that unemployed and inactive people are far more likely to have no qualifications than those in a job.

³⁶ Report of the Taskforce on Employability and Long-Term Unemployment (2002). Available at <u>www.delni.gov.uk/employability-taskforce-report</u>.

- A person's ability to *Manage the Labour Market*, such as presentation and CV skills, career management; adaptability in the labour market etc.
- *Structural Factors*, such as wage and tax rates, employer attitudes etc.
- 6.14 The approach of the Department to helping unemployed and inactive people address these barriers has been to work directly through the Employment Service (although some other parts of the Department also contribute, for example the Careers Service, Training provision, FE, Essential Skills etc). This has found a formal recognition in PSA terms through targets (discussed in more detail below) covering the numbers of benefit clients moving into work; and other targets such as the delivery of a modernised employment service. This, for example, encompasses the development of Welfare to Work programmes such as Pathways to Work; Steps to Work; LEMIS etc; the movement towards joint delivery of work-focused services with the Social Security Agency through Jobs & Benefits Offices; and improvements in service delivery including appropriate learning and development for staff, resourcing, processes etc.

Employment PSA Targets

- 6.15 The Employment PSA targets³⁷ are given below.
 - PSA 3-4: "Assist 70,000 working age benefit clients to move into employment by March 2011, subject to economic conditions" (the "*Into Employment*" target).

³⁷ There are 3 additional targets within PSA 3 which are the responsibility of the Department. PSA targets PSA 3-1, PSA 3-2 and PSA 3-3 are considered in the FE, HE and Skills sections of this report.

- PSA 3- 5: "Increase 25% use of e-vacancy by employers by March 2011" (the "*Employers Online*" target)
- PSA 3- 6: "Deliver a modernised employment service by March 2011" (the "*Modernised Service*" target)

Employment PSA Targets

6.16 These targets will contribute, along with other inputs for example on the demand side to expand the economy, to the Executive's goal of an employment rate³⁸ of 75% for Northern Ireland by 2020.

"Into Employment" Target (PSA 3-4)

- 6.17 The Into Employment target is to move 70,000 people of working age from benefit into employment by March 2011, subject to economic conditions.
- 6.18 The main benefits covered would include Jobseeker's Allowance (JSA), a benefit claimed by those actively seeking work; Incapacity benefit (IB) and its replacement, the Employment and Support Allowance (ESA), claimed by people who are out of work due to a long-term illness or disability; and Income Support (IS), claimed mostly by lone parents and carers. The main emphasis has been and will remain those on JSA, but increasingly over past years the scope of interventions has been widened to include those on sickness-related benefits and also lone parents.
- 6.19 By June 2010, 69,328 people had been moved from welfare into work. It is clear that this target will be achieved before the end of the period.

³⁸ As noted above, this goal was formulated before the change in the definition of the working age population (see footnote 35).

6.20 Although performance is above target, current and expected forward economic conditions, with rising unemployment and contracting job opportunities, may well impact on the extent to which the target is exceeded.

"Employers Online" Target (PSA 3-5)

- 6.21 The Employers Online target is to increase the use of e-vacancy by employers by 25% in the period to 2011.
- 6.22 E-vacancy in this context means that employers can submit vacancies to the Employment Service themselves through an online link to the Department ("Employers Online"). The rationale behind this is two-fold: first, it gives a better, more responsive service to employers as they are able to control vacancies themselves and, furthermore, vacancies should appear more quickly on the system as they would not need to be processed by Department staff although certain checks <u>do</u> have to be carried out e.g. on proposed wage levels (with the incidental benefit of giving jobseekers more up-to-date information). Secondly, if the system works properly, online submission should free up resources to provide a better service to employers who are willing to engage with the Employment Service's priority (ie welfare) clients.
- 6.23 The baseline value for this target was 34% around a third of vacancies were submitted online by the employer. The target is to achieve 43% by 2011.
- 6.24 The current position is that there has, as yet, been only slight movement towards the target as the percentage vacancies placed using e-vacancy since April 2008 (average) has risen to 35%. However it should be noted that performance in individual months has often been in excess of this and has been running at over 40% for the three months to September 2010. There is no doubt that the economic downturn has adversely impacted on

vacancies. However, the number of vacancies remained relatively stable at approximately 26,500 in the first six months of the current (calendar) year and previous year. The downturn has led to the Employment Service having to be more proactive in this area by engaging with employers 'face to face' and this has negatively impinged on the proportion of vacancies noted directly by employers through Employers Online.

"Modernised Service" Target (PSA 3-6)

- 6.25 The Modernised Service target is to deliver a modernised employment service by 2011. This target does not lend itself to quantitative analysis.
- 6.26 Initial phase of modernisation process delivered flexible citizen-focused provision through the introduction of a number of initiatives, such as Pathways to Work (aimed at people with health problems and delivered in conjunction with other providers, including those from the health service); the Local Employment Intermediary Service, aimed at utilising local provision and knowledge especially in areas of high joblessness; and Steps to Work in September 2008: Steps is a tailored approach to providing assistance in Northern Ireland and subsumed the previous New Deal programmes. The second phase focuses on internal modernisation to ensure an improved service is delivered to clients by including development of workforce analysis tools, strategic partnership with Human Resources and Learning & Development Partners, development of technology-enabled business processes where feasible and the implementation of a Whole Systems Thinking approach to services to Job Seekers.

Employment Service Contribution to PSA Achievement

6.27 The Employment Service contributes to the achievement of the PSA targets in a number of ways. For example, the Into Employment target is impacted on by the work of frontline JBO staff in helping newly-unemployed people to access job opportunities. The Disablement Advisory Service will offer specialised advice to people with disabilities; Personal Advisers will help guide people onto programmes such as Steps to Work, Pathways etc; the provision on those programmes will further help individuals find work; and the programmes themselves are supplemented by other initiatives such as the Local Employment Intermediary Service.

- 6.28 This richness of provision allows the delivery of a flexible and targeted service to individuals: but it makes disaggregating the impacts of individual impacts difficult if not impossible. However, the Department endeavours to monitor these both through the provision of statistics on the programme and also through its programme of evaluations.
- 6.29 Given the complexities and the amount of information available, it is proposed to take a phased approach to this provision. For this iteration of the paper it is proposed to focus in more detail on the new Steps to Work programme and later work will look in more detail at the service to employers.

Steps to Work

- 6.30 On 29 September 2008, the Department introduced the Steps to Work (StW) programme which subsumed the main New Deal programmes across most of Northern Ireland. New Deal continues to operate in the Foyle and Lisnagelvin areas. Steps to Work is the Department's main adult return to work programme. Its aim is to assist people who are unemployed or economically inactive to find and sustain employment.
- 6.31 Participation in Steps to Work is mandatory for all those on Jobseeker's Allowance (JSA) aged between 18 and 24 who have been claiming for 6

months or longer and those aged 25 and over claiming JSA for 18 months or more. Steps to Work also offers access to provision for voluntary participants aged 18 or over (16 or over for lone parents) for those on Incapacity Benefit, Employment and Support Allowance, Income Support, other benefits, and those economically inactive not in receipt of benefits.

- 6.32 Individuals on JSA who have not yet reached the threshold for mandatory participation may also avail of Steps to Work provision on a voluntary basis. Furthermore, access to Steps to Work provision is available to those on the Department's 'Pathways to Work' and 'progress2work' programmes.
- 6.33 Steps to Work provides a flexible approach to address an individual's barriers to employment. It offers the opportunity to gain employment; a work related qualification; meaningful and relevant experience of the workplace through high quality job placements; assistance with improving essential skills and help with developing the skills needed to search for employment for example, interview skills, jobsearch skills, CV building. A key element in Steps is the Employer Subsidy: employers are paid £75 per week (£60 per week for those aged under 25) for up to 26 weeks to employ a Steps participant. This is not a "temporary job" employers are expected to keep participants on after the subsidy ends and the data suggest that, by and large, they do: between September 2008 and December 2009, 60% of participants on the Employer Subsidy remain in employment after the subsidised period ends.
- 6.34 As part of the Department's response to the economic downturn and increasing unemployment, a number of enhancements have been made to the Steps to Work programme including:
 - The funding and range of short training courses;

- The introduction of a waged strand 'Step Ahead' which provides fixedterm (6 months) employment within the Voluntary/Community sector for those who have been on benefit for 30 months or more – this group tends to comprise those at greatest distance from the labour market who have been particularly disadvantaged by the recession;
- The introduction of additional specialist provision targeted at unemployed graduates (Graduate Acceleration Programme);
- Increased childcare allowances for eligible clients participating in Steps to Work provision;
- Increased funding to cover participants' travel to work experience placements beyond normal travel arrangements.
- 6.35 The Department has a particular focus on increasing the number of working age benefit clients moving into employment and this is reflected in its PSA targets which are set out at **Annex 1**. The following analysis considers the progress that has been made in assisting the unemployed and economically inactive into work through Steps to Work.

Starts and Occupancy

- 6.36 From September 2008 to June 2010, 33,334 participants started Steps to Work. The majority of participants who started were mandatory, accounting for 71% (23,522 participants) of all starts.
- 6.37 The total number of participants on Steps to Work at the end of June 2010 was 10,165. Of these, 7,991 (79%) were mandatory and 2,174 (21%) were voluntary.
- 6.38 Over three quarters (76%) of those who started Steps to Work between September 2008 and June 2010 were male. At the end of June 2010, 78% of participants were male, 50% were aged under 25 and 35% were from the

most deprived areas of Northern Ireland.³⁹ Over half (54%) of those on the programme at the end of June 2010 recorded their community background as Catholic (excludes those who did not report their community background as either Catholic or Protestant).

Employment Outcomes

- 6.39 In measuring the success of Steps to Work in assisting participants into work, it must be reflected that Steps to Work was introduced during the recession at a time when the JSA claimant count was rising, employment was falling and job vacancies were declining. Despite the difficult labour market conditions, between September 2008 and December 2009⁴⁰ Steps to Work assisted a total of 4,006 participants to find work with 3,173 entering unsubsidised employment, 817 subsidised employment through the Employer Subsidy and 16 fixed term subsidised jobs in the voluntary/community sector through the "Step Ahead" Initiative.
- 6.40 Of the 3,173 participants (21% of all leavers) who found unsubsidised employment, 2,647 sustained that employment for 13 weeks or more. This represents 83% of all those who found unsubsidised employment and 18% of all participants who left the programme in that period. Nine out of ten participants who sustained employment for 13 weeks went on to sustain employment for at least 26 weeks (this figure relates to leavers from the period September 2008 to June 2009).

³⁹ Deprivation analysis based on the Northern Ireland Multiple Deprivation Measure (2010).

⁴⁰ Data relating to moves to unsubsidised employment are of necessity lagged as time has to be allowed for people to find employment and then demonstrate that it has been sustained, and to allow for the data to be captured.

6.41 Figure 6.4 displays the percentage of participants who moved into unsubsidised employment after leaving Steps to Work between September 2008 and December 2009. The figure shows that from January to March 2009 the percentage of participants who left Steps to Work and moved into unsubsidised employment increased each quarter.

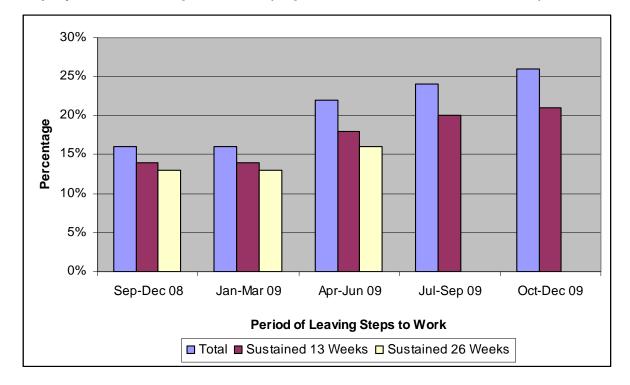


Figure 6.4 Percentage of all participants who moved into unsubsidised employment from Steps to Work (September 2008 to December 2009)

- 6.42 Over one fifth (22%) of mandatory participants who left Steps to Work moved into unsubsidised employment compared to 21% of voluntary participants (September 2008 to December 2009). Of mandatory participants who left the programme, 18% found sustained employment for 13 weeks or more. The corresponding figure for voluntary participants is 17%.
- 6.43 From September 2008 to December 2009, 22% of males and 21% of females who left Steps to Work moved into unsubsidised employment. In

the same period, 24% of leavers who recorded their community background as Protestant and 20% of participants who recorded their community background as Catholic moved into unsubsidised employment.

- 6.44 Approximately 16% of leavers from the most deprived areas of Northern Ireland moved into unsubsidised employment compared to 21% of all leavers across Northern Ireland. The corresponding figure for leavers from the least deprived areas was 28% (September 2008 to December 2009) ⁴¹.
- 6.45 From September 2008 to December 2009, the proportion of younger participants who found work on leaving the programme was higher than for those aged 50 and over. Over one quarter (26%) of leavers aged under 25 moved into unsubsidised employment compared to 14% of those aged 50+.
- 6.46 The proportion of participants who left Lead Contractors between September 2008 and December 2009, and moved to employment (unsubsidised or subsidised) varied markedly across contract areas (13% to 27%). It should however be recognised that some participants are further from the labour market than others and therefore some Lead Contractors may be assisting a relatively higher share of 'harder to help' participants. Such participants may have complex and multiple barriers to employment. Lead Contractors are also operating in areas with varying levels of deprivation and some Contract Areas will have been harder hit by the economic downturn than others. Longitudinal inspections for the new Steps to Work Contractors are in progress. All Lead Contractors will have both phases of their inspection completed by end of March 2011. For further information see the *Annual Report from Quality and Performance Branch.*

⁴¹ Deprivation analysis based on the Northern Ireland Multiple Deprivation Measure (2010) quintiles.

Key Points

- 6.47 From the introduction of Steps to Work in September 2008 to June 2010,33,334 participants started the programme. The majority of participants who started were mandatory and around three quarters were male.
- 6.48 Steps to Work assisted a total of 4,006 participants to find work in the period from September 2008 to December 2009, with 3,173 (21% of all leavers) entering unsubsidised employment. Approximately 83% of those who moved to unsubsidised employment sustained it for at least 13 weeks.

