FUTURE SKILLS ISSUES AFFECTING INDUSTRY SECTORS IN WALES

Media and New Media Sector

Futureskills Wales

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INDUSTRY SECTORS IN WALES

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Introduction

This document is one of a series commissioned by the Future Skills Wales Research Forum. The overall project aims to extend and complement the work begun by the original Future Skills Wales project, which forecast future generic skills needs across Wales using forecasting and survey data. The current project adds studies of future vocational skills needs within key sectors in Wales. Each sector study is based on desk research and qualitative interviews with practitioners and employers, and aims to provide an overview of the sector, the skills issues, and current and potential actions to further strengthen the sector.

Businesses and employees in each of the sectors studied have achieved great successes; that is why these sectors have become important for Wales. Our focus on current skills issues should not obscure these achievements or the determination of all concerned to meet current and future challenges.

Sector Profile

The Media and New Media sector in Wales is a hybrid of two technologies and traditions:

- video and film for broadcast;
- digital multimedia for all distribution channels including the Internet.

The video/film part of the sector has been strong in relation to the size of the Welsh economy, due to demand from the major broadcasters, S4C, BBC Wales and HTV Wales. But the independent producers have sometimes been limited in their ambitions, reflecting their reliance on relationships with local broadcasters. This part of the sector faces an uncertain future due to these internal factors and the external pressures of global competition.

New media and multi-media technologies are being adopted by these firms, but there is a new generation of New Media enterprises which have based their entire strategies around these. Many of the better known examples are based in Cardiff, with others in the Valleys and distributed throughout Wales. Due to the expansion of services based on the new technologies, this part of the sector may have clearer growth potential. Infrastructure developments may offer new opportunities for rurally located businesses.

Apart from these considerations, the sector is important in cultural terms, being a key means of expressing Welsh identity both in Wales and potentially across the developing global media markets.

Estimation of the number of firms and employees is not straightforward, partly due to the large numbers of freelancers and the volatile nature of the New Media part of the sector. However, current estimates suggest around 600 businesses employ around 6,000 in Wales. The main centre of activity is around Cardiff, with a significant cluster of both ‘traditional’ Media and New Media business in the North, particularly around Caernarfon.

The occupational profile of the sector is distinctive, with very few operatives, but significant proportions in professional, associate professional, technical, craft and service occupations.

In employment terms, the sector is smaller in Wales than is normal, relative to the rest of the UK. The employment forecast for the sector is for growth, which is seen as fairly modest in terms of absolute numbers, but significant in percentage terms - around 28% over ten years. However employment in the sector is not forecast to grow in importance relative to the UK sector as a whole.

A determining factor will be the extent to which major purchasers in Wales are prepared to establish innovative business strategies using new digital technologies.

Skills Issues

Skills issues identified by our study include:

- separation between business, creative and technical skills;
- skills deficiencies in commercial and marketing areas;
- interactive and new media technical skills needs;
- strengthening skills and entrepreneurial approach in new entrants.

Action on Skills

The media and new media companies have established links and groups to address issues for the sector, including skills issues. Detailed action plans have been prepared for the sector in North Wales.

Themes for ongoing action include:

- strengthening funding and provision arrangements for New Media, especially the NVQs offered (Cyfle/Media Skills Wales);
- establishment of a Digital Media Wales Forum, building on current work by the New Media Group Wales and on proposals and action in North Wales, to provide a national dimension to action;
- location of skills strategy within a national development strategy embracing New Media;
- within Careers advisory work, emphasis on the distinction between general academic and vocational media studies.

A number of more detailed recommendations are made and are summarised in the table below.

Recommendations are also made for further research:

- on the New Media subsector across Wales;
- to extend the research directory recently produced for Sgrîn;
- on training provision covering the latest technologies;
- on the destinations of FE media studies students;
- and using an event-based methodology to engage micro businesses and freelancers.

Recommendations

No.	Recommendation	When	Key Players
1	Disseminate results of qualifications mapping and AVITG work, and any proposed changes	Late 2000	ACCAC/NTOs
2	Reinforce messages to independent sector to stimulate demand for management and new media training	ongoing	Cyfle/MSW/TAC/S4C/ Assembly/CETW
3	Facilitate formation of a **Digital Media Wales Forum** for companies in traditional and new media, to transcend existing boundaries and represent the digital content sector on policy and training issues. Adapt and adopt existing North Wales cluster development proposals for all Wales.	Start 2000	Employers/WDA/ Assembly/NTOs/New Media Group Wales/CETW Partners in 'North Wales Multimedia Action Plan'
4	Use **Digital College** to offer and promote supply-chain development courses for the sector	From late 2000	S4C/Cyfle/MSW/WDA/ Key employers
5	Within the Forum, constitute a global marketing and exploitation sub-group to co-ordinate and support the sale of Welsh product, building on existing North Wales plans	From 2001	Employers/WDA/CETW/ Sgrîn/Cyfle/TAC and North Wales partners
6	Celebrate and disseminate excellence in HE, FE and Cyfle/ Media Skills Wales provision for the sector in Wales		HE/FE/Cyfle/MSW/CETW
7	Offer the Cyfle/MSW New Media NVQ more widely, and agree the funding arrangements needed to allow this	For 2001 courses	Cyfle/MSW and Board, with WDA and Assembly/ CETW
8	Identify and co-ordinate sources of investment for new content and production ventures	ongoing	Broadcasters/New Media Group Wales/ key employers/WDA
9	Emphasise distinction between 'general' academic Media Studies provision and vocational provision, and encourage young people – especially females - to consider vocational routes	ongoing	Careers/schools/FE/HE ES/New Deal/CETW
10	Review and encourage potential for New Media development within rural and Objective 1 areas	2000	Assembly/WDA/Obj 1 bidders

1. Introduction

1.1 This document is one of a series commissioned by the Future Skills Wales Research Forum. The overall project aims to extend and complement the work begun by the original Future Skills Wales project, which forecast future generic skills needs across Wales using forecasting and survey data. The current project aims to add studies of future vocational skills needs within key sectors in Wales.

