Monthly Labour Market Report

Llywodraeth Cymru
Welsh Government

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Welcome

The Monthly Labour Market Report from the Learning and Skills Observatory Wales (LSO) aims to provide the main headlines on the Welsh labour market and is based on the latest data available.

This month's issue puts the spotlight on the importance of **the ICT sector in Wales**.

This report was produced by the Centre for Economic and Social Inclusion (known as *Inclusion*), commissioned by Welsh Government to blend Wales's available labour market information (LMI) (from the various sources) and produce a monthly analysis. Whilst the report is owned by Welsh Government it is not validated in terms of its specific content or interpretation.

Inclusion has an unrivalled understanding of the labour market based on over 28 years of experience of working with the range of stakeholders involved in delivering employment and skills services. We collect and analyse both national and local labour market data through our well developed Local Labour Market Information System, conduct research on employment and skills issues at the local level, run events that bring together policymakers and providers in the skills and employment sector, and produce weekly e-briefings that summarise what is new in employment and skills for our subscribers.

We currently supply monthly employment and skills data to the Greater London Authority, as well as providing labour market tools and analysis for Greater Manchester.

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Latest labour market trends

Employment

Employment data from the Labour Force Survey (LFS) – estimates obtained from a large sample quarterly rolling survey of households – show that Wales outperformed most though not all the other UK nations and regions in the rolling quarter October-December 2013. However, Wales proved to be the star turn of the UK labour market in the year to October-December as a whole, outperforming all the other nations and regions in terms of improvement in the employment rate.

The (seasonally adjusted) Labour Force Survey estimate of the number of people aged 16 and over in employment in Wales increased by 7,000 (+0.5%) compared to the previous quarter (June-September 2013) to a total of 1.387 million. The quarterly net increase in employment in Wales is comprised of an increase in the number of women in employment and a decrease in the number of men in employment. Male employment fell by 5,000 (-0.6%) while female employment increased by 12,000 (+1.9%).

The total quarterly increase in employment in Wales compares to a corresponding increase in total UK employment of 193,000 (+0.6%). In addition to the increase in Wales employment increased by 178,000 (+0.7%) in England and by 9,000 (+0.3%) in Scotland. However, employment fell by 1,000 (-0.1%) in Northern Ireland. The net increase in England comprised an increase in employment in the North East (7,000, +0.6%), the North West (6,000, +0.2%), Yorkshire and Humberside (15,000, +0.6%), the East Midlands (7,000, +0.3%), the West Midlands (36,000, +1.5%), the East of England (8,000, +0.3%), London (56,000, +1.4%), the South East (41,000, +0.9%) and the South West (3,000, +0.1%).

The working age employment rate for Wales (i.e. the proportion of the population aged 16-64 in employment) increased in the quarter by 0.5 percentage points to 70.8%. This compares with an increase of 0.4 percentage points in both England and Northern Ireland and no change in Scotland. The employment rate in Wales is 1.4 percentage points lower than the UK average (72.1%) and lower than the employment rate in both England (72.3%) and Scotland (72.8%) but higher than the rate in Northern Ireland (67.6%).

The employment rate gap between the UK average and Wales narrowed considerably in the year to October-December 2013, during which period the employment rate in Wales increased by 2.1 percentage points, more than treble the 0.6 percentage point increase in the average UK employment rate. Wales recorded the largest annual employment rate increase in the UK, followed by Scotland (2 percentage points) and South East England (1.6 percentage points). Nonetheless, within the UK only Northern Ireland, North East England (67.4%), the North West (68.6%) and the West Midlands (69.2%) have a lower employment rate than Wales. The South East (76.6%) has the highest employment rate in the UK.

Unemployment and economic inactivity

The number of people in Wales who are unemployed on the International Labour Organisation (ILO) Labour Force Survey definition fell by 12,000 to 105,000 between the quarters July-September 2013 and October-December 2013. Total unemployment fell by 111,000 in England and by 3,000 in Scotland but increased by 1,000 in Northern Ireland.

The quarterly fall in unemployment in Wales was much larger than the corresponding 7,000 increase in the number of people in employment because of an offsetting decrease of 4,000 in the number of people active in the labour market. The number of unemployed men decreased by 1,000 (-2.4%) to 61,000 while the number of unemployed women decreased by 10,000 (-19.0%) to 45,000.