7. The Innovation Agenda

- 7.1 Increasing access to, and the quality of, knowledge and innovation in Northern Ireland is recognised as a key economic driver, which will allow Northern Ireland to close the productivity gap with the rest of the UK.
- 7.2 The recent Independent Review of Economic Policy (IREP) commissioned by the Department of Enterprise, Trade and Investment (DETI) and chaired by Professor Barnett was published in September 2009. The report acknowledges the importance of effective innovation and knowledge transfer to Northern Ireland's future prosperity.
- 7.3 In order to enhance innovation capacity the Department seeks to: support the local universities' research capabilities and research quality; exploit fully the contribution that the local universities and Further Education colleges can make to the economy and, in particular, increase their responsiveness to the needs of business and the community. Last year's Quality and Performance report found that, overall, Northern Ireland's performance on Higher Education and Further Education Innovation and R&D and related business interaction activities was improving and compared favourably with other parts of the UK. A summary of the key findings from last year's report are set out at **Box 7.1** below. Meanwhile **Box 7.2** provides an overview of progress against issues raised regarding the Innovation Agenda in last year's report.

Box 7.1: The Innovation Agenda – A Recap of Key Issues raised in the 2010 Baseline Report

- The period between 2003/04 to 2007/08 saw an increase in publicly sourced (i.e. Research Councils, government departments / Agencies and EU Commission) income from collaborative research in Northern Ireland by 110%; over three times that of the UK (29%) for the same period. Collaborative research income received by each Northern Ireland HEI was higher (at an average of £10.3m per institution) than any other UK country and considerably higher than the UK average of £4.36m per institution.
- The HE Business and Community Interaction (HE-BCI) survey showed that total income (from companies and non-commercial organisations) received by Northern Ireland HEIs from research contracts grew by 17% between 2006/07 2007/08. Despite this growth, average research contract income per institution was lower in Northern Ireland (£1.5m) than the UK (£2.1m).
- Between 2006/07 2007/08 Northern Ireland experienced a 10% increase in the number of research disclosures from local HEIs, whereas the UK experienced a decrease of 3.6%. Northern Ireland was the only UK country to experience positive growth and in 2007/08 had 2.5 times more research disclosures per institution than the next best performing UK country.
- The cost recovery provision in FE (i.e. FE provision fully funded by participants including companies seeking to increase productivity via bespoke training) increased from 8.4% of total assessed enrolments in 2002/03 to 18.8% of total assessed enrolments in 2007/08.

Box 7.2: The Innovation Agenda – An overview of progress against the Departmental Action Plan

In response to the first Baseline Analysis report on Quality and Performance, the Department published an Action Plan setting out the steps it intended taking to address issues raised. A detailed update of progress against that Action Plan is set out in Annex 2 of this report. The actions to address issues outlined in Box 7.1 are summarised below.

- In order to further support knowledge transfer from the Northern Ireland research base, the Department has secured a further year of funding for the Higher Education Innovation Fund.
- Encouraging increased HE/FE collaboration focused on meeting the needs of business and the wider community remains a priority for the Department and approval has been secured for the next phase of the Connected programme.
- In order to increase postgraduate provision so that the needs of industry are met, the Department continues to fund additional PhDs in areas of economic relevance. The PfG target for 300 additional research PhD students at local Universities by 2010 looks set to be achieved.
- The Department, in conjunction with the other UK HE funding bodies, is engaged fully with the development of the 'Research Excellence Framework' which will assess research on the basis of quality while simplifying the process.
- 7.4 Between 1998/99 and 2008/09 the number of PhD enrolments at Northern Ireland HEIs has grown by 95% (from 1,195 to 2,325). Over the same period, the number of STEM PhD enrolments increased by 68% (to 1,395).

7.5 Over the last year, the number of STEM PhD enrolments at NI HEIs has increased by 15% (between 2007/08 and 2008/09). Over the same period, the number of non STEM enrolments at NI HEIs has grown by 3%.

Commercialisation of Research in Northern Ireland

- 7.6 An important indicator of the link between HE R&D activity and the local economy is the level of interaction between businesses and research institutions and how this has changed over time. Currently the main source for this type of data is the Higher Education Business and Community Interaction (HE-BCI) survey. The survey provides information to support the public funding of R&D and Knowledge Transfer activities of UK HEIs.
- 7.7 The most recent survey covers the academic year 2008/09 and it reports on responses by HEIs to a number of relevant questions. It is possible to use outputs from the survey to compare Northern Ireland with other UK countries. It is also possible to compare performance on a range of indicators over a number of academic years. The following provides an updated analysis of the Northern Ireland HEI sector on key indicators of business interaction.

Income from Collaborative Research

7.8 The HE-BCI survey defines collaborative research as research which includes the HEI, a public funder and a third party. Under the survey, collaborative research income consists primarily of public funding as defined above. Collaborative research is important to Northern Ireland HEIs as it not only increases the level of funding available for research projects but also provides greater opportunities for an innovative break through which HEIs and companies based here could exploit.

- 7.9 Income from collaborative research in Northern Ireland grew by 203% between 2003/04 and 2008/09 compared to 35% for the UK over the same period. More recently, between 2007/08 and 2008/09, income from collaborative research in Northern Ireland grew by 26%. This is significantly higher than England (+8%) and Scotland (no change). Welsh HEIs experienced a decline (-14%) in income from collaborative research over the same one year period (see **Figure 7.1**).
- 7.10 The survey also found that the collaborative research income received by each HE Institution in Northern Ireland is higher (at an average of £14.8m) than any other UK country and considerably higher than the UK average of £4.6m per institution.

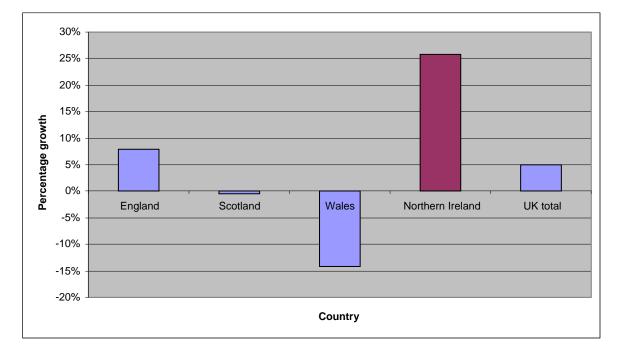


Figure 7.1 Growth in HEI income from collaborative research 2007/08 – 2008/09

Income from Consultancy Contracts

7.11 The HE-BCI survey shows that the total income received by Northern Ireland HEIs from consultancy contracts with commercial and non-commercial organisations (these are considered to be a more direct transaction than collaborative research) grew by some 35% between 2007/08 – 2008/09. Northern Ireland HEI income from contracts remains lower at £2.0m per institution, on average, than for English and Scottish HEIs (£2.1m) but the gap with England is now marginal. The position is illustrated in Figure 7.2.

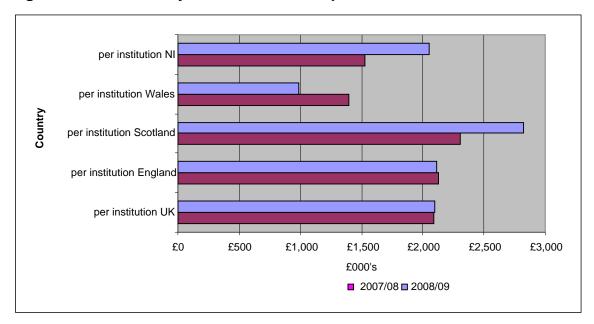


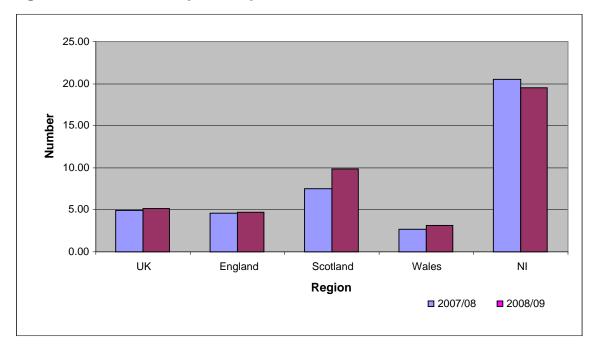
Figure 7.2 Consultancy Contracts Income per HE institution

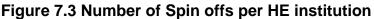
Number of Research Disclosures

7.12 The number of research disclosures is also a good indicator of the level of research and innovation. A disclosure occurs when research-active staff become aware of potentially exploitable research and work with others (often knowledge exchange specialist staff) to develop those ideas. 7.13 Northern Ireland compares favourably with the UK in terms of the number of disclosures per institution – this is despite a fall of -28.8% between 2007/08 and 2008/09 compared to a rise of 5.7% in the UK.

Spin-Off Companies

7.14 In 2008/09, the total number of spin-offs⁴² (with some HEI ownership) still active after 3 years in Northern Ireland stood at 39, a slight fall from the year earlier but up 5% since 2003/04. It is estimated that these companies employed around 970 full-time equivalent staff with turnover of £91million. Figure 7.3 illustrates that Northern Ireland institutions compare favourably with institutions from other parts of the UK in terms of number of spin-offs (19.5 on average across the two Northern Ireland institutions in 2008/09 compared to the UK average of 5.2.)





⁴² A company set up to exploit Intellectual Property (IP) that has originated from within the HEI.

Employer Interaction in the Further Education Sector

- 7.15 Interaction between businesses and the Further Education colleges and the support it can provide to the Northern Ireland economy remains a key issue for the Department. The Department recognises that interaction of this type has the potential to help businesses, particularly SMEs, take practical steps to exploit innovation and increase competitiveness.
- 7.16 The Department monitors the proportion of cost recovery provision within the Northern Ireland FE Sector. This relates to provision that is fully funded by participants and includes bespoke provision for local companies to help them train their staff and increase productivity. In the last 6 years for which data are available such enrolments have increased from 8.4% to 18.3% as a proportion of total assessed enrolments (08/09 compared to 02/03). This indicator has fallen back very slightly from 18.8% recorded in the previous year (07/08).
- 7.17 The Department also now requires each college, as part of its College Development Planning (CDP) process, to address a number of issues under the theme of Economic Engagement. The college's CDPs for 2010/11 set out precise details of how they will engage with external organisations and indicate how curriculum planning is formed by ongoing engagement with employers. It is intended that the next iteration of this quality and performance report will monitor the outputs from that process.

Research Assessment Exercise 2008

- 7.18 The four UK higher education funding bodies⁴³, of which the Department is one, periodically assess the quality and volume of research activity in the higher education institutions that they fund using the Research Assessment Exercise (RAE), a peer review-based benchmarking exercise. The most recent exercise was carried out in 2008 and is referred to as RAE 2008. The next exercise will take place in 2014 under a new process, the Research Excellence Framework, which is currently under development.
- 7.19 RAE 2008 used the same main principles of peer assessment as previous exercises. Subject areas were broken into Units of Assessment (UoAs) of which there were 67. However, this time the results were presented as quality profiles using the definitions below. In each case, the panel took account of three overarching components of the submission research outputs, research environment and indicators of esteem. Work that fell below national quality or was not recognised as research and was unclassified.

⁴³ The other UK funding bodies are the Higher Education Funding Council for England (HEFCE), the Scottish Funding Council (SFC) and the Higher Education Funding Council for Wales (HEFCW).

Table 7.1 Quality profiles of the RAE

4*	Quality that is world-leading in terms of originality, significance and
	rigour.
3*	Quality that is internationally excellent in terms of originality,
	significance and rigour but which nonetheless falls short of the
	highest standards of excellence.
2*	Quality that is recognised internationally in terms of originality,
	significance and rigour.
1*	Quality that is recognised nationally in terms of originality,
	significance and rigour.
Unclassified	Quality that falls below the standard of nationally recognised work.
	Or work which does not meet the published definition of research
	for the purposes of this assessment.

- 7.20 It should be noted that 'national' and 'international' refer to standards, not to the nature or geographical scope of particular subjects. In producing a quality profile for each submission rather than a single point rating, RAE 2008 assessment panels were able to recognise the breadth of research quality evident in many departments and groups in UK universities. The four higher education funding bodies use these quality profiles to determine their distribution of grant for research to the Institutions.
- 7.21 Unfortunately the change in the use of profile limits the ability to draw direct comparisons between these results and the previous 2001 exercise. In addition, there is another difficulty in drawing meaningful comparison/analysis between universities and that is, under the 2001 and 2008 exercises, they did not have to disclose the proportion of academic staff submitted. This enabled them to claim a high percentage of four star (4*) activity but they may only have submitted a few staff.

7.22 However, while recognising these two caveats, the following provides a high-level analysis of the Northern Ireland RAE outcomes.

Analysis of Performance

7.23 The 2008 results show that the proportion of research graded at the highest level has increased since the last RAE in 2001. Half the assessed research in Northern Ireland is either internationally excellent or world-leading and more than 98 per cent of Northern Ireland HEI researchers are working in disciplines where world leading research is taking place. Further details on the RAE 2008 results can be found at http://www.rae.ac.uk/results/.

Queen's University, Belfast (QUB)

7.24 At a high-level QUB submitted almost 800 staff to RAE 2008 and every area had research assessed as world-leading. Queen's has eleven subject areas, ranging from Pharmacy, Civil Engineering, Law and Anthropology, ranked within the top 10 in the UK and twenty-four in the top 20. This is particularly impressive as it only submitted to 38 Units of Assessment (UoAs).

University of Ulster

- 7.25 The University of Ulster (UU) submitted almost 500 staff to RAE 2008 in 25 UoAs.
- 7.26 UU has achieved three top three positions in the areas of Biomedical Sciences, Celtic Studies and Nursing. A further seven subjects ranked amongst the top twenty, namely: Agriculture, Veterinary and Food

Science, Architecture and the Built Environment, Communication, Cultural and Media Studies, Law, Linguistics, Metallurgy and Materials and Sports-Related Studies.