1.2 Businesses and employees in each of the sectors studied have achieved great successes; that is why these sectors have become important for Wales. Our focus on current skills issues should not obscure these achievements or the determination of all concerned to meet current challenges.

1.3 Each of the individual sector reports is complemented by a report on management and information technology skills issues across the sectors studied. This reviews the situation in each sector and draws out common themes and implications.

1.4 The Media and New Media sector was selected for inclusion in part because of the rapid changes affecting the sector. On the one hand, the expansion of broadcast output resulting from the advent of digital channels, and the growth of Internet-traded products and services, present opportunities for those working in broadcast and digital technologies. This may translate into growth opportunities for the sector in Wales.

1.5 On the other hand, these same developments, and particularly the technological and market revolutions associated with the convergence of broadcast, digital processing, and communications technologies, may weaken the position of Welsh producers within a wider, more competitive market.

1.6 Regulatory and public policy developments will have a significant bearing on the outcome. But the development of skills within the sector, to meet these new challenges and exploit new opportunities, will also be critical in determining the future health of Media and New Media companies in Wales.

Method

1.7 The first phase of the study proceeded mainly by desk research and telephone discussions.

1.8 In the second stage, further meetings were held with sector representatives, and employer case studies were undertaken to extend and deepen the analysis of vocational skills issues.

1.9 The aim was not to conduct quantitative primary research, but to consult with sector representatives in order to identify perceived skills issues, the actions being taken in response to these, and the potential for further action or policy development. The published reports should therefore provide a clear introduction to the sector, a ‘snapshot’ of sector issues, and pointers to current and potential action.

2. The Media and New Media Sector in Wales

Definition

2.1 The media/new media sector is not easy to define because of the many developments which are tending to blur the previously well defined edges of the sector.

2.2 At the core of the sector is all the activity relating to the production and broadcasting of programmes via the 'traditional' electronic media - film, radio and television.

2.3 The market for most of this activity in Wales is quite well defined - the Welsh broadcasters, especially television broadcasters, are the customers for most activity in these areas. As well as employing many workers in these areas, they take output from a substantial group of independent companies. These are producing mainly video-based output, although there are also vital animation and film production sub-sectors.

2.4 In addition to this activity, however, there is a whole range of related production which also makes use of new electronic media to produce and deliver programmes or 'content'. These new media are essentially CD-ROM and pc/internet systems. Activity in this area would include website design, electronic games, virtual reality systems, multimedia presentations or training packages, computerised animation, or special effects for direct distribution or integration in film or video productions.

2.5 There is already some crossover between these two areas, and the convergence of broadcast and IT/communications systems is likely to increase the interdependence of these originally separate activities.

2.6 The Standard Industrial Classification (SIC) codes used in research were:

- 92.11 film and video
- 92.2 radio and TV
- 72.6 other computer related services.

Sector Characteristics

2.7 It follows from the above that there are three main groups of organisations in the Media and New Media sector:

- the major broadcasters;
- independent suppliers to the broadcasters;
- other suppliers working with new electronic media.

Number of Firms

2.8 The broadcasters are relatively easy to identify:

- BBC Wales and Radio Wales;
- HTV Wales;
- S4C;
- Radio Cymru;
- Independent Radio Broadcasters such as Radio Gynnedd (N).

2.9 It is more difficult to give exact numbers of independent media suppliers, because many of these are either small companies or freelances who may leave and re-enter the market depending on demand.

2.10 The total number of firms in the sector was reported by an internal report on the original Future Skills Wales project, covering 'Media and Multimedia', as around 200. A recent survey undertaken by Cyfle/Media Skills Wales was mailed to 133 TV and film production companies.

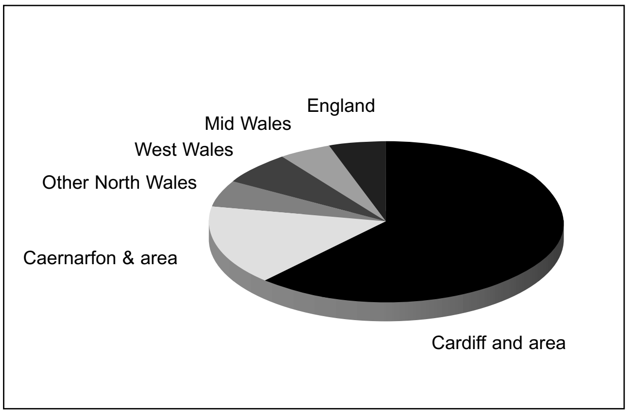
2.11 Less is known about the numbers of suppliers working in new electronic media - this is also likely to be volatile, given the rapid development of technology and the market in this area, and the relatively low cost of entry at the bottom end. The Cyfle/Media Skills Wales questionnaire was mailed to a total of 420 'New Media' companies, with 'the term... used in its widest possible sense' (Cyfle, 2000). In combination the two figures suggest a sector population of around 500-550 employer organisations. In addition 115 questionnaires were sent to freelances.

Locations

2.12 The main TV broadcasters are based in the Cardiff area, and this has determined the location of a large proportion of suppliers in the independent sector, who also tend to be based in and around the capital.

2.13 Figure 2.1 shows the location of the 86 companies listed as members on the website of Teledwyr Annibynnol Cymru (TAC), the trade association for independent producers in Wales. These are all independent suppliers to S4C, BBC Wales or HTV Wales. Over half are Cardiff based.

Figure 2.1: Locations of TAC Member Companies



2.14 The chart shows that the main exception to this is S4C and an associated group of suppliers of Welsh language programming, based in the Caernarfon area (18 TAC members were based in this area, most in Caernarfon itself).