The ILO unemployment rate in Wales fell by 0.8 percentage points to 7.1% in the quarter. The UK average rate of ILO unemployment fell by 0.4 percentage points to 7.2%. As a result the unemployment rate in Wales at the end of 2013 was lower than the UK average, lower than in both England (7.2%) and Northern Ireland (7.4%) and equal to that in Scotland. Within England, the North East (10.0%), the West Midlands (8.3%), Yorkshire and Humberside (8.6%), the North West (8.1%) and London (8.1%) had a higher unemployment rate than Wales. South East England (5.1%) and South West England (6.5%) had the lowest unemployment rates.

The administrative count of people unemployed and claiming Jobseeker's Allowance (JSA) is somewhat lower (64,400 in Wales in January 2014, a JSA claimant count rate of 4.4%) than ILO unemployment because non-JSA claimant jobseekers are excluded. The number of JSA claimants in Wales decreased by 1,100 between December 2013 and January 2014. However care should be taken in interpreting change in the claimant count since this can be influenced by changes to the benefit system as well as underlying change in the labour market.

The number of economically inactive people of working age in Wales was unchanged between July-September 2013 and October-December 2013. As the LMI scorecard shows the working age rate of economic inactivity in Wales (23.7%) is 1.5 percentage points higher than the UK average (22.1%). However, the gap between the UK average economic inactivity rate and the economic inactivity rate in Wales narrowed in the year to October-December 2013 as a whole, the inactivity rate in Wales falling by 1.1 percentage points and the average UK inactivity rate falling by 0.1 percentage points.

Within the UK regions and nations Northern Ireland (26.9%), the North West (25.1%), the North East (24.9%) and the West Midlands (24.3%) have higher inactivity rates than Wales. The lowest inactivity rates are in the South East (19.2%) and the East of England (19.6%).

LMI scorecard

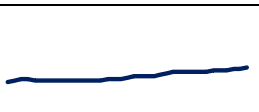
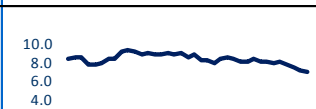
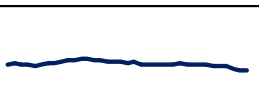
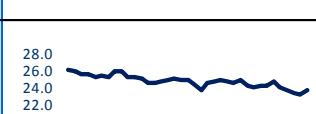
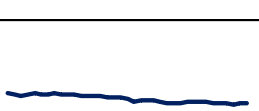
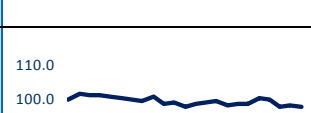
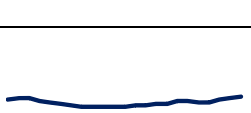
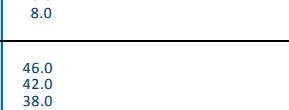
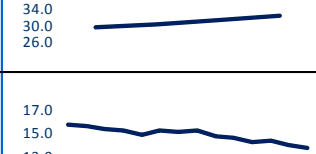
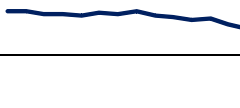
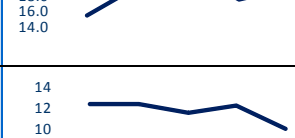
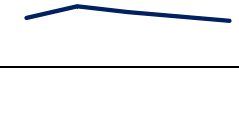
The scorecard presents recent trends and figures for a number of core labour market indicators, using a variety of different sources:

	Source
Working age employment rate	1
Working age male employment rate	1
Working age female employment rate	1
ILO unemployment rate 16+	1
Claimant count as a proportion of the working age population	2
Working age economic inactivity	1
Index of workforce jobs	3
Proportion of the working age population with no qualifications	4
Proportion of the working age population qualified to NQF4+	4
Proportion of the working age population who claim out of work benefits	5
Children living in workless households	6
Proportion of 16–18 year olds who are not in employment, education or training	7

1	LFS, ONS: subject to sampling variability and should be used with caution
2	Claimant count seasonally adjusted, NOMIS: trends can be affected by changes to benefit rules
3	Employer surveys, household surveys and administrative sources, ONS
4	Annual Population Survey/Annual Local LFS, ONS. Data is subject to sampling variability and should be used with caution.
5	Department for Work and Pensions, NOMIS
6	Household LFS, ONS: subject to sampling variability and should be used with caution
7	Source: ONS, Higher Education Statistics Agency, Welsh Government Lifelong Learning Wales Record, Pupil Level Annual School Census, Annual Population Survey.