Stranmillis University College

7.27 This was Stranmillis University College's first submission to the RAE and involved six full-time equivalent staff (FTE) in one UoA, namely education. Of their submitted research activity 40% was adjudged to be internationally recognised or higher.

Department for Employment and Learning's Higher and Further Education Collaboration fund - The Connected Programme

- 7.28 Funded by the Department's Higher and Further Education Collaboration Fund, the Connected Programme is an initiative of Queen's University Belfast, the University of Ulster and the Association of Northern Ireland Colleges (ANIC). It seeks to enable the HE and FE sectors to identify and meet the knowledge transfer needs of businesses and the wider community in a coordinated and holistic fashion. It is the first programme of its kind in the UK.
- 7.29 The Connected 1 pilot programme was established in April 2007 with a set of high level objectives and a number of SMART activity targets. This three year pilot programme was to end in March 2010. Therefore, in order to ensure an uninterrupted service to business and the wider community, an evaluation was commissioned in 2009 to assess the performance of the pilot and to make recommendations for the future development of the programme.

- 7.30 The evaluation found that, in its first two full years of operation, the Connected Programme met fully the majority of its targets including those relating to the 'number of added value engagements' and 'number of projects delivered from enquires received by the Connected Central Unit'.
- 7.31 The following table summarises the cumulative knowledge transfer activity with industry against set targets for the overall three year project. As the table illustrates, all targets apart from Knowledge Transfer Partnerships (KTPs) have been exceeded. As with other knowledge providers, the economic downturn has impacted upon completed KTPs.

Table 7.2: Connected I Programme: Knowledge Transfer Targets andPerformance

Activity	Target	Actual
Enquiries Received	1600	1693
Added Value	550	1410
Engagements		
Number of Knowledge	15	8
Transfer Partnership		
Number of Projects	126	437
Delivered		
Value of projects	£750,000	£981,144
Delivered		

7.32 The following table summarises the cumulative *internal* knowledge transfer activity amongst HE and FE partners against set targets for the three year duration of the pilot programme.

Activity	Target	Actual
Number of Placements	27	20
in/from Business and/or		
the Community		
Number of Major Training	50	90
and Development		
Engagements		
Number of Staff	130	115
Exchange Visits		
Number of International	12	48
Network Visits		

Table 7.3: Connected I Programme: Internal Knowledge Transfer Targets and Performance

- 7.33 As the above table illustrates, this "internal" aspect of Connected also performed well. Taking into account that actual project delivery did not begin until January 2008 (due to major re-organisations of both the FE sector and the Office of Innovation and Enterprise at the University of Ulster).
- 7.34 Overall, the evaluation report was very positive regarding the performance of the Connected pilot, particularly the establishment of 6 high profile sectoral initiatives (with a further 12 in the pipeline) and the step change in coordinated interaction between the HE and FE sectors with respect to their business facing activities. Before Connected, the HE and FE sectors had generally worked independently of each other.
- 7.35 Approval has been given for a second round of the programme to run for four years from Financial Year 2010/11.

Key Points

- 7.36 Northern Ireland regularly outperforms the rest of the UK in a number of Innovation and R&D indicators including the number of spin-out firms and the extent of research collaboration.
- 7.37 This year the Department looks set achieve its PfG target to increase by300 the number of PhD research students at local universities.
- 7.38 Research graded at the highest level from the RAE has been increasing across both QUB and UU and both universities have improved their overall position in the wider UK HEI context.
- 7.39 While there was a marginal decline in the proportion of full cost recovery provision at FE (an indicator of community and business interaction) in the last year, levels remain high by historical standards.
- 7.40 An evaluation in to the Connected Programme (a joint initiative between Queen's University Belfast, the University of Ulster and the Association of Northern Ireland Colleges (ANIC)) established that in its first two full years of operation, the Connected Programme fully met the majority of its targets including the number of added value engagements, number of projects delivered and the value of projects delivered.

8. Final remarks

- 8.1 This document, the second in the Department's Quality and Performance series, has sought to provide an assessment of Departmental funded provision and programmes. It updates the position identified in the previous 'Baseline Analysis' report, and has included for the first time analysis of quality and performance of a number of additional programmes including Bridge to Employment and Steps to Work. It has focused sharply on STEM provision and has included an updated Action Plan detailing the progress made in addressing issues identified in the first baseline report.
- 8.2 The analysis points to a continued hostile operating environment. Unemployment remains on an upward trend and more people have been out of work for longer. Employment numbers, while beginning to increase again, are a long way off pre-recession peaks and the region is particularly exposed to constraint in public expenditure. Nevertheless, there is continued consensus amongst economic commentators that innovation, skills and employment will be crucial to driving future economic growth and prosperity.
- 8.3 Performance in many strategically important areas has been improving. The proportion of the working age population qualified at level 2 and above and level 3 and above continues to increase although the attainment of related PfG targets in these areas remain challenging. The overall number of enrolments on STEM subjects has increased in the 2008/09 year and early indications suggest that this growth will be continued into 2009/10, reversing a longer term trend of decline.
- 8.4 In broad terms, the Department's skills provision continues to be successful at engaging with those from the more deprived areas and, where comparable data exist, the Northern Ireland performance on this

measure tends to be significantly ahead of other parts of the UK. The evidence on quality of skills provision from a range of sources suggest that the areas assessed have been improving, although there are opportunities identified for further enhancement.

- 8.5 Despite the economic downturn over 69,000 people having moved from welfare into work from the start of the period (April 2008) to June 2010 and the associated PSA target is on track for delivery.
- 8.6 In relation to innovation and R&D this report has presented a positive picture of strong and growing engagement between HE, FE and the Business community. Again on many of the key indicators of HE research commercialisation Northern Ireland compares favourably with other UK countries.
- 8.7 Set against this positive picture, the report points to a number of remaining challenges for the Department. In particular, there continues to be wide variability in the rate at which individuals successfully complete the course for which they had enrolled and attain the associated qualification. For example, having embarked on a course, some social groups are more likely to attain a qualification successfully than others and retention and achievement rates continue to vary markedly across education and training providers and across subject areas.
- 8.8 As a response to the first baseline analysis of the Department's quality and performance and the issues it raised, the Department developed an action plan to ensure the programmes it delivers and the provision it sponsors is of a high quality. The Action Plan was published alongside the above report.

8.9 The Department is committed to monitoring implementation of the Action Plan on a regular basis and it has been reproduced at Annex 2 of this report with a statement of the progress that has been made set alongside each action. Nevertheless, many of the actions which are being undertaken are ongoing and are not due to be completed until the end of this financial year. It is too early to assess the full impact they are having at this stage but evidence from this updated report indicates that the issues which the actions are designed to tackle remain very relevant. These include: increasing the skills levels of the workforce, particularly in STEM areas; addressing variability in success rates within and across programmes; addressing barriers to employment; and supporting base. knowledge transfer from the Northern Ireland research Implementation of the above Action Plan will continue to be monitored as this Quality and Performance work develops and the actions will be refined to take account of the outcomes of these reports. This body of evidence and associated actions are designed to bolster the Department's efforts to maintain and enhance the quality of the programmes it delivers.

Annex 1: Department for Employment and Learning's Programme for Government (PfG) Targets and Key Goals

The Executive's PfG sets out a number of key goals and targets which are relevant and provide focus to the Department for Employment and Learning's policy and programme delivery agenda. These targets have informed this quality and performance report and are set out below.

This Annex sets out the relevant PfG goals and targets by work area using the following categorisation:

Categ	gories/Colour Code	
Skills		
-	Overall Targets	
-	HE Targets	
-	FE Targets	
-	Training for Success	
	Targets	
- Essential Skills Targets		
Employment		
Innovation		

<u>Skills</u>

Skills – Ove	erall Targets	
PSA 2- 1a	Publish a review of labour market information in NI.	
PSA 2- 1b	To have developed the Regional Employment and Skills action Plan.	
PSA 2- 1c	Have in place Sector Skills Agreements for 25 sectors.	
PSA 2-2	To have all current component projects of success through Skills launched by 2010/11.	
PSA 2-3	A review of Success Through Skills will be completed during 2008 for publication in Spring 2009.	
PSA 2 -17	By 2011, to have implemented a joint Department of Education/Department	
	for Employment and Learning strategy to address the shortage of skills in	
	science, technology and mathematics disciplines.	
PSA 2-5	Increase the proportion of the working age population who are qualified at	
	skill level 2 and above to 80% by 2015.	
PSA 2-7	Increase the proportion of the working age population who are qualified at	
	skill level 3 and above to 60% by 2015.	
PSA 2-10	After consultation to launch Careers Education, Information, Advice and	
	Guidance strategy CEIAG and an implementation plan by June 2008.	
PSA 2-16	Increase by 5% the numbers studying STEM subjects in post 16 cohort by	
	2011.	
PSA 3-3	By 2015, increase the proportion of working age population in Neighbourhood	
	Renewal areas qualified to level 2 (including qualifications on the NQF).	
PfG Key	Put in place by 2010 a careers advice service to meet the needs of people	
Goals	with disabilities.	

Skills – Es	Skills – Essential Skills Targets			
PSA 2-4	By March 2011, 42,000 adult learners will have achieved a recognised			
qualification in Essential Skills.				

Skills – Further Education Targets		
PSA 1- 19	Establish baselines and monitoring agreements to measure the volume of	
	direct support that further education colleges provide to employers, and to	
	measure the level of employer satisfaction with the support provided, by	
	December 2008.	
PSA 2-6	Increase the proportion of Further Education enrolments at Level 2 from 29%	
	in 2005/06 to 32% in 2010/11.	
PSA 2-8	Increase the proportion of Further Education enrolments at Level 3 from 57%	
	in 2005/06 to 60% in 2010/2011.	
PSA 2- 12	Increase in the quality of FE and training provision as assessed by ETI.	
PSA 2-	Increase the proportion of Further Education enrolments in Northern Ireland's	
12a	identified priority skills areas from 25% in 2005/06 to 28% by 2011.	
PSA 2-13	Increase the proportion of Further Education enrolments that are on NQF	
	courses from 91% in 2005/06 to 95% in 2010/11.	
PSA 2- 14	Increase the proportion of Further Education enrolments that are on	
	professional and technical courses from 82% in 2005/06 to 90% in 2010/11.	
PSA 3- 1	Increase the proportion of FE enrolments from the more deprived Northern	
	Ireland regions, as defined by the Northern Ireland multiple deprivation	
	measures, from 22% in 2005/06 to 24% in 2010/11.	

Skills – Higher Education Targets		
PSA 2-15	Increase the quality of higher education provision as assessed by QAA.	
PSA 3-2	By 2011, make progress, year on year, towards fair access to higher	
	education.	
PfG Key	Increase by 25% the numbers of students, especially those from	
Goals	disadvantaged communities, at graduate and postgraduate level studying	
	Science, Technology, Engineering and Mathematics (STEM subjects) by	
	2015.	

Skills – Training for Success Targets	
PSA 2-9	Increase Apprenticeship training completion rates under Training for Success
	(and residual Jobskills) to 44% at Level 3 by 2009/10.

Employment Targets

The following PSA targets are subject to economic conditions.

Employment		
PSA 3-4	Assist 70,000 working age benefit clients to move into employment by March	
	2011, subject to economic conditions.	
PSA 3-5	Increase by 25% use of e-vacancy by employers by March 2011.	
PSA 3-6	Deliver a modernised employment service by March 2011.	
PfG Key	Increasing the employment rate from 70% to 75% by 2020.	
Goals		

Innovation Targets

Innovation		
PSA 1-20	Measurable improvements in research quality as measured by the Research	
	Assessment Exercise (RAE).	
PSA 1-21	Increase by 10% the key Knowledge Transfer indicators as measured by the	
	Higher Education - Business and Community Interaction (HE-BCI) Survey for	
	Academic Year 2010/11.	
PfG Key	Increase by 300 the number of PhD research students at local universities by	
Goals	2010.	
PfG Key	Introduce a new programme to increase the commercialisation of university	
Goals	and college research by 2010.	

Annex 2: Delivering Success through Excellence: Progress against Departmental Action Plan

As a response to the first baseline analysis of the Department for Employment and Learning quality and performance and the issues it raised, the Department developed an action plan to ensure the programmes it delivers and the provision it sponsors are of a high quality.

The Department is committed to monitoring implementation of the action plan on a regular basis and this updated version includes a statement of the progress that has been made set alongside each action. Nevertheless, this should be treated as an interim assessment of progress. Many of the actions which are being undertaken are ongoing and are not due to be completed until the end of this financial year. In addition, the data used in this report are somewhat lagged in places and could not therefore be used to assess the full impact of the actions at this stage.

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A. SKILLS -

A.1 Attainment of Key Public Sector Agreement (PSA) Targets (see Section 4 of the Quality and Performance Baseline Analysis report for further details)

Issue Attainment on Level 2 (and above) and Level 3 (and above) PSA Skills Targets.		
Planned Action	Timescale	Department Lead
Work with other departments and	By end 2010/11 Business Year	FE Division, Skills &Industry Division
agencies to encourage and facilitate uptake and accreditation of level 2 and level 3 skills.	Progress towards achieving action	

Issue	Current Position	
Attainment on Level 2 (and above)	Based on current trajectories, significant challenges remain in attaining these Level 2 and 3	
and Level 3 (and above) PSA	targets.	
Skills Targets.		
Planned Action	Timescale	Department Lead
Review reasons for non-	By end 2010/11 Business Year	FE Division, ES Division
completion of qualifications and	Progress towards achieving action	
encourage Department sponsored	Within the Steps to Work programme a review of the NVQ Level 2 strand, including the	
education and training providers	reasons for the high rate of non-completion, has recently been carried out. It should be	
to focus further on level 2 and 3	noted that StW provides a relatively small number of NVQ Level 2 qualifications per year	
enrolments and on achievement	(approx. 100-150). Note:	
of these qualifications.	(a) StW does not offer NVQ Level 3; and	
	(b) StW Providers have no input to enrolment: this is via Employment Service Advisers.	