Employees

2.15 Estimates of the numbers working in the sector exist, but are difficult to support with hard evidence. In forecasts recently produced by Business Strategies Limited (BSL, 2000), the population estimate for people working in organisations with the SIC codes listed earlier is 6,000 across Wales. However this includes all those working in 'other computer related services', which may include some employees who are outside the New Media sector as we have defined it.

2.16 The Cyfle/Media Skills Wales survey found that on average firms in the TV and Film Production part of the sector employed ten full time staff and seven staff on contracts of less than one year. For 133 firms this would produce a total of around 1,330 full time and around 930 part-time staff - however this excludes people working within purely New Media enterprises.

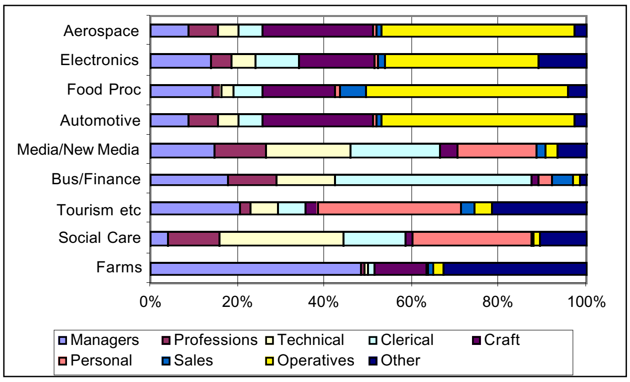
2.17 Of the 62 employees and freelances responding to the Cyfle/MSW survey, 42% were aged over 40; most of these were male. The gender split was 67% male, 33% female. 74% were freelances working on contracts of less than one year, reflecting the sampling method for this part of the survey.

2.18 On this evidence, a reasonable estimate of workforce numbers would be around 2,200 or so in TV and Film with another 3,000 to 4,000 in New Media (including part-time and freelance workers); a total of 6,000 or so. Some of these latter may also be active in areas which might broadly be described as 'other computer services' such as pc and network support, database system design and so on.

2.19 The BSL figure for employment in the sector for the UK as a whole is almost 192,000, meaning that Welsh employment represents just over 3% of the UK sector total. Employment in the sector in Wales represents 0.5% of total Welsh employment.

2.20 Recent forecasts, by Business Strategies Limited, provide an estimate of the broad occupational profile of this and the other sectors studied by York Consulting. **Figure 2.2** below compares the profiles. The media and new media sector has relatively large proportions of professionals, associate professional and technical staff. **Annex B** has further comparisons between the sectors studied for this Future Skills Wales Sectors project.

Figure 2.2: Sector Occupational Profiles - 2000



Source: BSL Sector Forecast, 2000

Markets and Exports

2.21 There is some evidence to suggest that the main TV and film production sector is restricted in terms of exports by the retention of copyright on all programmes supplied to S4C. This means in effect that S4C suppliers need to focus, and can survive by successfully focusing, on a local Welsh market. In contrast to this, as in other sectors the media/new media sector generally is characterised by increasingly global supply chains and competition. This creates something of a challenge for suppliers working mainly with S4C.

Turnover

2.22 An earlier Cyfle report (Cyfle, 1998) estimates the annual turnover of the Welsh media and television industry at between £160m and £170m per annum. However this may be a conservative estimate in the light of figures reported elsewhere. For example, the proceedings of the Select Committee on Welsh Affairs on Broadcasting in Wales and the National Assembly (13th May 1999, quoted in Cyfle, 2000, p71) states the turnover of the sector as £350m. A study by the Cardiff Business School (1998), gives a similar figure of £309m for the annual turnover of the media sector.

Sources of Change

2.23 An important background factor is the recent rationalisation of suppliers by S4C, (from 1997). The company, in effect, asked their independent suppliers to cut costs in exchange for longer term contracts. This reflected an increasing need to fill broadcasting time, especially in connection with the introduction of digital services. The change involved a reduction in overall supplier numbers.

2.24 The biggest factor affecting the future of the sector is the convergence of traditional and new media infrastructures. This means, for example, that programming in previously separate web, broadcast and film technologies is starting to be available in digital format via a number of delivery methods (cable, terrestrial, satellite) and a single piece of domestic or mobile equipment. The ramifications of this are yet to emerge in full, but, for example, they seem very likely to affect current funding and regulatory systems for the main broadcasters, with profound effects on employment and skills needs in the sector.

Prospects for the Future

2.25 One scenario discussed in recent Cyfle reports is that the number of independent producers will be further reduced by cost pressures, to form a core of producers with close, long-term supply relationships with the main broadcasters (especially S4C). The Cyfle 1998 report comments 'it is difficult to imagine production companies competing in television production longer term without turning over in the region of £2m - £5m' (p5); 'Could we be down to 10 prominent production companies in Wales?' (p3). The authors note that some of the TV production companies surveyed were planning to move out of the TV market and diversify into multimedia and corporate productions. Alliances and mergers were also seen as possible responses to the tightening of the market.

2.26 However, the results of the Cyfle 2000 survey do not provide a clear confirmation of this trend. Although some companies still noted possible or actual moves into New Media production, two thirds 'did not envisage a change in their core operation - with Broadcast production still accounting for 95-100% of their turnover' (Cyfle 2000, p13). 'The results show only three Welsh independent television production companies seeing any significant income (over 20%) arising from digital interactive media in the next five years... this would appear to reflect an abject failure by the Welsh Film and Television Production and Broadcast sector to seriously engage with New Media and to address the issue of convergence' (p31).

2.27 Key questions for the future development of the sector are:

- how quickly will the New Media sector grow?
- how quickly will consolidation and decline affect the existing broadcast production sector?
- Will existing production companies adapt by embracing New Media, or will a largely separate but parallel New Media sub-sector continue to emerge and eventually outgrow the existing Media sub-sector?