LMI Scorecard

February 2014

		Wales		Difference between Wales and National (latest figures): Better / Worse	NATIONAL (UK or GB depending on indicator)	
		Trend (Three to four years)	Latest result & trend		Latest result & trend	Trend (Three to four years)
Supply of Labour	Working age employment rate (%)		70.8% ↑	-1.4 Charts cover: Oct-Dec 10 to Oct-Dec 13	72.1% ↑	
	Working age male employment rate (%)		74.3% ↑	-2.8 Charts cover: Oct-Dec 10 to Oct-Dec 13	77.1% ↑	
	Working age female employment rate (%)		67.2% ↑	0.1 Charts cover: Oct-Dec 10 to Oct-Dec 13	67.2% ↑	
	ILO Unemployment rate 16+ (%)		7.1% ↓	-0.2 Charts cover: Oct-Dec 10 to Oct-Dec 13	7.2% ↓	
	Claimant Count as a proportion of the working age population, seasonally adjusted (%)		4.4% ↓	0.8 Charts cover: Jan 11 to Jan 14	3.6% ↓	
	Working age economic inactivity (%)		23.7% ↓	1.5 Charts cover: Oct-Dec 10 to Oct-Dec 13	22.1% ↓	
Demand	Index of workforce jobs. 2008 Q1=100		97.7% →	-3.1 Charts cover: 2008 Q1 to 2013 Q3	100.8% →	
Skill gaps	Proportion of the working age population with no qualifications (%)		10.6% ↓	1.6 Charts cover: Year to Dec 09 to year to Dec 12	9.0% ↓	
	Proportion of the working age population qualified to NQF4+ (%)		32.6% ↑	-4.1 Charts cover: Year to Dec 09 to year to Dec 12	36.7% ↑	
Worklessness & NEETS	Proportion of the working age population who claim out of work benefits		13.7% ↓	2.8 Charts cover: May 10 to Aug 13	10.9% ↓	
	Children living in workless households (%)		19.1% ↑	4.1 Charts cover: Apr-Jun 2008 to 2012	15.0% ↓	
	Proportion of 16-18 year olds who are NEET (%)		10% ↓	1 Charts cover: 2008 to 2012	10% England →	

The ICT sector in Wales

Introduction

The ICT sector in Wales is global and dynamic. It includes a wide range of companies from blue-chip corporations through to innovative Small and Medium Enterprises (SMEs) across:

- IT services
- software
- telecommunications
- electronics

The Welsh Government believe that a strong ICT sector is critical to Wales, and is working with a sector panel to develop and implement a strategy and action plan for the sector. Closely aligned with the aims and objectives of Delivering a Digital Wales, the strategy's focus will be to grow the sector and increase the take up of ICT across all sectors in Wales, taking into account the key barriers and enablers for the sector of:

- infrastructure - Next Generation Broadband (NGB), data centres, Public Sector Broadband Aggregation (PSBA), Fibrespeed
- skills - meeting employer needs, Sector Skills Councils, education and training
- supply chain - building capacity, maximising opportunities
- regulations - industry standards and accreditation
- finance - access to funding sources, investment, procurement
- research and development - innovation, commercialisation, business and academia

This month's report focuses on the recent economic and labour market performance of the ICT sector, and examines the value of ICT qualifications to the workforce. It concentrates on the four sub areas of ICT i.e. (1) IT Services, (2) Communications, (3) Electronics and (4) Software.

The ICT Sector in Wales

Statistics published by the Welsh Government[1] estimate that there were 3,000 active enterprises in the ICT sector in Wales in 2012, employing a total of around 21,500 people in 2011, accounting for 2% of all employees. In 2011, the sector generated £1,987 million of Gross Value Added (GVA), 4.2% of Wales' total GVA. The sector has the highest average full time earnings (at £627 per week, compared to £521 across the whole economy) and has very high levels of productivity. ICT generated an estimated £41.40 of GVA for every hour worked (the second highest level of productivity among priority sectors in Wales), some 4% higher than the average for the UK.

In terms of the sub-sectors that make up the broader ICT sector (Table 1), it can be seen that the IT services sector accounts for two thirds of enterprises but only around a third of employee jobs (around 8,000 in total). Software is largely made up of very small businesses, with 535 enterprises employing just 1,600 people, while electronics employs 5,600 in just 200 enterprises. Communication is the largest sub-sector in terms on GVA, contributing £681 million to the Welsh economy in 2011, and also has the highest productivity, at £77.20 GVA per hour worked.