Issue	Current Position	
Attainment on Level 2 (and above)	Based on current trajectories, significant challenges remain in attaining these Level 2 and 3	
and Level 3 (and above) PSA	targets.	
Skills Targets.		
Planned Action	Timescale	Department Lead
Assess the validity of the level 2	By end 2010/11 Business Year	Analytical Services
and level 3 measurement tool via	Progress towards achieving action	
the planned review of the	A review of the method of measureme	ent of Level 2 and Level 3 targets is well underway. It
Department for Employment and	is being informed by a similar review of working age skills targets in England. The	
Learning's PSA Data Systems.	recommendations from the review will inform the development of the next iteration of PfG	
Bring forward recommendations		
for change as appropriate.	-	

Issue	Current Position	
Extend and enhance the	The Quality and Performance report sought to benchmark Department for Employment and	
benchmarking of Department for	Learning programme performance against similar provision elsewhere but recognised the	
Employment and Learning	need to develop this work further.	
programme performance.		
Planned Action	Timescale	Department Lead
Assess how benchmarking within	By end of 2010	Analytical Services working in conjunction with the
and across the Department for		Department for Employment and Learning's Quality
Employment and Learning		and Performance Branch and the Education and
programmes can be extended and		Training Inspectorate (ETI)
made more meaningful.	Progress towards achieving action	
Consideration will be given to	QPB is currently working with Analytical Services on an exercise to benchmark the quality	
developing national and	of FE provision in NI against similar provision in Scotland initially and subsequently Wales.	
international benchmarks. Build	It is hoped to complete this initial exercise by early 2011. Work is also underway to build an	
further robust benchmarks into the	econometric model to assess and benchmark more comprehensively, success rates in	
next iteration of the Quality and	Further Education colleges initially and, subsequently, across other Department for	
Performance report.	Employment and Learning funded programmes and provision.	
<u> </u>	1	
Issue	Current Position	
Promote and facilitate enrolments	The Quality and Performance report highlights the significant challenges that lie ahead if	
in STEM areas.	STEM PSA targets are to be attained.	
Planned Action	Timescale	Department Lead
An independent STEM Review	By end of 2010	Skills and Industry Division
report was published in late 2009.	Progress towards achieving action	
The Department for Employment	A Government STEM Strategy, 'Success through STEM', has been approved by Executive	

The Department for Employment	A Government STEM Strategy, 'Success through STEM', has been approved by Executive
and Learning, in conjunction with	and was launched for public consultation. The Strategy includes a number of
the Department of Education, will	recommendations which are aimed at enhancing STEM enrolments.
publish a strategic response and	
Action Plan.	

A.2 Higher Education Teaching and Learning (see Section 5.1 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

Issue Pattern of HE Enrolments at NI HEIs, particularly part-time enrolments.		
Planned Action	Timescale Autumn 2010 draft document to be ready for consultation. Progress towards achieving action	Department Lead Steering group chaired by Sir Graeme Davies. Expert groups independently chaired. The Department for Employment and Learning is responsible for secretariat support and for production of the consultation document.

Issue	Current Position	
Pattern of HE Enrolments at NI	As Accounting Officer for the Department, the Permanent Secretary holds meetings with	
HEIs, particularly part-time	the Heads of the Higher Education Institutions to provide comfort on the accountability	
enrolments.	arrangements each has in place. These meetings provide an opportunity to discuss issues	
	on the performance, operation or accountability of the institution.	
Planned Action	Timescale Department Lead	
HEI representatives to outline		
	monitoring of progress as required.	
,	Progress towards achieving action	
•	Next round of accountability meetings with Universities is not scheduled to take place early	
Performance report. These will be	2011.	
reviewed at the next		
Accountability Meeting.		

Issue	Current Position	
Promoting STEM enrolments in	There is a PSA target to increase the number of students studying STEM (especially those	
HE	from disadvantaged backgrounds) by 25% by 2015. This target is not on track to be met	
	currently.	
Planned Action	Timescale	Department Lead
Develop a Widening Participation	The WP strategy is scheduled to be	HE Division
Strategy (WP) for NI which will	completed at the same time as the	
examine a range of measures	HE Strategy (see above).	
including the possibility of	Progress towards achieving action	
expanding the Step-Up to Science	The development of the WP Strategy is on target. Separately, work has been	
programme.	commissioned to examine the effectiveness of spend on WP activities. Through the	
	consultation process there will be an examination of how better VFM can be achieved from	
	WP spend.	

Issue	Current Position	
HE Non-Completion Rates	The NI universities have improved their position compared to last year although their non-	
	completion rates are still above their benchmarks.	
Planned Action	Timescale Department Lead	
Both universities are taking a	Measurement of progress will be	HE Division
series of measures to reduce	monitored each year.	
rates still further.	Progress towards achieving action	
	The performance of the NI HEIs has declined according to the latest data. NI has the	
	worst retention rates in the UK. This has a negative impact on the issue raised. Retention	
	rates will be examined as part of the HE Strategy.	

A.3 Further Education

(see Section 5.2 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

Issue	Current Position	
Increasing Level 2 and Level 3	The Department has PSA targets to increase the proportion of enrolments at FE colleges	
enrolments.	in levels 2 and 3. Latest data show that	at progress is being made.
Planned Action	Timescale	Department Lead
FE Division to share the outputs of	By end 2010/11	FE Division
the quality and performance report		
and specific PSA monitoring data		
with Colleges in advance of the		
College Development Planning		
(CDP) process. It will agree		
actions with colleges to aid		
achievement of these targets.		
Policy drivers which will help to		
achieve above targets include:		
Curriculum Policy (including ILP);		
Work Based Learning; and		
VQ Reform.		

I	
	rogress towards achieving action
TI	ne latest position 28.4% for Level 2 enrolments, shows a decrease of 1.1%, however this
is	a mid year lift of enrolments and only reflects the Sept 09 enrolments and would not
l in	clude the Jan 2010 enrolments; in the current economic climate this is a reasonable
pe	erformance. It is hoped that the Level 2 enrolments will show an increase when the total
	jure for the academic year is available. The current possition on Level 3 enrolments is
	3.2% against the target of 60%.
	ne Level 2 enrolments should be balanced against an over achievement in Level 3
	prolments ie the total target for Level 2 and Level 3 is 92% by 2010/11, and the current
	chievement of these two Levels taken together is 91.6%. It is preferable to have the Level
	target exceeded, even if this is "at the expense" of the Level 2 target.
	nrough the College Development Planning (CDP) process, interim targets have been
	greed to enable Colleges to work towards achieving these PSA targets for Level 2 and
	evel 3. The targets range from 94.5% down to 89.3% to allow for the variation in demand
	cross the sector. The bespoke CDP process recognises the individual "distance to travel"
	meeting the PSAs and reflects the local community need. It is anticipated that the
	erformance across the sector taken as a whole will meet the PSA target. In 2009 a
pr	oject was commenced by the Learning Skills Development Agency to research the "FE
e>	perience" of 16-19 year olds, and to develop and implement a shared electronic
In	dividual Learner Programme (e-ILP) that could be used across the FE sector to plan and
m	onitor individuals' learning. A major consideration in this work was making
re	commendations on the best use of existing college computer systems (including the
	rtual Learning Environments) to incorporate best practice in terms of learning plans for
	S-19 year olds.
	ne Individual Learner Plan was piloted, initially with 16-19 year olds enrolled with FE
	olleges, from September 2009. The project is due to be completed in the 2010/11
	cademic year and, thereafter, its impact on college recruitment, retention and
	chievement will be monitored.
a	

Issue	Current Position	
Increasing numbers on priority	The Department has PSA targets in these areas and latest data show that significant	
skill areas including STEM.	progress is still required.	
Planned Action	Timescale	Department Lead
FE Division to share the outputs of	By end 2010/11	FE Division
the quality and performance report	Progress towards achieving action	
and specific PSA monitoring data	The current figure is based on the Fe	b 10 lift. The % increased from 25.1% in Feb 09 to
with Colleges in advance of the	25.6% in Nov 09 which reflected yea	r end figure for 08/09. The in-year lift i.e. Feb 2010
CDP process and agree actions	indicates a drop to 23.1, however this	reflects Sept 09 enrolments and would not include all
with the colleges to aid	the Jan 2010 enrolments. The actua	I enrolments during the same period last academic
achievement of these targets.	year increased by approx 4000 enroln	nents mid-year. It is hoped the trend would continue
	this year. The February 2010 data	remains the most recent available. Following the
Policy drivers which will help to	finalisation of the Colleges' budgets for	or 2010/11, the Department wrote to colleges asking
achieve above targets include:	them each to re-profile their curriculum offering, based on their actual budget settlements.	
Curriculum Policy (including ILP);	In doing this, colleges were asked to pay particular attention to meeting the Department's	
Work Based Learning; and	PSA targets, one of which is PSA 2 indicator 12a. Increase the proportion of FE	
VQ Reform. Consideration to be		
given to attaching weighted		
funding to STEM areas that are	"vulnerable" to, learner choice. Therefore, it has to be recognised that colleges offering	
not already included in priority		sufficient learner uptake to meet this target. Through
skills areas.		DP) process, interim targets have been agreed which
	recognise the distance travelled and yet to travel by individual colleges. Through some	
	colleges have yet to achieve the PSA target, they have agreed to the targets set in the	
	CDP's based on their current performa	ance and likely demand locally.

Issue Variability in success rates across		
colleges.		ross a range of student characteristics.
Planned Action	Timescale	Department Lead
FE Division to share and discuss	By end 2010/11	FE Division
the outputs of the quality and	Progress towards achieving action	
performance report with Colleges	Through the College Development Planning process, the Department challenges colleges	
in advance of the CDP process	on their rates of learner retention and achievement. In addition,	
and agree actions with the	retention, achievement and progression rates are key performance indicators outlined in	
colleges to address variability in	Improving Quality : Raising Standards (IQ:RS), the Inspectorate's manual of quality	
success rates.	indicators against which Colleges are evaluated by the Inspectorate and against which	
	they are required to carry out an annual self-assessment. These are key indicators for the	
	Inspectorate in determining a college's overall performance level but particularly the	
	performance level for Achievements and Standards.	

Issue	Current Position	
Variability in success rates across	The Department continues to imple	ment, its Quality Improvement Strategy, "Success
colleges.	Through Excellence', and has recently	carried out a review of its effectiveness.
Planned Action	Timescale	Department Lead
Colleges are currently undergoing	Follow up inspections and support	FE Division
training in self-evaluation to	through 2010/11	
strengthen their ability to identify	Progress towards achieving action	
weaknesses in their own provision	The Department's Quality Improvement Strategy, "Success Through Excellence', has	
	recently been reviewed and is currently been updated.	
appropriately.		· .

Issue Variability in success rates across		
colleges.	provision of priority skill areas at level 2. Overall grades awarded ranged from satisfactory to very good.	
Planned Action	Timescale	Department Lead
Areas for improvement arising	End 1010/11	FE Division
from these inspections are being	Progress towards achieving action	
addressed through the provision	5	lege self-evaluation report and quality improvement
of post-inspection support and		these by the Inspectorate confirmed that all of the
follow-up inspection activity.	colleges had satisfactory or better processes in place to self-assess the quality of their provision. Three of the colleges were judged to have very good arrangements in place,	
	two good and one satisfactory.	
	All of the colleges who had to undergo follow-up inspection activity following the inspection	
	of their Priority Skills Level 2 provision in 2009, succeeded in improving the performance	
	level awarded. Post-inspection support was offered to colleges who had to undergo follow-	
	up inspection activity. Two colleges whose provision in Tourism was originally evaluated	
	as inadequate and unsatisfactory respectively both improved their performance level to	
	very good.	

Issue	Current Position	
Variability in success rates across	Survey evaluations across all of the colleges are being carried out by the ETI in three	
colleges.	priority skills areas at level 3 in 2010.	
Planned Action	Timescale Department Lead	
To strengthen the quality of	End 2010/11	FE Division
provision across FE Colleges and	Progress towards achieving action	
again post-inspection support and	The survey of the Priority Skills areas at level 3 undertaken in 2010 confirmed that the	
follow-up inspection activity will be	overall quality of provision was satisfactory in two colleges, good in three and very good in	
provided as required.	one. Those colleges with individual Priority Skills areas evaluated as just satisfactory,	
	inadequate or unsatisfactory will have follow-up inspection activity planned for 2010-2011.	
	They will as usual be offered post-insp	pection support.

A.4 Training Programmes (see Section 5.3 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

Issue Contribute further to level 2 and Level 3 attainment.	Current Position The current level of achievement is summarised in the Quality and Performance Baseline analysis.	
Planned Action	Timescale Department Lead	
Ensure that individuals are not		Skills and Industry Division.
prevented from attaining a	Progress towards achieving action	
	Training for Success aims to target 16 and 17 year old school leavers (up to 24 in certain	
and knowledge – this will be to the	, , , , , , , , , , , , , , , , , , , ,	
advantage of the individuals		
concerned, while contributing to		
the Department meeting its PSA	development and employability skills.	
targets.		

Issue	Current Position	
Contribute further to level 2 and	The current level of achievement is summarised in the Quality and Performance Baseline	
Level 3 attainment.	analysis.	
Planned Action	Timescale Department Lead	
The Department will assess	End 2010/11 Skills and Industry Division	
options for the development of an	Progress towards achieving action	
up-skilling programme, as an alternative to an apprenticeship	The Department is introducing a team of trained Skills Advisors who can engage with employers to help identify their skills needs and match those with the appropriate	
for individuals who only require a small amount of training or only require assessment and recognition of existing skills.	Departmental offer where relevant. These advisors will have access to a funding stream to provide first time level 2 and level 3 qualifications to employees not previously qualified to the	

Issue	Current Position	
Contribute further to level 2 and	The current level of achievement is summarised in the Quality and Performance Baseline	
Level 3 attainment.	analysis.	
Planned Action	Timescale	Department Lead
The Department is working with	2010/11	Skills and Industry Division
the University of Ulster to develop	Progress towards achie	ving action
a teacher education qualification	The Teacher Education P	rogramme developed by the University of Ulster at the Department
for those employed in the work	request continues to roll out across the suppliers of work-based learning and employment	
based learning sector. A pilot	programmes. It is in big demand from the sector as those supplier organisations that have	
programme for this qualification	achieved good outcomes from ETI inspections report a definite link to the skills staff	
commenced in February 2009 and	developed on this Certificate in Teaching programme.	
the evaluation, which has just	This action is largely achieved. The programme is now in its first year of roll out.	
been completed by ETI, confirmed		
that the quality of the programme		
was very good. The Department		
will roll this programme out across		
the sector.		