2.28 The most likely scenario at present seems to be for a slow decline in numbers of firms and workforce in the more traditional Media businesses (not least because of the ageing profile of the principals within the independent workforce, who in many cases left broadcasting companies when outsourcing quotas were introduced). Unless these companies can adapt to new technical approaches, and in many cases new markets, they will not move into New Media, but instead will gradually be replaced by a new generation of New Media producers.

2.29 This new generation will base themselves on digital and interactive technologies, but the larger units may grow to incorporate video and film production. These companies will be able to offer a more complete service to broadcasters (who will increasingly need to offer digital tie-ins to complement broadcast material). But the competition in this market will be wider - firstly from the UK, and increasingly from Europe and across the Atlantic. Therefore, the producers themselves will either need to become larger to compete, or will need to form themselves into close coalitions or supply chains for the same purpose.

2.30 This scenario poses a threat to the existing sector in Wales, which reflects the existing strong market positions of local broadcasters. These may be eroded by the technical convergences noted above, and by corresponding changes in the regulatory regime. UK and Assembly policies will be an important factor in the shorter and middle term. The Select Committee of 13th May 1999 concluded 'we urge the National Assembly to recognise the importance of the broadcasting sector to economic development in Wales, and, in consultation with the industry, draw up a strategy for fostering its growth' (Cyfle, 2000, p71).

2.31 One key driver of the development process would be the adoption, by larger companies inside and outside the media sector in Wales, of new marketing and communications strategies, or wider business models, involving the use of new multimedia technologies. An example might be the adoption of strategies based on interactive TV, for example, where the necessary technologies exist and await effective exploitation by major potential purchasers.

2.32 It should be noted that unlike the case of the more traditional broadcasting producers, growth in the population of New Media enterprises may not necessarily be as concentrated in particular areas of Wales. There may be opportunities to foster this sub-sector as a contributor to employment and wealth creation in rural areas.

2.33 Limitations on the current communications infrastructure can restrict the potential for these companies in the more remote areas, primarily where they rely on faster, higher-bandwidth services. In many such areas cable is not installed, and high speed telephone based services using asymmetric digital subscriber lines (available from BT from July) will often not work due to the distances between the local exchanges and rural homes.

2.34 However, the UK government is planning to issue licenses covering broadband fixed wireless access, which uses reserved areas of the radio spectrum to provide high speed internet access in rural areas. These services may provide a viable alternative to land-based systems where radio reception is good, and will start to become available following completion of bidding in September 2000.

Forecast of Sector Employment

2.35 As noted earlier, new employment forecasts for the sectors studied by YCL were recently produced as part of the continuing Future Skills Wales research programme by Business Strategies Limited (BSL, 2000). The forecast is for modest but steady annual growth in employment, from the current level of 6,000 (2000) to 7,700 in 2010. In percentage terms, this is a 28% employment growth over the ten years. Some New Media employers suggest that this may be a significant underestimate - they point to growth in their own companies of 100% or more in the initial few years of operation.

2.36 Using the BSL figures, one can calculate the employment quotient of the sector in Wales. This is done by calculating the extent to which employment in the Welsh sector is proportionate to employment in Media/New Media for the UK as a whole, given the relative sizes of the Welsh and UK workforces. An employment quotient of 1 indicates that the sector in Wales is roughly the size one would expect in employment terms; scores below 1 indicate under-representation of the sector in Wales.

2.37 The BSL forecast shows an employment quotient of **0.73** for the Media/New Media Sector in Wales in 2000. This is little changed by 2010, when the employment quotient has declined very slightly to **0.71**. In other words, the forecast suggests that the sector in Wales is currently relatively weak in employment terms, and that, although it will experience employment growth, it will fail to make up any ground relative to the UK as a whole.

2.38 One should note that, due to the concentration of UK media and new media employment inside the M25, it is possible that the forecast for English regions outside London would not be dissimilar to that for Wales in employment quotient terms. (An exception might be the South East due to its proximity to London). A study for Teledwyr Annibynol Cymru (TAC, 1998), notes the dominance of London companies and notes that 'research... has found that 25% of the programmes listed by the BBC as "regionally produced" were, in fact, produced by London based companies on location elsewhere in the UK..' (p5).

Summary Sector SWOT

Strengths	**Weaknesses**
Well established independent sector	Key independent workers ageing
National broadcasting infrastructure	Lack of market penetration beyond Wales
Indigenous training/assessment provision	Lack of data on New Media sub-sector
Substantial research data on media sector	No strategy for New Media convergence
Political interest/support	
Opportunities	**Threats**
Inward investment	Exposure to broadcast policy changes
New generation of workforce entrants	Out migration of younger workers
Add New Media to training coverage	Loss of markets within Wales
Increased production volumes for digital	Reduced budgets for digital
Opportunities for rural location	
Adoption of innovative technical approaches by major purchasers	
Potential for producing more material for export	

3. Sectoral Skills Issues

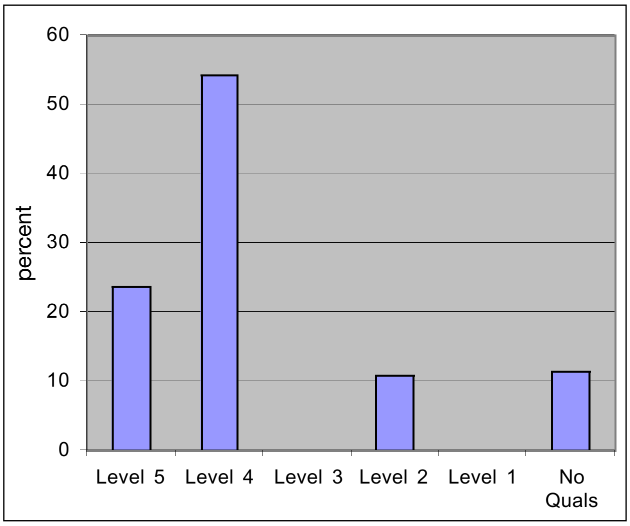
3.1 Figure 3.1 shows LFS estimates of the sector profile in terms of highest qualifications held. These must be treated with some caution because of the low numbers involved in the sector. This also means that no estimate has been made of the proportions with Level 3 qualifications and with no qualifications, since the absolute numbers generated by the estimate were very low.