[1] Priority Sector Statistics, August 2013 http://wales.gov.uk/statistics-and-research/priority-sector-statistics/?lang=en

Table 1: Profile of the ICT Sector in Wales

ICT Sub-sector	Active Enterprises (2012)	Employees (000s) 2012	GVA (£m) 2011	GVA per hour worked (£) 2011
Communication	230	7.0	681	77.2
Electronics	200	5.6	574	36.4
Services	2,035	7.2	648	47.0
Software	535	1.6	83	8.7
Total ICT	3,000	**21.5**	1,987	41.4
All sectors	**90,610**	**1,170.5**	**47,087**	**23.2**

Source: Welsh Government Priority Sector Statistics http://wales.gov.uk/statistics-and-research/priority-sector-statistics/?lang=en

Using a different definition of the sector, e-skills UK estimates the total IT & Telecoms (IT&T) workforce in Wales to be around 44,000. As well as the 19,000 workers in IT&T sector companies, it estimates that there are a further 25,000 IT professionals working in Wales in other sectors of the economy.

Data for 2011 and 2012, suggest that the ICT business base is starting to grow again after a difficult few years beginning with the recession of 2008, with almost 1% growth in the number of active enterprises (Table 2). In terms of subsectors, there has been particular growth in software enterprises, with strong growth in employees. There has also been very strong resurgence in communication. Electronics and Services have both had a tougher time in recent years, and the number of enterprises continued to fall in 2012, although employment in the latter subsector recovered, though not quite to pre-recession levels. The total number of ICT employees fell by more than 9% between 2008 and 2011, with only the software subsector showing growth in this time.

Table 2: Recent trends in ICT subsectors, Wales, 2008 - 2012

Active Enterprises	2008	2011	2012	% change 2008 - 2012	% change 2011 - 2012
Communication	185	230	230	24.3%	1.8%
Electronics	260	220	200	-23.1%	-7.8%
Services	2,355	2,110	2,035	-13.6%	-3.6%
Software	375	415	535	42.7%	27.8%
Total ICT	3,170	2,975	3,000	-5.4%	0.9%
All sectors	**95,445**	**89,470**	**90,610**	**-5.1%**	**1.3%**
Employees (000s)	**2008**	**2010**	**2011**	**% change 2008 - 2011**	**% change 2010 - 2011**
Communication	7.1	7.6	7.0	-1.4%	-7.6%
Electronics	6.7	5.8	5.6	-16.4%	-2.1%
Services	8.4	8.1	7.2	-14.3%	-10.5%
Software	1.5	1.6	1.6	6.7%	2.6%
Total ICT	23.7	**23.0**	**21.5**	-9.3%	**-6.5%**
All sectors	**1,183.0**	**1,165.5**	**1,170.5**	**-1.1%**	**0.4%**

Source: Welsh Government Priority Sector Statistics http://wales.gov.uk/statistics-and-research/priority-sector-statistics/?lang=en