Issue	Current Position	re has been a marked increase in appropriationship
Increasing Occupancy in priority skill areas including in STEM		ere has been a marked increase in apprenticeship Care/Child Development and Wellbeing; Retailing;
areas.	Administration; and Hospitality and	Catering. However, occupancy has fallen in some
	priority skills areas including Electrical	
Planned Action	Timescale	Department Lead
Consider options for enhancing	By December 2010 to inform the FE	Skills and Industry Division and FE Division.
apprenticeship occupancy in	college CDP process for the 2011/12	
Northern Ireland's priority skills	academic year and the monitoring of	
areas. These include:	Apprenticeship provision.	
	Progress towards achieving action	
• further promotion of priority	The Qualifications and e-Learning Bra	nch within FE Division is about to establish a
skills areas (including STEM)	Department wide project to consider and make recommendations that will maximise the	
through the current re-	impact on the Northern Ireland economy of public funding for vocational qualifications (VQs)	
contracting exercise; and	in NI. A key output from the project will a process that will enable the Department to focus it	
• using the Qualification and	funding on those VQs that have been identified by Sector Skills Councils as being	
Credit Framework (QCF) to	particularly important to their sectors in NI. Public funding for VQs will be increasingly focuse	
promote specified	on qualifications, and skills, needed by the NI economy.	
qualifications.		

Issue	Current Position	
Address variability in achievement	The current level of achievement is summarised in the Quality and Performance Baseline	
rates.	analysis.	
Planned Action	Timescale	Department Lead
Evaluate the quality of provision	By December 2010	Skills and Industry Division.
through inspection and other	Progress towards achieving action	
quality regimes, and support	This work is ongoing. Quality and Performance Branch (QPB) are currently working with the	
improvement where appropriate.	Scottish Inspectorate to take this work forward. The Scottish Inspectorate are very keen to	
	work jointly on this. Some initial discussions have taken place with Wales and these are	
	currently being pursued.	

A.5 Essential Skills

(see Section 5.4 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

Issue	Current Position	
Engaging further with older age	The Department is seeking to introduce separate targets for key providers of essential	
groups.	skills to encourage further focus on en	rolments from the harder to reach age groups.
Planned Action	Timescale	Department Lead
Separate age targets for Essential	By end 2010/11	FE Division
Skills enrolments to be agreed as	Progress towards achieving action	
part of the CDP process.	Targets which focus delivery on those	aged 20+ are now in place across the FE Sector and
	built into the colleges' performance tar	rgets.
In addition, a pilot Workforce		
Delivery programme to be	The Alliance of Sector Skills Councils	is co-ordinating the delivery of the programme which
developed in conjunction with the	is currently being delivering.	
Alliance of Sector Skills Councils.		
It will target 500 Essential Skills		
learners. The pilot will be		
evaluated and reported upon by		
the ETI. That evaluation will		
include a focus on the barriers to		
participation from older age		
groups.		

Issue	Current Position	
Addressing variability in success	The Quality and Performance report identifies variability in the success rates of students	
rates.	across providers, subject areas and a	cross a range of student characteristics.
Planned Action	Timescale Department Lead	
The Department will engage	By end 2010/11	FE Division
individually with the FE colleges	Progress towards achieving action	
as principal providers of Essential	Each college has an agreed ES Action Plan in place to address quality of provision and	
Skills to discuss the outputs of the	these have been revised and updated. Achievement data available in November 2010 to	
Quality and Performance report	validate progress in success rates.	
and agree actions that will be		
taken as part of the CDP process.		

B. THE EMPLOYMENT AGENDA -

(see Section 6 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

	Employment and Learning, Analytic	been produced and published by the Department for cal Services on 29 September 2010 and will be
Planned Action Provide validated programme outcome data for further analysis.	Timescale By March 2010. Progress towards achieving action See above.	Department Lead ES Division and Analytical Services.

Issue	Current Position			
PSA3 Indicators 4, 5 and 6 which	See detail in Quality and Performance	Baseline Report.		
relate to: moving people into				
employment; increasing use of e-	Note: all targets in PSA3 subject to ec	conomic conditions.		
vacancy service; and modernising				
the employment service.				
Planned Action	Timescale	Department Lead		
Actions detailed in the		ES Division		
Department's PSA3 Monitoring	0			
Report and performance is		g age benefit clients to move into employment was		
monitored on a quarterly basis.	achieved in September 2010.			
	 Indicator 5 - Increase by 25% the use of e-vacancy by March 2011, the economic downturn has impacted adversely on this target and will continue to do so. Working group is reviewing and taking actions in a number of areas. Progress reported monthly to Senior Management. Indicator 6 - Deliver a modernised employment service by March 2011. The second phase of the Modernisation Programme is currently underway. Work on a number of projects under the Modernisation programme will continue throughout 2010/11. 			

C. THE INNOVATION AGENDA -

(see Section 7 of the Department for Employment and Learning Quality and Performance Baseline Analysis report for further details)

Current Position				
The latest HE-BCI survey for AY 2007/08 shows that the continuing investment through				
the Higher Education Innovation Func	(HEIF) is yielding tangible benefits in terms of the			
commercialisation and exploitation of	university research (see section 7.9 to 7.18 of the Q			
& P Report). This success is reflect	ted in the recent Times Higher Education Award			
naming QUB as the UK's Entrepreneu	rial University of the Year.			
Timescale	Department Lead			
NI HEIF 3 to commence August	HE Division			
2010.				
Progress towards achieving action				
Funding for a further year (first year of HEIF 3) has been secured. Provisional results for				
AY 2008/09 survey show a further sign	nificant increase.			
	The latest HE-BCI survey for AY 200 the Higher Education Innovation Func- commercialisation and exploitation of & P Report). This success is reflect naming QUB as the UK's Entrepreneu Timescale NI HEIF 3 to commence August 2010. Progress towards achieving action Funding for a further year (first year of			

collaboration focused on meeting	Current Position The Department's Connected project (launched in April 2007) has received a positive evaluation (see sections 7.24 to 7.25) and Ministerial approval has been granted to develop the next phase of the programme from April 2010.			
Planned Action Liaise with QUB/UU/ANIC to develop a new 4-year programme	1.3.	Department Lead HE Division		
to cover FY 10/11 to FY 13/14.	Progress towards achieving action	ced and Ministerial approval secured for four years		

Issue	Current Position			
Support increased postgraduate				
provision to meet the needs of the	focused on areas of economic priority	as informed by MATRIX.		
local economy.				
Planned Action	Timescale	Department Lead		
Liaise with DETI/MATRIX to agree	Third intake of 100 additional PhDs	HE Division		
the priority areas for a third intake				
of 100 additional PhDs for AY	Progress towards achieving action			
10/11.		confident that final intake of 100 PhDs will be achieved.		
	PhDs are in areas of economic releva	nce.		
Issue	Current Position			
Increase the quality of research as		published in December 2008, confirmed that research		
measured by the Research		I the University of Ulster is of world class quality, with		
Assessment Exercise (RAE).	excellent" of which 14% was adjudge	Northern Ireland considered to be "internationally		
Planned Action	Timescale	Department Lead		
	New mechanism in place by 2013.	HE Division		
with the other UK HE funding				
bodies, will develop a new	Department is engaged fully in the dev			
mechanism, (known as the				
Research Excellence Framework)				
which will continue to assess				
research on the basis of quality				
but will use a process which is				
simpler and less burdensome.				

Annex 3: Trends in STEM enrolments in Northern Ireland

Introduction

- The Department, in conjunction with DE, has a PSA target in relation to increasing the number of STEM enrolments in the post 16 cohort by 2011. The first monitoring year of full-year data identified a 3.5% reduction in STEM enrolments from the base year, whilst the overall target is to increase STEM enrolments by 5% from 2006/07 to 2010/11. Encouragingly the 2007/08 data showed an increase of 2.4% from the previous year, however, enrolments are still below the base year level.
- 2. The purpose of this annex is, firstly, to set out an analysis of STEM enrolments broken down, where possible, by institution, subject area, sector, gender and mode of study to enable a better understanding of the drivers behind the direction of travel.
- 3. Detailed schools data have not been included in the paper. In addition due to the new data recording structures currently being set up for the Department for Employment and Learning's training provision within Analytical Services, the analysis within this paper excludes training. Therefore the paper focuses on FE and HE provision only.
- 4. In line with reporting on the PSA target, FE data relate to enrolments and outcomes at <u>Level 2 or above</u>. The FE data reported on each quarter within the overall target also <u>exclude</u> any training provision within the FE sector to avoid duplication and to ensure consistency this methodology has been adopted for this paper.
- 5. In terms of HE data the target currently includes all those STEM enrolments at the NI HEIs, and excludes those NI domiciled enrolments at the Open University (whereby there were around 1,200 enrolments in STEM related subjects in 2008/09).
- 6. In addition to the enrolments data, detailed information is also available on the outcomes from FE and HE. This paper also includes that analysis for STEM, broken down, where possible, by institution, subject and mode and level of study.
- 7. The baseline year for the STEM PSA indicator is 2006/07, therefore all analysis presented within this paper relates to data from the baseline to the latest available year which is 2008/09.

Overall PSA target

8. Before looking at the detailed sub-analysis it is worth setting out the progress made at the overall PSA target level. Table 1 below sets out the sub-components of the target by FE, HE, schools and training over the 3 year period 2006/07 to 2008/09. FE accounts for the largest share of the enrolments, representing 41%, followed by HE (32%), schools (15%) and training (12%) in 2008/09. Although there was a decline of 3.5% between 2006/07 and 2007/08, the position has started to reverse in 2008/09 with a 2.4% increase from the previous year. This was most pronounced in FE which showed an increase of 4.6% and also in schools with a 4.2% increase. STEM enrolments within HE have remained static over the period 2007/08 to 2008/09 showing a very small reduction of 0.2%. This is being heavily influenced by the 3% decline in STEM undergraduate enrolments at the NI HEIs even though STEM postgraduate enrolments increased by 11% between 2007/08 and 2008/09.

	06/07	07/08	08/09	% change 06/07 to 07/08	% change 07/08 to 08/09
FE	31,989	28,738	30,053	-10.2%	+4.6%
HE	23,760	23,055	23,001	-3.0%	-0.2%
Schools	10,536	10,741	11,197	+1.9%	+4.2%
Training	7,555	8,746	8,746*	+15.8%	n/a
Total	73,840	71,280	72,997	-3.5%	+2.4%

Table 1: Number of enrolments studying STEM subjects (NQF and equivalent Level 2 and above) in the post 16 cohort

* Note: due to the implementation of new data recording structures and the 'live' nature of the TMS dataset, training data is provisional and 08/09 has been held constant at the 07/08 figure, but the aim is to update by early 2011.

- 9. To reach the next milestone in 2009/10 of 75,284 and to bring the target back on track would require a 3.1% increase from 2008/09 levels.
- 10. Assuming the next milestone can be achieved a similar increase (3.0%) is required from 2009/10 to 2010/11 to meet the overall target of 77,530.

Further Education Enrolments

- 11. This section looks at STEM enrolments at Level 2 and above in FE broken down by College, subject area, mode of study and gender⁴⁴. It is important to note that this detailed sub-analysis <u>excludes</u> training provision undertaken within FE, as the target breakdown set out above excluded training provision within the FE figures to avoid double counting with the training element.
- 12. Overall between 2007/08 to 2008/09 there has been an increase of enrolments in STEM subjects from Level 2 and above of 5%. This is encouraging given that there was a 10% decrease from 2006/07 to 2007/08 (1st year of the college mergers). Overall there were around 1,300 more enrolments in FE at Level 2 and above in STEM subjects in 2008/09 compared to 2007/08, however that remains below the enrolments recorded in 2006/07 (an overall decline of 6% from 2006/07 to 2008/09).
- 13. STEM enrolments made up 33% of all Level 2 and above enrolments at the NI FE Colleges in 2008/09. The comparable figures for 2006/07 and 2007/08 were 35% and 33% respectively.