3.2 However, the analysis does show that, in contrast to most of the sectors studied, the Media/New Media sector workforce contains a markedly higher proportion of people with degrees or higher degrees or equivalents (Level 4 and 5).

3.3 Numbers within the workforce holding craft (Level 2) qualifications are relatively low (estimated at 10.8%), with very few holding supervisory level (Level 3) qualifications or qualifications at Foundation level. There is, however, a substantial proportion (just over 11%) with no qualifications whatsoever. The picture emerging, therefore, is of a 'two-speed' workforce, consisting of a substantial, highly qualified stratum supported by a much less well qualified section representing about 22% of individuals employed in the sector.

3.4 This picture may give rise to concern if we reflect that the less qualified section of the workforce appears not to be able to move up to access opportunities at the higher level. The relative absence of Level 3 qualifications suggests that few are taking either the vocational route, or part-time academic routes, to higher level qualifications within the sector. The stratification of the workforce fits a scenario where workers either enter the sector with a degree or similar qualification, or enter it, and remain, at a much lower level.

Fig 3.1: Estimates of Highest Qualifications Profile, Media/New Media Workforce



3.5 Is there a need for these Level 3 vocational skills and qualifications within the sector? A 'Training Needs Analysis for the Multimedia sector in Industrial South Wales' produced by the University of Wales Institute Cardiff, 1999, noted that 'an ideal recruit would be a graduate accredited in parallel to NVQ3 in the use of at least one of the industry standard packages'.

Current Vocational Skills Issues

3.6 The main source for current data on vocational skills issues is the Cyfle 2000 report. It is unfortunate that this is based on a small response; nevertheless it is the best direct information available on the sector.

3.7 The report provides a list of areas where responding TV and Film production companies felt there was the greatest need for training courses. This is reproduced in **Table 3.1**. The areas in which individual respondents felt they would benefit from further training are shown in **Table 3.2**.

3.8 By combining the rankings in each table, we produced a table of training needs common to both groups, ranked by overall importance (**Table 3.3**). Though not conclusive, due to the different nature of the two samples, and the low numbers involved, the results do indicate the mix of training needs:

- a strong strand of business development and commercial skills needs (pitching, finance, copyright, distribution, employment law);
- a significant common need for training in newer digital and communications technologies (Internet use and applications, Internet programming);
- training needs to support creative and content development work (script development and writing factual);
- needs in existing technical and supporting areas (video editing, single camera directing and health and safety).

3.9 These needs are consistent with a perceived requirement to develop new markets (first bullet point) and new product to meet their needs (third bullet point) as well as to utilise new production and distribution technologies (second bullet point).

Table 3.1: Need for Training Courses – TV and Film Companies

Training Area	Percentage Noting Need
Pitching to Clients/Funders/Commissioners	74
Business finance skills	39
Interactive Production	39
Production Research – radio/video/tv	37
Copyright/acquisition/contracts	37
E-commerce	37
Internet use and applications	34
Script development – drama	34
Negotiating skills	34
Multi-camera directing	34
Video editing (on-line)	32
Single camera directing	32
Time management	32
New media	32
Internet programming – html, Java, asp etc	32
Video editing (non-linear)	29
Writing drama for television	29
Distribution – cinema/TV/funded	29
Health and safety	29
Multi-media programming	29
Multi-media production management	29
Writing factual for television	26
Presentation skills	26
Employment law	26
Multi-media production and design	26

Source: Cyfle/Media Skills Wales

Table 3.2: Needs for Further Training (Individuals)

Training Area	Percentage Noting Need
Internet use and applications	47
Health and Safety	45
Successful freelancing	45
Pitching to clients/funders/commissioners	42
Script development - drama	29
Business finance skills	26
Copyright/acquisition/contracts	24
Distribution: cinema/TV/funded	24
E-mail	24
Law on location	21
Assertiveness	21
Word Processing	21
Introduction to film	18
Camera craft - location/film	18
Video editing (non linear)	18
Writing factual for TV	18
Time management	18
Stress management	18
Single camera directing	16
Negotiating skills	16
Employment law	16
Finance packages - budgeting etc	16
Internet programming	16
Graphics, sound and other asset design	16

Source: Cyfle/Media Skills Wales

Table 3.3: Training Needs Common to Firms and Individuals

Training Area	Joint Ranking Score
Pitching to clients/funders/commissioners	5
Business finance skills	8
Internet use and applications	8
Copyright/acquisition/contracts	11
Script development – drama	12
Health and Safety	18
Distribution – cinema/TV/funded	23
Writing factual for television	25
Video editing (non-linear)	29
Internet programming	30
Single camera directing	30
Employment law	41

Source: Derivation from Cyfle/Media Skills Wales Data

Skills Development Provision

3.10 It is difficult to access and analyse meaningful and comprehensive data on skills provision in the sector, mainly due to the need to distinguish between general education in the form of 'media studies', and vocational provision which develops skills needed by practitioners. The latter is provided by Cyfle and Media Skills Wales, as well as by a number of institutions with a strong vocational orientation, such as the Newport Film School. This provision includes some New Media elements, such as the New Media NVQ offered by Cyfle.

3.11 Our information on provision funded by Training and Enterprise Councils (TECs) is incomplete, but suggests that numbers funded on vocational courses directly relevant to the sector are very small - in single figures, for example, for 1999-2000 in both Mid and South-East Wales.