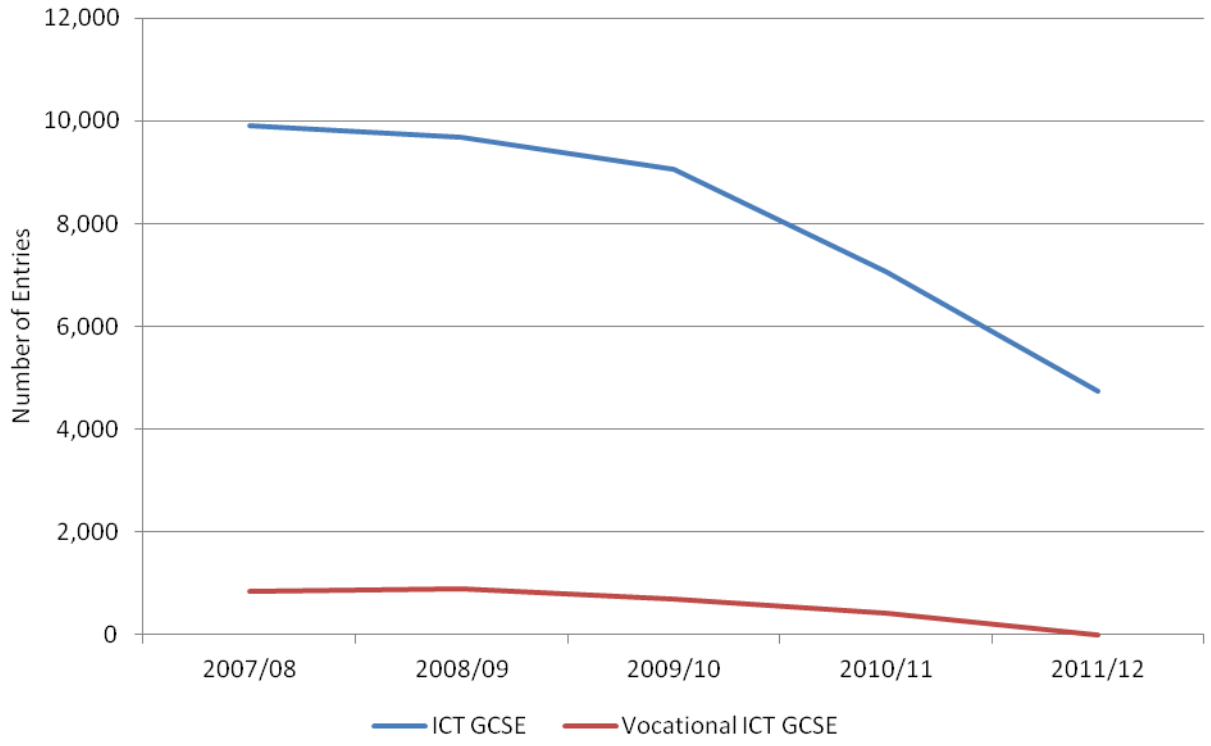
ICT learning and skills provision

In 2012, the Welsh Government undertook a review of qualifications for 14 to 19-year-olds in Wales aimed to ensure that qualifications are understood and valued and meet the needs of young people and the Welsh economy. In terms of ICT qualifications, the review found that 'the content of Essential Skills Wales ICT qualifications[2] was out of date and should be replaced by new Essential Skills Wales qualifications in digital literacy, covering the IT skills required for general learning, work and adult life'. The new qualifications are set to be trialled during 2014.

GCSEs

The review made no recommendations regarding the ICT GCSE, but there appear to be some issues with this qualification, as the number of young people taking this subject has dropped significantly in recent years. Figure 1 shows that the number of ICT entries fell from 9,911 in 2007/08 to 4,742 in 2011/12, a drop of well over 50%. Entries has fallen year on year since 2007/08, and the rate of fall has been particularly sharp in the last two years. Provisional figures for 2012/13 suggest a further decline, with just 4,494 ICT GCSE entries across Wales. Numbers of vocational GCSE entries in ICT had also been falling from 2008/09.

Figure 1: Take up of ICT GCSEs in Welsh schools, 2007/08 - 2011/12



Source: Welsh Assembly Government, Schools in Wales: Examination Performance Statistics *http://wales.gov.uk/statistics-and-research/schools-wales-examination-performance/?lang=en*

[2] Essential Skills Wales (ESW) is a suite of three different skills qualifications, available from Entry Level 1 through to Level 4 in Communication, Application of Number and ICT. ESW has been implemented in Wales since the 1st September 2010. ESW superseded Key Skills.

The Welsh Governments 14-19 Learning Pathways programme has been encouraging schools to offer vocational equivalents to GCSEs. Between 2008/09 and 2012/13 there was an increase in the number of pupils aged 15 taking non-GCSE qualifications in IT. This means that whilst there is a drop in GCSE entry , it has to some extent been compensated for by the increase in non-GCSE entries.

In 2012, the Royal Society published research findings that were prompted by a high degree of concern, expressed by schools, universities and businesses about aspects of the current provision of education in Computing in UK schools. Their main findings included:

- The current delivery of computing education in many UK schools is highly unsatisfactory. Although existing curricula for Information and Communication Technology (ICT) are broad and allow scope for teachers to inspire pupils and help them develop interests in Computing, many pupils are not inspired by what they are taught and gain nothing beyond basic digital literacy skills such as how to use a word-processor or a database. This is mainly because:

    1) the current national curriculum in ICT can be very broadly interpreted and may be reduced to the lowest level where non specialist teachers have to deliver it;

    2) there is a shortage of teachers who are able to teach beyond basic digital literacy;

    3) there is a lack of continuing professional development for teachers of Computing;

    4) features of school infrastructure inhibit effective teaching of Computing

- There is a need to improve understanding in schools of the nature and scope of Computing. In particular there needs to be recognition that Computer Science is a rigorous academic discipline of great importance to the future careers of many pupils. The status of Computing in schools needs to be recognised and raised by Government and senior management in schools.
- There is a need for qualifications in aspects of Computing that are accessible at school level but are not currently taught. There is also a need for existing inappropriate assessment methods to be updated.