14. At the College level, Tables 2 and 3 show that:

- South West College (SWC) was the only College to record an increase of STEM enrolments over both years – increasing by 6% in 2007/08 and by 7% in 2008/09;
- North West Regional College (NWRC) and Northern Regional College (NRC) have both experienced two consecutive and significant decreases in STEM enrolments between 2006/07 and 2008/09. NWRC now has 1,186 fewer STEM enrolments in 2008/09 compared to 2006/07 and NRC 731 fewer;
- The reduction in STEM enrolments at Belfast Metropolitan College (BMC) and South Eastern Regional College (SERC) in 2007/08 were compensated for in 2008/09 with higher increases bringing them back to above 2006/07 levels;
- Southern Regional College (SRC) experienced the most significant decline in 2007/08 (-23%) however there has been an increase of 12% at SRC in 2008/09; and

⁴⁴ Data on FE enrolments are sourced from the Further Education Statistical Record

• In 2008/09, BMC had the largest share of STEM Level 2 and above enrolments in the FE sector standing at 28%; followed by SERC at 18%. The other colleges ranged between 12% and 15% of all STEM Level 2 and above enrolments.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
BMC	8,359	7,577	8,496	-9%	+12%
NRC	4,828	4,465	4,097	-8%	-8%
SERC	5,381	5,219	5,535	-3%	+6%
SRC	5,289	4,049	4,531	-23%	+12%
SWC	3,253	3,453	3,701	+6%	+7%
NWRC	4,879	3,975	3,693	-19%	-7%
Total	31,989	28,738	30,053	-10%	+5%

Table 2: Level 2 and above enrolments on STEM courses by College(excluding training)

Table 3: STEM share by College (excluding training)

	2006/07	2007/08	2008/09
BMC	26%	26%	28%
NRC	15%	16%	14%
SERC	17%	18%	18%
SRC	17%	14%	15%
SWC	10%	12%	12%
NWRC	15%	14%	12%
Total	100%	100%	100%

15. Table 4 presents the FE data by subject area which shows the following:

- Maths & Computing Science; Engineering and Technology; and Architecture, Building & Planning together represented around threequarters of all FE STEM enrolments in each of the 3 academic years. Therefore trends in these subject areas heavily influence the overall direction;
- between 2007/08 and 2008/09 Architecture, Building & Planning enrolments experienced a decline of 6%, perhaps reflecting the impact of the economic downturn on the wider construction industry. Encouragingly all other subject areas recorded an increase most remarked in Biological Sciences (23%) and Engineering and Technology (14%);

- between 2006/07 and 2007/08 enrolments in Agricultural Related subjects increased by over 900 (70%) and those in Engineering and Technology also rose by over 900 (19%). All other subject areas declined over the year particularly in Physical Sciences (648 enrolments/39%), Maths & Computing Science (over 3,200 enrolments/25%), and Biological Sciences (166 enrolments/18%); and
- Iooking at the period 2006/07 to 2008/09 Agricultural Related subjects and Engineering and Technology were well above their levels in 2006/07; whilst Physical Sciences, Maths and Computing Science and Architecture, Building & Planning enrolments are well below the base position.

Table 4: Level 2 and above enrolments on STEM courses by subj	ect
(excluding training)	

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Medicine & Dentistry	33	12	0	-64%	n/a
Allied to Medicine	3,845	3,451	3,819	-10%	+11%
Biological Sciences	949	783	961	-18%	+23%
Agriculture & Related	1,342	2,277	2,326	+70%	+2%
Physical Sciences	1,660	1,012	1,058	-39%	+5%
Mathematics & Computing Science	13,058	9,836	10,036	-25%	+2%
Engineering & Technology	5,043	5,983	6,795	+19%	+14%
Architecture, Building & Planning	6,059	5,384	5,058	-11%	-6%
Total	31,989	28,738	30,053	-10%	+5%

- 16. Table 5 sets out STEM Level 2 and above enrolments by mode of study⁴⁵. Points to note are as follows:
 - part-time represented the biggest share of the enrolments at 79% in 2008/09 increasing its share from 78% in 2006/07;
 - full-time enrolments have recorded the largest decrease falling in 2007/08 by 14%. However in 2008/09, there then was an increase of 5% giving an overall decrease of 688 full-time enrolments from 2006/07 to 2008/09; and
 - part-time enrolments decreased in 2007/08 by 9% however increased by 4% in 2008/09 giving an overall decrease of 5% from 2006/07 to 2008/09.

Table 5: Level 2 and above enrolments on STEM courses by mode (excluding training)

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Full-time	6,896	5,902	6,208	-14%	+5%
Part-time	25,093	22,836	23,845	-9%	+4%
Total	31,989	28,738	30,053	-10%	+5%

⁴⁵ STEM enrolments by mode of study and subject area is set out in the Annex.

- 17. It is also interesting to analyse STEM enrolments by gender this is set out in Table 6 and shows the following:
 - males represent the biggest share of the enrolments at 62% in 2008/09 increasing its share from 56% in 2006/07;
 - female enrolments have recorded a significant decrease of 20% between 2006/07 and 2007/08, however remaining fairly static in 2008/09 showing an increase of 1%; *and*
 - male enrolments have decreased in 2007/08 by 3%, but subsequently increased by 7% in 2008/09.

Table 6: Level 2 and above enrolments on STEM courses by gender⁴⁶ (excluding training)

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Male	17,929	17,422	18,601	-3%	+7%
Female	14,060	11,316	11,452	-20%	+1%
Total	31,989	28,738	30,053	-10%	+5%

⁴⁶ STEM enrolments by gender and subject area is set out in the Annex.

- 18. Table 7 breaks the STEM enrolments into level of study. Some of the key messages are as follows:
 - in 2008/09, the largest proportion of STEM enrolments within FE were at Level 2 (46%), followed closely by Level 3 (43%). The remaining 11% were in HE in FE courses. These proportions are broadly similar for the two previous years;
 - decreases were felt across all levels from 2006/07 to 2007/08, with the sharpest decline in Level 2 (12%) and the lowest in HE in FE (5%); and
 - conversely, all levels increased in 2008/09 from 2007/08 with the largest increase at Level 2 at almost 800 enrolments (6%).

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Level 2	14,918	13,082	13,895	-12%	+6%
Level 3	13,802	12,537	12,972	-9%	+4%
HE in FE	3,269	3,119	3,186	-5%	+2%
Total	31,989	28,738	30,053	-10%	+5%

Table 7: Enrolments by level on STEM courses (excluding training)

Further Education Outcomes

- 19. This section continues the focus on FE looking specifically at outcomes⁴⁷ in relation to STEM at the NI Colleges. Similar to the FE enrolment analysis, the outcome data presented <u>exclude</u> training provision undertaken within FE and <u>include</u> those outcomes at Level 2 and above only. The analysis focuses on the number of achievements gained and retention and achievement rates by institution, subject, mode and level. Retention rates within FE are measured by the number of final year completers as a proportion of the number of final year enrolments. The achievement rate within FE is calculated as the number of achievements gained as a proportion of the number of final year completers. 2006/07 achievement data are however unavailable due to incomplete returns as a result of industrial action. Destinations data of full-time achievers from FE are also available, however, to a limited extent due to lack of coverage with the FE Leavers Survey dataset. Some commentary is provided on the data that are available in terms of destinations.
- 20. In 2008/09, there were 16,223 achievements gained in STEM subjects from within the FE sector. This represents a 16% increase from the previous year, whereby there were 2,234 more achievements in 2008/09 compared

⁴⁷ FE outcome data are sourced from the Further Education Leavers Survey.

to 2007/08. Growth in non-STEM achievements over the same period was lower at 8%.

- 21.STEM made up 36% of all Level 2 and above achievements at the NI FE Colleges in 2008/09. This is marginally more than the STEM share in 2007/08 (35%).
- 22. In terms of retention rates in STEM this had improved in 2007/08 rising from 90% in 2006/07 to 92% and staying at this level in 2008/09. Retention rates at Level 2 and above in STEM subjects have been above those for non-STEM subjects 92% compared to 88% in 2008/09.
- 23. Similarly achievement rates are higher in STEM than in non-STEM and have shown a positive improvement between 2007/08 and 2008/09 from 70% to 74%.
- 24. At the College level, Tables 8, 9 and 10 show that:
 - The number of achievements gained from 2007/08 to 2008/09 increased across all Colleges, except at the NWRC, whereby achievements gained decreased by 9%. Notable increases can be seen at both BMC and SRC over the year increasing by 37% and 34% respectively;
 - BMC retains the largest share in terms of the number of achievements gained in STEM growing from 25% in 2007/08 to 30% in 2008/09. SERC had the second highest share at 19% in 2008/09, with NRWC holding the smallest share across the FE sector, reducing from 13% in 2007/08 to 10% in 2008/09;
 - In terms of <u>retention rates</u>, SWC (95%), SRC (94%) and SERC (93%) were all above the STEM average for the sector in 2008/09. BMC had the lowest retention rate at 89%; *and*
 - In 2008/09, SWC had the highest <u>achievement rate</u> in STEM at 81% followed closely by SRC (80%). NWRC (68%) and BMC (71%) were both below the sector average of 74%. Achievement has improved significantly for SRC and NRC from 2007/08 by over 12 percentage points, whilst achievement declined for both NWRC and SWRC by 3-4 percentage points each.

	2007/08	2008/09	% change 07/08 to 08/09
BMC	3,503	4,799	+37%
NRC	1,744	1,870	+7%
SERC	2,801	3,013	+8%
SRC	2,057	2,757	+34%
SWC	2,083	2,154	+3%
NWRC	1,801	1,630	-9%
Total STEM	13,989	16,223	+16%

Table 8: Number of Level 2 and above achievements on STEM courses by College (excluding training)

Table 9: STEM share of achievements by College (excluding training)

	2007/08	2008/09
BMC	25%	30%
NRC	12%	12%
SERC	20%	19%
SRC	15%	17%
SWC	15%	13%
NWRC	13%	10%
Total	100%	100%

Table 10: Level 2 and above retention and achievement rates on STEMcourses by College (excluding training)

	Retention			Achievement		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
BMC	89%	90%	89%	*	65%	71%
NRC	89%	91%	90%	*	64%	76%
SERC	91%	91%	93%	*	75%	75%
SRC	93%	96%	94%	*	66%	80%
SWC	91%	93%	95%	*	84%	81%
NWRC	90%	91%	92%	*	72%	68%
Total STEM	90%	92%	92%	*	70%	74%
Total non- STEM	88%	89%	88%	*	68%	71%

* 2006/07 achievement data are however unavailable due to incomplete returns as a result of the FE lecturers strike

- 25. Tables 11 and 12 present the FE data by subject area which show the following:
 - Mathematics & Computing Science produced the largest number of achievements in 2008/09;
 - all subjects experienced a growth in achievements⁴⁸ in 2008/09, however, increases in the number of achievements were most significant in Engineering & Technology, Agriculture and Subjects Allied to Medicine;
 - subjects with the highest <u>retention rates</u> in 2008/09 were Architecture, Building & Planning (98%), Agriculture & Related (98%) and Engineering & Technology (94%). Physical Sciences (79%) and Biological Sciences (81%) were both well below the sector STEM average and have both declined from their levels of 86% in 2006/07; and
 - the poor performers in terms of <u>achievement rates</u> in 2008/09 were also Biological Sciences (57%) and Physical Sciences (59%) alongside Maths & Computing (62%) which was also well below the sector STEM average. All other subjects were above the sector STEM average, most notably Agriculture (90%) and Architecture, Building & Planning (87%).

	2007/08	2008/09	% change 07/08 to 08/09
Medicine & Dentistry	3	0	n/a
Allied to Medicine	1,834	2,244	+22%
Biological Sciences	329	387	+18%
Agriculture & Related	1,463	1,892	+29%
Physical Sciences	369	423	+15%
Mathematics & Computing Science	4,500	4,730	+5%
Engineering & Technology	2,490	3,465	+39%
Architecture, Building & Planning	3,001	3,082	+3%
Total	13,989	16,223	+16%

Table 11: Number of Level 2 and above achievements on STEM courses by subject (excluding training)

⁴⁸ With the exception of Medicine & Dentistry where achievements were negligible (3 achievements) in 2007/08 anyway.

		Retention		Achievement		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
Medicine & Dentistry	94%	33%	n/a	*	75%	n/a
Allied to Medicine	93%	92%	93%	*	75%	81%
Biological Sciences	86%	81%	81%	*	61%	57%
Agriculture & Related	95%	98%	98%	*	84%	90%
Physical Sciences	86%	86%	79%	*	49%	59%
Mathematics & Computing Science	87%	88%	88%	*	62%	62%
Engineering & Technology	93%	94%	94%	*	68%	79%
Architecture, Building & Planning	97%	98%	98%	*	85%	87%
Total STEM	90%	92%	92%	*	70%	74%
Total non- STEM	88%	89%	88%	*	68%	71%

Table 12: Level 2 and above retention and achievement rates on STEM courses by subject (excluding training)

* 2006/07 achievement data are however unavailable due to incomplete returns as a result of the FE lecturers strike

- 26. Tables 13 and 14 present the data by mode of study⁴⁹. Points to note are as follows:
 - part-time made up, by far, the largest share of achievements gained in 2008/09 at 86% and have increased by 18% from 2007/08. Full-time have risen marginally by 3%;
 - <u>retention</u> was higher in part-time at 93% in 2008/09 compared to 85% for full-time; *and*
 - it was full-time however, which held the highest <u>achievement rate</u> in 2008/09 at 82% compared to 73% in part-time STEM subjects.

Table 13: Number of Level 2 and above achievements on STEM courses by mode (excluding training)

	2007/08	2008/09	% change 07/08 to 08/09
Full-time	2,266	2,336	+3%
Part-time	11,723	13,887	+18%
Total	13,989	16,223	+16%

Table 14: Level 2 and above retention and achievement rates on STEM courses by mode (excluding training)

	Retention			Achievement		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
Full-time	87%	86%	85%	*	80%	82%
Part-time	91%	93%	93%	*	69%	73%
Total STEM	90%	92%	92%	*	70%	74%
Total non- STEM	88%	89%	88%	*	68%	71%

* 2006/07 achievement data are however unavailable due to incomplete returns as a result of the FE lecturers strike

⁴⁹ STEM retention and achievement rates by mode of study and subject area is set out in the Annex.

- 27. Tables 15 and 16 break the STEM outcomes into level of study. Some of the key messages are as follows:
 - in 2008/09, the largest proportion of STEM achievements gained within FE were at Level 2 (53%), followed by Level 3 (39%);
 - similar levels of growth can be seen across all levels between 2007/08 and 2008/09, ranging between 13 to 18%;
 - <u>retention</u> was highest amongst those undertaking HE in FE STEM courses at 94% with the same rate of 91% at Levels 2 and 3 in 2008/09; *and*
 - similarly <u>achievement</u> was highest for HE in FE STEM courses at 79% in 2008/09, with Levels 2 and 3 around the STEM sector average at 74% and 75% respectively.