3.12 By contrast, figures supplied by the Welsh Funding Councils for provision funded by the Further Education Funding Council for Wales (FEFCW) show that in these two Welsh regions alone, a total of 6,021 students were enrolled on Media courses at further education institutions. Clearly, given the similar numbers actually employed in the sector in Wales, few of these will find work as media practitioners with Welsh companies: in most cases the qualification must be relevant rather as a general indicator of academic performance for employers in other sectors.

Management and IT Skills

3.13 Our analysis indicates that management and IT skills development is likely to be central for the healthy development of the sector. Enhanced commercial skills are likely to be required in the management team, as well as better planning and strategic development skills to identify and exploit diversification and wider market opportunities.

3.14 In IT, the particularly fast-moving nature of technical development for New Media markets creates a particular challenge for provision planning.

Related Workforce Issues

3.15 The Cyfle findings also indicate some other possible issues for the future composition of the workforce:

- from their results there would appear to be relatively few women in senior positions in the workforce – however, respondents and commentators contributing to YCL's study questioned this, pointing out the existence of large numbers of women at senior levels in broadcasting;
- some employers fear that employees trained in advanced technologies will be tempted away from the firm - indeed perhaps away from Wales, to areas where higher pay is on offer for their new skills;
- the ageing of the independent workforce implies the need (assuming that the sector is to maintain itself at least at current levels) to attract new entrants and to enable them to develop by new routes - the old methods, via in-house broadcaster training, being no longer available to the same extent.

3.16 For the major broadcasters, the future remains uncertain to the extent that existing workforce numbers may fall in response to changing market and regulatory conditions. This may release some skilled workers for the independent and New Media sectors. However, the majors face the same needs for skills in the development and commercialisation of content based on the new technologies, and will be competing with the independents and with other sectors for people with these skills. They may face difficulties in obtaining the right recruits, as they tend to operate relatively formal pay and grading structures which are difficult to adapt to conditions of highly competitive recruitment.

Case Studies

3.17 Case studies produced with the help of employers are provided below to illustrate the themes of the report.

Case Study: S4C - A Strategic View

S4C is the Welsh language TV broadcaster providing analogue and digital channels, most of the content for which is commissioned from independent production companies.

The key strategic need is for recognition and development of Welsh creative talent. Content development is the basis for success in the global market. The fortunes of the sector will depend on combining this creative talent with good technical skills and a wider commercial vision and ambition:

'Most production in Wales has hitherto been led by public sector demand rather than by the commercial market.'

New opportunities for competitiveness and growth will depend on developing a new commercial vision - 'the big challenge is how can Wales be part of this international market for content?'. In recent years the awareness of the need for business skills, as well as creative talent, has grown in the industry, and 'there are some entrepreneurs around'.

This shortage of new enterprise is especially true as regards new media applications - '95% of UK registered websites are inside the M25 - we are way behind in Wales'. There is a need to reverse the perception that 'you can't do it in Wales'.

The S4C policy to consolidate the independent supplier base has been aimed in part at producing larger, more competitive organisations, to move away from the old tendency to produce via 'cottage industries'. Funding for development will remain conditional on ownership of subsequent rights, but S4C will consider proposals for other arrangements:

'Much material is rightly and inevitably too local to be more widely exploitable. But where producers can produce internationally exploitable material, which can achieve a critical mass, we will be happy to negotiate... to work hand in hand to develop it. S4C can market the product more effectively - so there are deals to be done.'

In meeting the strategic skills needs there is a need to foster high level vocational provision. It is important to distinguish this from 'Media Studies' at school and undergraduate level, which is legitimate in academic terms and as a means of producing a 'media-literate' population, but does not produce vocational skills. Postgraduate and specialised provision is available from a number of Welsh institutions including the Cardiff School of Journalism, Lampeter, the Newport Film School, and Trinity College Carmarthen, as well as from Cyfle/Media Skills Wales.

Case Study: S4C - Delivering Training Digitally

One of the key needs in provision for the sector is to develop entrepreneurialism - Welsh TV 'doesn't pay its way commercially'. Initiatives such as the Wales Management Council' s new 'Enterprise Action' programme will help.

There is a need to deliver wider access to lifelong learning and this type of training for business. The Digital College will provide this by offering lifelong learning services using S4C digital TV broadcasts and TV-based interactive training courses. Digital set-top boxes will provide Internet access. The content will embrace New Media techniques, combining broadcast and website material. A specially developed search engine will enable users to identify courses of interest either within the services or externally via colleges. In some cases it will be possible to purchase and download college course material. Expert advice will be available via website discussions.

A five day TV service based on three hours each morning will commence from November 2000. One strand will provide support and training for businesses, especially SMEs - for example training needs analyses, help with exporting, customised language training.

The content for this service will be commissioned from the colleges. This will include the audiovisual content, but the key components are the materials and course designs, teaching input, and websites. Colleges will be able to combine their facilities in terms of TV and film studios used for Media courses, website design and programming expertise, and pedagogical knowledge.

A benefit of this approach is that by developing the colleges as, in effect, multi-media production companies, it should provide opportunities for their students to obtain experience of new media operations which are real, not simulated. The operations will also offer the opportunity to transcend boundaries between media, IT and other disciplines, reflecting the market demands which students will encounter in industry.

Case Study: Barcud Derwen

Barcud Derwen is an independent company providing facilities and post-production services for TV and film production firms. It is the largest company in this field outside London. It originated in a merger of two similar companies - Barcud in Caernarfon, which served the independent production sector in that area, and Derwen in Cardiff. It has continued to expand and diversify and now comprises a number of distinct activities including:

- acting as the host broadcaster for the Assembly;
- giant screen hire for stadium and outdoor events;
- cinema special effects (via acquisition of a London company);
- investment in joint productions;
- computer graphics and multimedia businesses (for example, building the website for the New Millennium Centre in Cardiff and S4C linked websites and CD-ROMs);

This diversification has offset declining profits from the traditional business, caused by the declining numbers of independent producers in Wales, and their increasing average size. This factor, with cost and technology improvements, enables them to establish more production facilities in-house.