One of the initial motivators for the Royal Society's project was the sharp declines in numbers completing GCSE and A-level courses titled or categorised as in ICT and Computing. However, the range of qualifications available across the UK in these subjects is much more extensive, including:

- IT/ICT practitioner qualifications;
- Electronics/systems and control;
- Music technology;
- Production technology and technical theatre (light; sound; media);
- 3-D design;
- CAD/CAM;
- Interactive media;
- Design and technology GCSEs and GCEs;
- IT/ICT GCSEs and GCEs.

The Royal Society concluded that 'the range of ICT and Computing-related qualifications at Level 2 in England, Wales, and Northern Ireland is overly diverse and confusing to potential end users. Many of these qualifications do not appear to provide what employers and HE are looking for; others lack the currency of GCSEs and A-levels. The progression routes (e.g. from level 2 to level 3, or to employment or HE) are poorly defined'.

The UK Commission for Employment and Skills[3] shares this view:

'This continuing decline is of significant concern to both universities and employers. Demand for skilled IT professionals continues to increase, yet we are failing to inspire a generation of young people to pursue technology careers or study technology at further and higher education level.'

Post-16 Learning

Table 3 shows recent trends in Wales of the take up of various types on ICT qualifications in post-16 learning. It shows that all aspects of ICT provision have seen a significant fall in take up since 2007/08, with the total number of learning activities down by 31% by 2011/12.

Table 3: Post-16 ICT learning in Wales, 2007/08 - 2011/12

	2007/08	2008/09	2009/10	2010/11	2011/12	% change 2007/08 - 2011/12
All learning activities	**95,615**	**94,600**	**90,395**	**87,090**	**66,010**	**-31.0%**
GNVQ / AVCE (1)	125	145	170	110	40	-68.0%
GCSE / VCE (2)	175	160	75	115	60	-65.7%
AS/A2 level	7,355	7,555	6,895	6,295	6,030	-18.0%
NVQ (including QCF qualifications directly replacing NVQs) (3)	4,255	4,305	3,850	1,595	315	-92.6%
National Certificate / Diploma	1,515	1,865	1,655	775	335	-77.9%
First Certificate / Diploma	530	670	675	175	10	-98.1%
Key Skills	445	250	80	.	.	-
BTEC / OCN / Access Certificate or Diploma (4)	26,415	25,720	20,225	21,370	17,935	-32.1%
Higher Education level	70	60	475	410	300	328.6%
QCF qualifications (excluding direct NVQ equivalents) (5)	.	.	.	15,600	12,995	-
Other learning activities (6)	54,735	53,865	56,300	40,645	27,990	-48.9%

Source: StatsWales, Learning Network Analysis, Number of learning activities by learning aim and subject area *https://statswales.wales.gov.uk/Catalogue/Education-and-Skills/Post-16-Education-and-Training/Further-Education-and-Work-Based-Learning/Learning-Network-Analysis/NumberOfLearningActivities-by-LearningAim-SubjectArea*

Notes
1 GNVQ: General National Vocational Qualification; AVCE: Advanced Vocational Certificate of Education
2 VCE: Vocational Certificate of Education
3 NVQ: National Vocational Qualification
4 OCN: Open College Network

[3] UKCES (2012) Fall in total number of students taking ICT GCSEs reinforces demand for new curriculum, 24 Aug 2012, http://www.ukces.org.uk/news/articles/2012/aug/fall-in-ict-gcse

5 Introduced 2010/11 for QCF quals - during interim period those directly equivalent to an NVQ will be counted as an NVQ
6 Includes all other types of learning aim not listed, e.g. City and Guild Certificates, ECDL, CLAIT and basic skills qualifications

The Royal Society research found that the 'uptake of Computing A-level is hindered by a lack of demand from HE. Few HE departments appear to hold Computing A-level in high esteem and development of rigorous high-quality post-16 courses is required with the label Computer Science.

Higher Education

e-skills UK, the Sector Skills Council (SSC) for the ICT sector state that:

'IT related Higher Education remains an important source of talent for the sector's labour force requirements. Across the UK, a key issue affecting undergraduate provision has been the large decrease in numbers of applicants to IT related courses.'