Table 15: Number of achievements by level on STEM courses (excluding training)

5/	2007/08	2008/09	% change 07/08 to 08/09
Level 2	7,322	8,651	+18%
Level 3	5,624	6,357	+13%
HE in FE	1,043	1,215	+16%
Total	13,989	16,223	+16%

Table 16: Retention and achievement rates on STEM courses by level (excluding training)

	Retention			Achievement		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
Level 2	89%	91%	91%	*	70%	74%
Level 3	91%	93%	91%	*	70%	75%
HE in FE	94%	95%	94%	*	75%	79%
Total	90%	92%	92%	*	70%	74%
STEM						
Total non- STEM	88%	89%	88%	*	68%	71%

* 2006/07 achievement data are however unavailable due to incomplete returns as a result of the FE lecturers strike

28. Destination data are available for full-time achievers from FE. However, as explained earlier, these are available to a limited extent due to lack of coverage with the FE Leavers Survey dataset. Of the 2,336 full-time achievers from FE in 2008/09, destinations are known for 1,439 of these. The highest proportion of these went on to full-time HE (46%), followed by

full-time FE (30%), with very small proportions who went down the part-time HE or FE route (2% in each case). A further 11% entered full-time employment with only 1% being unemployed.

Higher Education Enrolments

- 29. Within this section we now look at all STEM enrolments at the NI HEIs broken down by Institution, subject area, mode of study and gender⁵⁰.
- 30. HE STEM enrolments decreased by 3% between 2006/07 and 2007/08 with enrolments remaining fairly static over the period 2007/08 to 2008/09 showing a very small reduction of 0.2%. The latter year is being heavily influenced by the 3% decline in STEM undergraduate enrolments at the NI HEIs even though STEM postgraduate enrolments increased by 11% between 2007/08 and 2008/09. This increase in postgraduate enrolments is likely to continue in 2009/10 and 2010/11 as the full roll-out of the Department's funding towards 300 additional PhDs, in economically relevant areas, takes place.
- 31.STEM enrolments made up 48% of all enrolments at the NI HEIs in 2008/09. In 2006/07 and 2007/08 this was 49% and 48% respectively.

32. At the institution level⁵¹, Tables 17 and 18 show that:

- QUB recorded a decrease of 4% in STEM enrolments between 2006/07 and 2007/08 however from 2007/08 to 2008/09 these enrolments have increased by 3%;
- Within UU there has been a decrease in STEM enrolments over the two consecutive years of 2% and 3% respectively;
- Stranmillis' STEM enrolments have remained constant over the period; and
- In 2008/09, QUB had the largest share of STEM enrolments in the HE sector standing at 52% with UU representing 47% of STEM enrolments and Stranmillis 1%. QUB's share has risen slightly from 2006/07 whereby it was 51% and as a result UU's has declined from 48%.

⁵⁰ HE enrolments are sourced from the Higher Education Statistics Agency

⁵¹ Note: There are no STEM enrolments recorded at St. Mary's University College.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
QUB	12,100	11,660	11,950	-4%	+3%
UU total	11,530	11,265	10,920	-2%	-3%
Belfast	140	160	225	+14%	+41%
Coleraine	3,095	3,115	3,060	+1%	-2%
Jordanstown	6,865	6,580	6,350	-4%	-4%
Magee	1,435	1,405	1,285	-2%	-9%
Stranmillis	130	130	130	0%	0%
Total	23,760	23,055	23,000	-3%	0%

Table 17: Total STEM enrolments at NI HEIs by institution

Table 18: STEM share by Institution

	2006/07	2007/08	2008/09
QUB	50.9%	50.6%	52.0%
UU total	48.5%	48.9%	47.5%
Belfast	0.6%	0.7%	1.0%
Coleraine	13.0%	13.5%	13.3%
Jordanstown	28.9%	28.5%	27.6%
Magee	6.0%	6.1%	5.6%
Stranmillis	0.5%	0.6%	0.6%
Total	100.0%	100.0%	100.0%

33. Table 19 presents the HE data by subject area which shows the following:

- Subjects Allied to Medicine represent by far the biggest share of STEM enrolments at the NI HEIs at 36%. Biological Sciences, Computing Science, Engineering & Technology and Architecture, Building & Planning each make up around 11-12% of all STEM enrolments;
- between 2007/08 and 2008/09 Computing Science, Agricultural Related subjects and Subjects Allied to Medicine all experienced a decline 8%, 7% and 3% respectively. Ironically given the downturn in the Construction Industry, the biggest increase was seen in Architecture, Building & Planning enrolments standing at 12%, followed by Medicine and Dentistry (5%) and Physical Sciences (3%);
- as mentioned earlier there was a 3% decline in STEM undergraduate enrolments at the NI HEIs between 2007/08 and 2008/09 with STEM postgraduate enrolments increasing by 11%. Subject areas which have seen growth over the year at the undergraduate level are Medicine &

Dentistry (3%); and Architecture, Building & Planning (8%). In relation to postgraduate level increases were seen in all areas except Subjects Allied to Medicine;

- between 2006/07 and 2007/08 enrolments in Agricultural Related subjects increased by 75 (19%); those in Physical Sciences rose by 115 (7%) with an increase in Architecture, Building & Planning enrolments of 80 (4%) and an increase in Subjects Allied to Medicine of 225 enrolments (3%). All other subject areas declined over the year particularly in Biological Sciences (905 enrolments/26%), Mathematical Sciences (55 enrolments/13%), and Computing Science (195 enrolments/7%); and
- looking at the period 2006/07 to 2008/09 Physical Sciences and Architecture, Building & Planning were well above their levels in 2006/07; whilst Biological Science and Computing enrolments are well below the base position.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Medicine & Dentistry	1,660	1,640	1,715	-1%	+5%
Allied to Medicine	8,225	8,450	8,225	+3%	-3%
Biological Sciences	3,555	2,650	2,680	-26%	+1%
Agriculture & Related	390	465	435	+19%	-7%
Physical Sciences	1,640	1,755	1,805	+7%	+3%
Mathematical sciences	420	365	370	-13%	+1%
Computing Science	2,825	2,630	2,415	-7%	-8%
Engineering & Technology	2,870	2,850	2,845	-1%	0%
Architecture, Building & Planning	2,170	2,250	2,510	+4%	+12%
Total	23,760	23,055	23,001	-3%	0%

- 34. Table 20 sets out STEM enrolments by mode of study⁵². Points to note are as follows:
 - full-time enrolments represent the biggest share at 77% in 2008/09 increasing its share from 75% in 2006/07; and
 - both full-time and part-time enrolments decreased by around 3% from 2006/07 to 2007/08, however from 2007/08 to 2008/09 part-time provision in STEM has reduced significantly at 11% whilst full-time showed an increase of 3%.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Full-time	17,775	17,255	17,830	-3%	+3%
Part-time	5,995	5,800	5,180	-3%	-11%
Total	23,760	23,055	23,001	-3%	0%

Table 20: Total STEM enrolments at NI HEIs by mode

⁵² STEM enrolments by mode of study and subject area is set out in the Annex.

- 35. It is also interesting to analyse STEM enrolments by gender⁵³ this is set out in Table 21 and shows the following:
 - females represent the biggest share of the enrolments at 57% in 2008/09 which is a similar proportion to that in 2006/07. This is heavily influenced by the large number of female enrolments in subjects allied to medicine which makes up over half of all female STEM enrolments;
 - female STEM enrolments have recorded a decrease of 2% between 2006/07 and 2007/08, and also over the period 2007/08 to 2008/09 a decrease of 2%; and
 - whilst male STEM enrolments have decreased in 2007/08 by 5%, an increase was recorded in 2008/09 of 2%.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Male	10,255	9,785	10,000	-5%	+2%
Female	13,515	13,275	13,005	-2%	-2%
Total	23,760	23,055	23,001	-3%	0%

Table 21: Total STEM enrolments at NI HEIs by gender

⁵³ STEM enrolments by gender and subject area is set out in the Annex.

Higher Education Outcomes

- 36. A vast amount of data are available in relation to outcomes from HE⁵⁴. For the purpose of this report the focus is on non-continuation rates, the number of qualifiers from NI HEIs and activity of qualifiers 6 months after graduation.
- 37. In terms of non-continuation rates within HE these are based on the proportion of full-time first degree entrants to NI HEIs in a particular year of entry who do not continue in the following academic year. Those not continuing in 2008/09 in STEM subjects stood at 10.4%, which was below the rate in 2006/07 (11.1%) however had increased from 2007/08 (9.5%). For the last two years for which data are available the non-continuation rate in STEM subjects has been marginally higher than for non-STEM subjects moving from a position in 2006/07 where it was marginally lower.
- 38. Qualifiers in STEM subjects from the NI HEIs have remained fairly static between 2006/07 to 2008/09, increasing by around 1% or 115 up to 6,885 qualifiers. For non-STEM subjects there was a very small decrease of 20 qualifiers over the same period.
- 39. In 2008/09 72% of STEM full-time qualifiers from the NI HEIS were in employment six months after graduation, whether that be in full-time work, part-time work or a combination of work and study. This had decreased from 79% in 2006/07, with those STEM graduates unemployed increasing from 4% to 9% over the period. In 2008/09 the unemployment rate for non-STEM graduates was 8% and those in employment 73%.
- 40. The proportions of those in employment six months after graduation from a STEM subject in a graduate type job had decreased from 80% in 2006/07 to 68% in 2008/09. This proportion however stands higher than those graduating from non-STEM subjects which was 65% in 2006/07 and was recorded as 55% in 2008/09.
- 41. At the institution level Tables 22, 23 and 24 show that:
 - non-continuation rates in STEM were highest at the UU in 2008/09 at 13.4% and have been over the last 3 years. QUB's STEM noncontinuation rate have been around 7-8% over the last 3 years. Although those at Stranmillis have increased since 2006/07 to 7.1% in 2008/09, the numbers involved are relatively small;
 - STEM qualifiers have increased by around 170 at QUB between 2006/07 to 2008/09 with a drop over the same period of 60 at UU – overall these are relatively small proportions. Within UU, the Coleraine campus has

⁵⁴ HE outcomes data are sourced from the Higher Education Statistics Agency.

experienced an increase in STEM qualifiers; whilst those at Jordanstown have been decreasing steadily by around 100 each year; *and*

• QUB continues to hold the highest percentage share of STEM qualifiers from the NI HEIs at 58% in 2008/09, with UU reducing its sector share from 43% in 2006/07 to 41% in 2008/09.

Table 22: Non-continuation rate of full-time first degree entrants to NI HEIs in STEM by institution

	2005/06 entrants not continuing in 2006/07	2006/07 entrants not continuing in 2007/08	2007/08 entrants not continuing in 2008/09
QUB	8.0%	6.7%	7.6%
UU total	14.1%	13.3%	13.4%
Stranmillis	0%	5.6%	7.1%
Total STEM	11.1%	9.5%	10.4%
Total non-STEM	11.7%	9.0%	10.0%

Table 23: Qualifiers in STEM from NI HEIs by institution

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
QUB	3,820	3,995	3,990	+5%	0%
UU total	2,910	2,835	2,850	-3%	+1%
Belfast	35	30	50	-14%	+67%
Coleraine	790	885	880	+12%	-1%
Jordanstown	1,725	1,650	1,550	-4%	-6%
Magee	360	270	375	-25%	+39%
Stranmillis	40	30	40	-25%	+33%
Total STEM	6,770	6,855	6,885	+1%	0%

Table 24: STEM qualifiers share by Institution

	2006/07	2007/08	2008/09
QUB	56%	58%	58%
UU total	43%	41%	41%
Belfast	1%	0%	1%
Coleraine	12%	13%	13%
Jordanstown	25%	24%	23%
Magee	5%	4%	5%
Stranmillis	1%	0%	1%
Total STEM	100%	100%	100%

- 42. Tables 25 and 26 present the HE data by subject area which show the following:
 - in 2008/09, non-continuation rates were highest in Engineering & Technology (17.9%), Computing Science (15.9%), Agriculture (11.8%) and Mathematical Sciences (11.6%) – all above the STEM average. All of these, with the exception of Computing, have gradually been rising over the last 3 years;
 - the best performers in 2008/09 in terms of non-continuation are Medicine & Dentistry (1.1%), Subjects Allied to Medicine (7.6%) and Physical Sciences (8.7%). Most improvement over the 3 years can be seen in Architecture, Building & Planning, moving from 14% in 2006/07 to 9.1% in 2008/09;
 - Subjects Allied to Medicine represent by far the biggest share of STEM qualifiers at the NI HEIs at 44% in 2008/09; and
 - Computing Science and Biological Sciences have seen the biggest decline in qualifiers among all STEM areas, with Architecture, Building & Planning and Agriculture showing the largest increases between 2006/07 and 2008/09.