The company therefore points a way forward for the sector in Wales, being well advanced with an effective transition or extension from traditional to new media activities. However it is open to question how many other firms in the independent sector possess the vision, the will, or the expertise to make similar progress.

Traditionally the BBC trained production personnel for the industry, but this stock of trained workers is now declining and will need replacement from elsewhere.

Cyfle is seen as providing an excellent entrance point into the industry, although the English-based (Media Skills Wales) provision is still relatively new. A Barcud Derwen employee was an early student on the New Media course which Cyfle/Media Skills Wales have introduced. Provision for the existing workforce is more problematic, mainly because of demand limitations caused by shortages of time and money in the independent sector. Even when financial support is provided (for example via the Sion Pyrs Fund, a trust fund to train management), applications have been disappointing. This partly reflects the traditionally close relations between purchaser (S4C) and suppliers, leading to a lack of emphasis on management and commercial skills.

'Cyfle/Media Skills Wales can be developed to meet larger scale needs and New Media training requirements. There should be no difficulties with provision as long as the funding is available and the demand is there.'

Case Study: Ffilmiau'r Nant

Ffilmiau'r Nant, based in Caernarfon and Menai Bridge, is one of the largest independent producers in North Wales, with a strong track record in drama, documentary, children's soaps, and sport. The company employs up to 200 at a given time, depending on the productions in progress. Most of these are freelances on contracts of varying lengths.

Although the founders were trained in the major broadcasting companies, particularly HTV and the BBC, a new generation of producers and directors, trained within the independent sector, is now becoming important. Cyfle provision has been 'invaluable' in supporting this process.

Pressure on time and budgets means that it is more difficult to develop professionals via intermediate grades such as second assistant director. There is also an unrealistic expectation among some younger workers that they can move quickly to producer/director level.

The main orientation is towards creative skills, but there are difficulties in finding skilled actors, editors and scriptwriters/storyliners for drama. Ffilmiau'r Nant is working with Trinity College Carmarthen and a small independent drama school, to try to establish an acting training course.

The company is aware of the need to add a multimedia dimension to its productions, but will buy in the necessary technical expertise for this in line with normal practice. For example, they will be seeking a supplier to build a programme-linked website; there are now companies offering these services locally. Investment is seen as potentially risky due to the volatile nature of the technologies and skills involved.

The principals feel that they have become 'more streetwise' as regards rights, exploitation and marketing issues. However the difficulty of breaking into English-speaking markets must not be underestimated. For example, it is probably necessary to form alliances with English producers in order to establish a foothold.

Support for producers wanting to identify and access sources of funding would be welcome - along the lines of Irish European Media Enterprise Funds. For example this might provide expertise in the nature of the various forms of support, the formation of proposals, and bidding.

Case Study: Imaginet

Imaginet is a significant member of a group of new suppliers of digital media productions, many of which are based in the Cardiff area. The company works with a range of interactive digital technologies, including websites interactive TV, CD-ROMs and kiosk systems.

This activity requires a wide range of skills. Imaginet employs graphics and design specialists, creative programmers, graphic and computer animators and people with more traditional media skills. There are also core ICT workers such as database developers and systems integrators, advertising and marketing specialists, and account managers. The company aims to progress by being proactive, innovative and entrepreneurial.

Imaginet sees clear scope for growth - 'there are companies like us in London but with five times the number of staff, and some in the USA with up to 9,000 employees... we need more people'.

For Imaginet, a clear vision of the way forward is needed which exploits the enormous potential of new technologies. This must be shared by suppliers, key public sector organisations such as the WDA and the Universities, and key public and private sector purchasers and users. Key Welsh companies need to become fully 'e-commerce enabled' and to integrate global interactive communications with their own internal systems - 'Wales hasn't started yet - nobody's done all of that'.

To facilitate this, new people with new skills in key areas are needed:

- commercial/technical awareness amongst key corporate managers;
- graduates with expertise in interactive TV and mobile media systems;
- ICT expertise in large server based systems;
- skills in newer technologies such as voice activated systems.

An example of the urgent need for market development is interactive TV, a key market for which there is currently no client in Wales. There is a need for a strategic lead in these areas.

4. Action on Skills

4.1 As far as the TV and film production sector is concerned, Wales is lucky to have, in Cyfle and Media Skills Wales, well established NVQ provision. The numbers involved remain fairly small; it seems likely that provision in this area will need to be expanded at some point to meet the need for replacements as the workforce ages. In particular, there appears to be a need to strengthen workforce skills at Level 3, perhaps in closer conjunction with existing degree level provision.

4.2 Cyfle and Media Skills Wales have a clear view that they also need to develop similar provision for the New Media sector. This could potentially serve to ease the diversification of the existing independent production sub-sector, as well as serving the newer population of digital technology based suppliers.

4.3 Such provision, if effective and widely accessed, could have an important effect on the ability of the Welsh sector to meet emerging challenges. It could aid the repopulation of the production sector, especially if elements of traditional and new technology could be combined by mixing NVQ modules. This might require strategic co-operation between NTOs in the media and new media sector and in the IT sector (Skillset and ITNTO).

4.4 In the shorter term, Cyfle and Media Skills Wales have established a New Media NVQ and hope to develop this as a key driver of skills development in the New Media part of the sector. There are funding issues associated with this, as these organisations are funded mainly by the broadcasters and other bodies from within the more traditional areas of the sector. These issues need to be resolved so that progress can be speeded in this area.

4.5 The key need is for agreement at a strategic level for an approach to sectoral development and the associated skills issues, which can embrace both parts of the sector, overcoming historical differences to recognise and exploit the opportunities offered by convergence. The Assembly has an opportunity to facilitate such a development, but will need to consult and frame its deliberations on an appropriately wide basis.