(e-skills UK, Technology Insight 2012)

Table 4 shows that the medium term trend for undergraduates at Welsh HEIs is one of no significant change, with the same numbers in 2012/13 as in 2007/08. However, this masks a significant decline from peak levels in 2009/10, of 7%. The number of postgraduate enrolments fell by 13% from 2009/10.

Table 4: First Year enrolments in Computer Science at Welsh HEIs, 2007/08 - 2012/13

Year	Postgraduate	Undergraduate	Total
2007/08	430	1,825	2,255
2008/09	445	1,810	2,255
2009/10	435	1,965	2,400
2010/11	480	1,840	2,320
2011/12	335	1,750	2,085
2012/13	380	1,825	2,210
Change 2007/08 - 2012/13	-50	0	-45
% change 2007/08 - 2012/13	-12%	0%	-2%

Source: StatsWales, First Year enrolments at Welsh HEIs by subject, level and mode of study

As well as the falling numbers of undergraduates entering Computer Science, the Royal Society also found that there were consistently higher than average drop out rates among the first year computer science undergraduates compared to other subjects. This was partially attributed to the lack of demand for A Level Computing as an entry requirement to Computer Science courses in HE, 'possibly as a result of students arriving without a clear understanding of what Computer Science is'.

Furthermore, there are concerns that academic provision in ICT is failing to meet the needs of industry. In a recent article, Computer Weekly stated that:

'Universities need to broaden the teaching of computer science due to the growing mismatch between graduate skills and business IT requirements. Such is the need for IT professionals with particular skills that the digital industry is calling for more overseas staff and start-ups want visa requirements relaxed to make it easier to bring in staff from overseas. London mayor Boris Johnson has also called for a special visa to help London businesses bring in the right IT skills.'

'Meanwhile, thousands of experienced and newly qualified IT professionals are unemployed, under-employed or working in jobs unrelated to their jobs. Figures from the Higher Education Statistics Agency (HESA) show that computer science graduates are the largest group of unemployed graduates in the UK. Some 14% of recent computer science graduates are unemployed, compared with 13% of graduates in communications, 5% in education, 4% in veterinary science, and almost none in medicine and dentistry.'

(Source: Computer Weekly, 22nd October, 2013)

Although a high proportion of computer science graduates are unemployed, many do go on to secure appropriate employment. Among first degrees leavers from Welsh HEIs in 2011/12, 75% of computer science graduates went into employment in professional occupations, compared to 58% of graduates across all subject areas and 70% across scientific subjects[4].

Skills Issues

So if academic ICT provision is failing to meet the demands of businesses, what are the ICT skills that are most in demand and which are proving hardest to find? In its Technology Insight research, e-skills UK analysed ICT vacancies to understand where the greatest demand for skills was, and the - the most commonly requested technical skills in 2011 were (in order of demand volume): SQL, .NET, C#, Java, SQL Server, ASP, Visual Basic, HTML, JavaScript, and Oracle.

In terms of the skills that were hardest to find, e-skills UK stated that 'amongst recruiters of IT & Telecoms staff across the UK as a whole, IT and Telecoms related skills shortages tended to be associated with Programmers/Software Developers and Web Design/Development professionals. Employers report that the technical skills that were proving hardest to fill were .NET/ASP.NET, Dynamics, SharePoint, Visual Basic/Visual Studio, C#, PHP and VMWare'.

Policy Responses

The issues affecting the ICT sector are not new, and there have been numerous responses to the concerns raised around skills and ICT provision in Wales.

In October 2013, the Welsh Government announced a two-phase approach to the review of assessment and the National Curriculum. The first phase of the review has been primarily concerned with developing proposals that are aimed at strengthening and supporting the teaching of literacy and numeracy in schools in Wales. Also developed during this phase of work were proposals for 'wider skills' to become statutory elements of curriculum arrangements going forward. These are the skills that are considered to be essential for learning, for work and for life. It was proposed that these skills should be a core feature of curriculum arrangements, from Foundation Phase through to key stage 4, in order to ensure alignment with, and progression towards, a revised model for the Welsh Baccalaureate. The full list of skills that were proposed are:

- critical thinking and problem solving
- planning and organising
- creativity and innovation
- personal effectiveness

[4] Source: HESA Statistical First Release 192 - Destinations of Leavers from Higher Education in the United Kingdom, 27th June 2013, http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=2903&Itemid=161

- digital literacy

These proposals were tested as part of a public consultation which closed on 17 January and responses were broadly supportive. A summary of these responses will be published in due course. The next phase of the review will consider a much broader set of issues relating to curriculum and assessment arrangements in Wales. This piece of work will mark a period of comprehensive curriculum reform with the intention of developing a Curriculum for Wales. Stakeholders will be asked to engage and will be offered opportunities for consultation throughout this process.