Table 25: Non-continuation rate of full-time first degree entrants to NI HEIs
in STEM by subject

	2005/06 entrants not continuing in 2006/07	2006/07 entrants not continuing in 2007/08	2007/08 entrants not continuing in 2008/09
Medicine & Dentistry	0.7%	0.0%	1.1%
Allied to Medicine	10.3%	5.6%	7.6%
Biological Sciences	7.6%	8.9%	9.9%
Agriculture & Related	8.1%	2.0%	11.8%
Physical Sciences	10.3%	9.7%	8.7%
Mathematical sciences	9.6%	7.8%	11.6%
Computing Science	17.4%	15.5%	15.9%
Engineering & Technology	13.2%	16.1%	17.9%
Architecture, Building & Planning	14.0%	12.5%	9.1%
Total STEM	11.1%	9.5%	10.4%
Total non- STEM	11.7%	9.0%	10.0%

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Medicine & Dentistry	345	305	355	-12%	+16%
Allied to Medicine	2,820	3,150	3,040	+12%	-3%
Biological Sciences	910	780	725	-14%	-7%
Agriculture & Related	110	115	175	+5%	+52%
Physical Sciences	430	490	480	+14%	-2%
Mathematical sciences	130	100	125	-23%	+25%
Computing Science	680	630	585	-7%	-7%
Engineering & Technology	705	700	690	-1%	-1%
Architecture, Building & Planning	640	580	710	-9%	+22%
Total STEM	6,770	6,855	6,885	+1%	0%

Table 26: Qualifiers in STEM from NI HEIs by subject

- 43. Table 27 sets out STEM qualifiers by mode of study. Points to note are as follows:
 - full-time qualifiers represent the biggest share at around two-thirds across all 3 years; *and*
 - part-time qualifiers increased by 3% from 2006/07 to 2007/08 with full-time remaining at the 2006/07 level. However from 2007/08 to 2008/09 part-time provision in STEM had reduced back to its 2006/07 level whilst full-time showed an increase of 2%.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Full-time	4,565	4,575	4,685	0%	+2%
Part-time	2,205	2,280	2,200	+3%	-4%
Total STEM	6,770	6,855	6,885	+1%	0%

Table 27: Qualifiers in STEM from NI HEIs by mode

- 44. Table 28 sets out STEM qualifiers by level of study. Points to note are as follows:
 - first degree qualifiers represent the biggest share at 60% in 2008/09 and increasing from 57% in 2006/07; *and*
 - although postgraduate and first degree qualifiers both reduced from 2006/07 to 2007/08 (8% and 1% respectively), other undergraduate qualifiers increased by 17%. However the reverse is true for 2007/08 to 2008/09 whereby other undergraduate decreased significantly by 27% with postgraduate (13%) and first degree (7%) both increasing.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
Postgraduate	1,495	1,375	1,550	-8%	+13%
First Degree	3,905	3,880	4,165	-1%	+7%
Other undergraduate	1,365	1,600	1,170	+17%	-27%
Total STEM	6,770	6,855	6,885	+1%	0%

Table 28: Qualifiers in STEM from NI HEIs by level

- 45. Table 29 presents first degree qualifiers by degree class⁵⁵ which show the following:
 - the highest proportion of those qualifying from STEM first degrees at the NI HEIs received an Upper second class honours degree (45% in 2008/09);
 - the numbers qualifying with a first class honours degree have been increasing over the last 3 years by 3% in 2007/08 and 7% in 2008/09 from one year earlier, with those receiving a lower second class honours dropping by 4% in 2008/09; *and*
 - those qualifying with a Medicine & Dentistry first degree are classified as a pass or unclassified, which made up around 60% of those in the category 'Third class honours/pass/unclassified' in 2006/07 and 2007/08. This decreased to 44% in 2008/09 and through assessing the data there have therefore been a growing number of those qualifiers gaining a third or pass in 2008/09.

	2006/07	2007/08	2008/09	% change 06/07 to 07/08	% change 07/08 to 08/09
First class honours	600	615	655	+3%	+7%
Upper second class honours	1,790	1,785	1,890	0%	+6%
Lower second class honours	1,110	1,115	1,070	0%	-4%
Third class honours/pass/unclassified	405	370	545	-9%	+47%
Total STEM	3,905	3,880	4,165	-1%	+7%

 Table 29: First Degree Qualifiers in STEM from NI HEIs by degree class

⁵⁵ STEM first degree qualifiers by subject area and degree class is set out in the Annex

- 46. Table 30 sets out the activity of full-time qualifiers from NI HEIs six months after graduation by subject. The key messages are:
 - those who qualified in Physical Sciences and Mathematical Sciences in 2008/09 were the most likely to continue with further study only where over a third went down this route; whilst those who qualified in Medicine & Dentistry and Subjects Allied to Medicine were more likely to be in employment⁵⁶ with 100% and 84% respectively;
 - the unemployment rate was highest amongst Computing Science (14%) and Architecture, Building & Planning (12%) for graduates of 2008/09; and
 - between 2006/07 and 2008/09 the unemployment rate has at least doubled among those graduates in Subjects Allied to Medicine, Biological Sciences, Physical Sciences, Engineering & Technology and Architecture, Building & Planning. This is likely to be a reflection of the impact of the economic downturn.

⁵⁶ Whether that be in full-time work, part-time work or a combination of work and study

		2006/07			2007/08			2008/09	
	Work	Further study only	Unem- ployed	Work	Further study only	Unem- ployed	Work	Further study only	Unem- ployed
Medicine & Dentistry	100%	0%	0%	97%	1%	1%	100%	0%	0%
Allied to Medicine	92%	4%	2%	89%	4%	5%	84%	8%	5%
Biological Sciences	67%	24%	4%	66%	22%	6%	64%	22%	11%
Agriculture & Related	49%	41%	5%	65%	15%	10%	62%	27%	7%
Physical Sciences	50%	42%	5%	57%	30%	7%	52%	35%	11%
Mathematical sciences	63%	26%	4%	46%	34%	10%	52%	38%	6%
Computing Science	76%	11%	9%	72%	9%	14%	69%	15%	14%
Engineering & Technology	81%	11%	5%	79%	8%	9%	66%	20%	10%
Architecture, Building & Planning	83%	8%	5%	73%	9%	12%	72%	12%	12%
Total STEM	79%	13%	4%	77%	11%	7%	72%	16%	9%
Total non- STEM	74%	16%	5%	73%	15%	7%	73%	15%	8%

Table 30: Activity of full-time qualifiers from NI HEIs six months after graduation by subject

Note: 'Other' category has not included in the above table and therefore some rows for each row do not equal 100%.

- 47. Table 31 sets out the type of job of those full-time qualifiers from NI HEIs who were in employment 6 months after graduation by subject area, with the following of interest:
- between 2006/07 and 2008/09 the proportion of STEM graduates in employment and in a graduate type job has decreased across all subject areas, with the exception of Medicine and Dentistry;
- the sharpest decline has been seen for Architecture, Building & Planning graduates where it has decreased from 93% to 63% – with the downturn in Construction probably having a big impact; and

• other subject areas where there have been decreases of 15 or more percentage points are Engineering & Technology, Physical Sciences and Mathematical Sciences.

	200	6/07	200	7/08	2008	8/09
	Graduate job	Non- graduate job	Graduate job	Non- graduate job	Graduate job	Non- graduate job
Medicine & Dentistry	99%	1%	100%	0%	99%	1%
Allied to Medicine	94%	6%	93%	7%	87%	13%
Biological Sciences	40%	60%	38%	62%	31%	69%
Agriculture & Related	62%	38%	63%	37%	52%	48%
Physical Sciences	48%	52%	47%	53%	33%	67%
Mathematical sciences	65%	35%	65%	35%	50%	50%
Computing Science	67%	33%	70%	30%	61%	39%
Engineering & Technology	87%	13%	86%	14%	71%	29%
Architecture, Building & Planning	93%	7%	83%	17%	63%	37%
Total STEM	80%	20%	78%	22%	68%	32%
Total non- STEM	65%	35%	62%	38%	55%	45%

Table 31: Full-time qualifiers from NI HEIs in employment 6 months after	
graduation by subject area and type of job	

Appendix

Level 2 and above enrolments on STEM courses by mode and subject at the NI FE Colleges

	200	6/07	2007/08		2008/09		% change 06/07 to 07/08		% change 07/08 08/09	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Medicine & Dentistry	0	33	0	12	0	0	-	-64%	-	-
Allied to Medicine	1,500	2,345	1,183	2,268	1,170	2,649	-21%	-3%	-1%	+17%
Biological Sciences	232	717	78	705	139	822	-66%	-2%	+78%	+17%
Agriculture & Related	174	1,168	156	2,121	171	2,155	-10%	+82%	+10%	+2%
Physical Sciences	452	1,208	215	797	295	763	-52%	-34%	+37%	-4%
Mathematics & Computing Science	2,302	10,756	2,017	7,819	2,060	7,976	-12%	-27%	+2%	+2%
Engineering & Technology	937	4,106	1,066	4,917	1,210	5,585	+14%	+20%	+14%	+14%
Architecture, Building & Planning	1,299	4,760	1,187	4,197	1,163	3,895	-9%	-12%	-2%	-7%
Total	6,896	25,093	5,902	22,836	6,208	23,845	-14%	-9%	+5%	+4%

	200	6/07	200	7/08	200	8/09	% change 07/		% change 08/	e 07/08 to /09
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Medicine & Dentistry	26	7	12	0	0	0	-54%	-	-	-
Allied to Medicine	3,448	397	3,018	433	3,212	607	-13%	9%	+6%	+40%
Biological Sciences	683	266	539	244	681	280	-21%	-8%	+26%	+15%
Agriculture & Related	989	353	1,615	662	1,644	682	+63%	+88%	+2%	+3%
Physical Sciences	985	675	526	486	539	519	-47%	-28%	+3%	+7%
Mathematics & Computing Science	6,948	6,110	4,826	5,010	4,631	5,405	-31%	-18%	-4%	+8%
Engineering & Technology	337	4,706	432	5,551	414	6,381	+28%	+18%	-4%	+15%
Architecture, Building & Planning	644	5,415	348	5,036	331	4,727	-46%	-7%	-5%	-6%
Total	14,060	17,929	11,316	17,422	11,452	18,601	-20%	-3%	+1%	+7%

Level 2 and above enrolments on STEM courses by gender and subject at the NI FE Colleges

			Rete	ntion					Achiev	vement		
	200	6/07	2007/08		2008/09		2006/07		2007/08		2008/09	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Medicine & Dentistry	n/a	94%	n/a	33%	n/a	n/a	*	*	n/a	75%	n/a	n/a
Allied to Medicine	91%	93%	85%	94%	86%	95%	*	*	86%	72%	88%	80%
Biological Sciences	86%	85%	79%	81%	72%	82%	*	*	63%	61%	81%	54%
Agriculture & Related	75%	97%	81%	99%	78%	99%	*	*	61%	86%	69%	91%
Physical Sciences	84%	86%	77%	87%	81%	78%	*	*	93%	44%	76%	55%
Mathematics & Computing Science	85%	87%	86%	88%	85%	88%	*	*	84%	59%	79%	60%
Engineering & Technology	80%	95%	87%	96%	86%	95%	*	*	71%	67%	87%	78%
Architecture, Building & Planning	94%	97%	91%	99%	91%	99%	*	*	79%	85%	85%	87%
Total STEM	87%	91%	86%	93%	85%	93%	*	*	80%	69%	82%	73%

Level 2 and above retention and achievement on STEM courses by mode and subject at the NI FE Colleges

	200	6/07	2007/08		2008/09		% change 06/07 to 07/08		% change 07/08 08/09	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Medicine & Dentistry	1,470	195	1,505	135	1,600	115	+2%	-31%	+6%	-15%
Allied to Medicine	4,950	3,280	4,880	3,565	4,960	3,265	-1%	+9%	+2%	-8%
Biological Sciences	2,585	965	2,300	350	2,400	280	-11%	-64%	+4%	-20%
Agriculture & Related	330	65	390	75	365	75	+18%	+15%	-6%	0%
Physical Sciences	1,325	320	1,360	400	1,415	395	+3%	+25%	+4%	-1%
Mathematical sciences	400	20	355	5	350	20	-11%	-75%	-1%	+300%
Computing Science	2,480	345	2,260	375	2,185	230	-9%	+9%	-3%	-39%
Engineering & Technology	2,445	425	2,365	485	2,410	435	-3%	+14%	+2%	-10%
Architecture, Building & Planning	1,790	380	1,840	410	2,145	365	+3%	+8%	+17%	-11%
Total	17,775	5,995	17,255	5,800	17,830	5,180	-3%	-3%	+3%	-11%

Total STEM enrolments at NI HEIs by mode and subject at the NI HEIs

	200	6/07	200	7/08	200	8/09		e 06/07 to //08	U U	e 07/08 to /09
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Medicine & Dentistry	705	960	705	935	740	980	0%	-3%	+5%	+5%
Allied to Medicine	1,220	7,010	1,265	7,180	1,385	6,845	+4%	+2%	+10%	-5%
Biological Sciences	1,160	2,395	875	1,775	935	1,745	-25%	-26%	+7%	-2%
Agriculture & Related	100	290	135	330	115	320	+35%	+14%	-15%	-3%
Physical Sciences	845	795	885	875	880	925	+5%	+10%	-1%	+6%
Mathematical sciences	200	220	160	210	160	205	-20%	-5%	0%	-2%
Computing Science	2,070	760	1,885	745	1,775	640	-9%	-2%	-6%	-14%
Engineering & Technology	2,365	505	2,275	575	2,250	595	-4%	+14%	-1%	+4%
Architecture, Building & Planning	1,590	580	1,600	650	1,760	750	+1%	+12%	+10%	+15%
Total	10,255	13,515	9,785	13,275	10,000	13,005	-5%	-2%	+2%	-2%

Total STEM enrolments at NI HEIs by gender and subject at the NI HEIs

			2006/07				2007/08				2008/09	
	1 st	2.1	2.2	3 rd /pass/ unclassified	1 st	2.1	2.2	3 rd /pass/ unclassified	1 st	2.1	2.2	3 rd /pass/ unclassified
Medicine & Dentistry	0	0	0	235	0	0	0	220	0	0	0	240
Allied to Medicine	245	635	230	30	235	685	235	25	275	720	330	105
Biological Sciences	65	375	185	5	75	350	225	20	75	325	160	10
Agriculture & Related	10	40	15	0	5	50	20	0	10	45	15	0
Physical Sciences	30	120	145	10	35	120	120	5	45	135	100	15
Mathematical sciences	35	45	35	10	35	25	30	5	35	35	35	15
Computing Science	80	225	210	20	85	205	180	10	70	200	155	35
Engineering & Technology	115	160	145	75	100	165	150	70	105	200	110	70
Architecture, Building & Planning	20	190	140	20	45	190	155	15	35	230	165	50
Total STEM	600	1,790	1,110	405	615	1,785	1,115	370	655	1,890	1,070	545
Total non- STEM	435	2,340	1,500	65	440	2,370	1,470	80	470	2,295	1,350	145

First degree qualifiers in STEM from NI HEIs by subject area and degree class

Note: Those qualifying with a Medicine & Dentistry first degree are classified as a pass or unclassified

people:skills:jobs:





THE DEPARTMENT:

Our aim is to promote learning and skills, to prepare people for work and to support the economy.

This document is available in other formats upon request. Further information: Department for Employment and Learning Adelaide House 39-49 Adelaide Street Belfast BT2 8FD Tel: 028 9025 7609 Fax: 028 9025 7696 email: <u>analyticalservices@delni.gov.uk</u> web: <u>www.delni.gov.uk</u>