In terms of ICT provision, a Ministerial group under Leighton Andrews has been set up specifically to revisit ICT curriculum. The output from that work is feeding into the broader curriculum review.

The Welsh Government is also making efforts to upskill sections of the ICT workforce. In response to demand identified by employers across Wales, the Welsh Government is investing over £1.4million of its own budget and European Social Funds (ESF), in an innovative higher level entry / CPD programme that will seek to address the current and future skills demands of the ICT sector in Wales. Working in collaboration, the Department for Education and Skills and the Department for Economy, Science and Transport, are funding two pilot programmes delivered by e-Skills UK which will provide up to 550 people with the specific ICT skills needed by industry.

To meet the needs of those who are in work but want to refresh their skills, subsidised IT training courses are also being made available to employers based in Wales. **Pathways to Digital Growth**, supported by European Structural Funds provides high-quality online training and exam entry for up to 250 employees, in areas including IT Project Management, IT Service Management, Software Testing, and Oracle Java Programming. Large corporations and local SMEs will benefit from the training, with staff already enrolled from organisations including Admiral Insurance, Living Data, and Sequence Collective. The training programmes are aligned with employers' needs and are designed to address current and predicted IT skills shortages in Wales. Research delivered last year by e-skills UK found that more than 3,000 recruits are needed each year just to meet existing demand from Wales' growing IT sector, and it is estimated that the sector will grow at double the national employment average between now and 2020.

For those who are currently out of work, free training is available in five areas in demand from employers, including Technical Support, Software Testing, and Database Development. Up to 300 adults can take part in the **Pathways to Digital Employment** programme, receiving entry into a paid-for exam in an industry recognised qualification, alongside employability training including CV writing and interview preparation.

e-skills UK is working with Welsh employers and key Welsh stakeholders to address the IT & Telecoms skills issues that will have the most significant impact on the country's economy. Its 4-year Strategic Plan for Wales has been endorsed by The Welsh Assembly and the Wales Stakeholder Panel. It aims to inspire future talent by:

- implementing and expanding employer-backed initiatives in schools like CC4G
- exciting young people about technology careers through BigAmbition Wales
- getting employer input for degree programmes that meet the needs of Welsh industry, such as the IT Management for Business degree being delivered through University of South Wales and Glyndwr University
- coordinating influence and support from employers for GCSEs, A levels, and apprenticeships, through the Pathways to Apprenticeships programme (ESF funded) and the IT Professional Apprenticeship Level 3 programme (SPFP funded).

It is also supporting IT professionals by:

- exploring interest in a Skills Academy for Wales
- working with the Software Alliance in Wales to support the sector
- enabling the formal accreditation of employer training

Conclusion

ICT is clearly an important sector of the Welsh economy. Although a relatively small one in terms of the number of people it employs, it provides relatively highly skilled, highly productive and well paid jobs. However, there is significant evidence that ICT education and skills provision (across the UK) is not meeting all of industry's needs.

Looking to the future, forecasts from e-skills suggest that the employment of IT professionals within the IT industry in Wales to 2020 is forecast to grow at 1.4% per annum – over twice as fast as the average employment growth in Wales. Growth in the IT & Telecoms professional workforce is forecast to be mainly amongst the more senior level/high value roles i.e. ICT Managers, IT Strategy & Planning and Software Professional roles whilst the number of people employed in lower skilled roles will continue to contract or remain static. Through to 2020 Software Professionals in Wales show the highest forecast employment growth of all IT & Telecoms occupations at 1.6% per annum.

e-skills UK highlight the importance of getting the balance of ICT skills provision right - impact modelling work commissioned in 2012 generated estimates of the potential GVA and employment impacts likely to result if all businesses, particularly small businesses, fully invest in and optimise advanced ICT. e-skills estimate that the ICT driven GVA uplift of £1.5 billion in the Welsh economy could translate into 18,000 new jobs, across many occupations and sectors, over the next 5 to 7 years.

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