4.6 There is currently a relative lack of involvement by companies in the New Media part of the sector, especially if they have no film or TV production element within their offer. In these cases they may not have links via TAC, Cyfle, Media Skills Wales or Sgrin to existing structures. The New Media Group Wales, the national association in Wales for new media firms and individuals, is administered by Sgrin and sponsored by the WDA and others. It provides a focus for the exchange of information and support for marketing and development activities. As such it will have an important part to play in future work to address skills and development needs for the New Media sub-sector.

4.7 There is a need to build on these existing structures to build a widely based employer forum, to include employers in new and emerging areas of digital content development and production, such as interactive games and learning systems, websites, and e-publishing.

4.8 On the wider UK front, work is being done to map qualifications for the media and cultural industries, and this is intended to inform development of a qualifications framework which can meet the needs of this sector, while providing the necessary links to other frameworks, especially for IT. This work is being taken forward by QCA, with ACCAC involvement, and using input from a specially constructed sector advisory group comprising representatives of the various NTOs concerned. The results of the qualifications mapping phase should be available in late Autumn 2000.

4.9 Complementing this should be the work of the Audio Visual Industry Training Group, (AVITG), meeting under the auspices of the Department for Culture, Media and Sport (DCMS) and Skillset. This is looking at how skills needs can be identified and provided for, across the UK. It is due to report in November 2000. Input from Wales is provided by Huw Jones, Chief Executive of S4C.

4.10 The sector itself is developing, in the shape of the Digital College, a ready made means of developing and delivering vocational information and training via new technologies. This should be exploited to address the skills needs of this, as of other sectors.

4.11 In Wales the new opportunities to establish New Media enterprises in formerly impracticable rural areas, offer the prospect of complementing related strategies for the establishment of a ‘Green Wales’ brand covering new technology industries, organic food products, and related attractions like alternative technology and ecology themed centres.

4.12 As regards management skills development needs, the focus is on the development of outward looking marketing and exploitation work, to the rest of the UK and overseas. Some important work has already been done in North Wales to assist opportunity sourcing and cluster development (TAC, 1998, and WDA 2000). Similar work covering the whole of Wales, and tapping a wider range of funding sources, would be a logical development from this.

4.13 Amongst other action, for example, this work recommends:

- enhanced provision via an Applied Multimedia Skills initiative and a Scholarship Programme;
- a Workforce Multimedia Literacy and Multi-skilling initiative;
- A Multimedia ‘Hot-House’, mini-incubators, and graduate placement schemes.

4.14 **Table 4.1** summarises the above points and presents some more detailed recommendations.

Table 4.1: Recommendations

No.	Recommendation	When	Key Players
1	Disseminate results of qualifications mapping and AVITG work, and any proposed changes	Late 2000	ACCAC/NTOs
2	Reinforce messages to independent sector to stimulate demand for management and new media training	ongoing	Cyfle/MSW/TAC/S4C/ Assembly/CETW
3	Facilitate formation of a **Digital Media Wales Forum** for companies in traditional and new media, to transcend existing boundaries and represent the digital content sector on policy and training issues. Adapt and adopt existing North Wales cluster development proposals for all Wales.	Start 2000	Employers/WDA/ Assembly/NTOs/New Media Group Wales/CETW Partners in 'North Wales Multimedia Action Plan'
4	Use **Digital College** to offer and promote supply-chain development courses for the sector	From late 2000	S4C/Cyfle/MSW/WDA/ Key employers
5	Within the Forum, constitute a global marketing and exploitation sub-group to co-ordinate and support the sale of Welsh product, building on existing North Wales plans	From 2001	Employers/WDA/CETW/ Sgrîn/Cyfle/TAC and North Wales partners
6	Celebrate and disseminate excellence in HE, FE and Cyfle/ Media Skills Wales provision for the sector in Wales		HE/FE/Cyfle/MSW/CETW
7	Offer the Cyfle/MSW New Media NVQ more widely, and agree the funding arrangements needed to allow this	For 2001 courses	Cyfle/MSW and Board, with WDA and Assembly/ CETW
8	Identify and co-ordinate sources of investment for new content and production ventures	ongoing	Broadcasters/New Media Group Wales/ key employers/WDA
9	Emphasise distinction between 'general' academic Media Studies provision and vocational provision, and encourage young people – especially females - to consider vocational routes	ongoing	Careers/schools/FE/HE ES/New Deal/CETW
10	Review and encourage potential for New Media development within rural and Objective 1 areas	2000	Assembly/WDA/Obj 1 bidders

Recommendations for future research

4.15 Cyfle and Media Skills Wales have a record of producing focused and relevant research on the sector, although there have been difficulties arising from the small size of many target companies and their corresponding reluctance to respond to surveys.

4.16 More recently, the Sgrin Research 2000 Project (Phase 1), conducted by Strategic Marketing, reviewed research on the UK and Welsh sectors and produced a database of publications (Sgrin, 1999). This will be an important resource for further work within this project, and succeeding work thereafter. There was an intention to conduct a second phase of this research, but the precise nature of this had not been defined. Meanwhile, the latest Cyfle/Media Skills Wales research has become available.

4.17 Other useful work has been done in North Wales, based in part on research with the sector there (TAC 1998 and WDA 2000).

4.18 There is now an opportunity to review the information available and to identify information gaps and potential methods for addressing these. It may be appropriate to consider a joint Sgrin/Cyfle/Media Skills Wales approach to this, in line with the wider and more strategic general approach outlined earlier.

4.19 Areas which suggest themselves as themes for further research include:

- all-Wales research to identify employers in the New Media sector, building on the sample construction work undertaken for the Cyfle/Media Skills Wales Survey 2000.
- work to build on the directory of relevant research recently developed for Sgrin; for example this might be extended to cover material on the New Media sector and linked work on relevant IT and cultural/creative sector issues;
- the availability, location and quality of training provision covering the latest digital technologies and packages;
- first and further destinations of FE and HE students leaving media and new media courses in Wales.

4.20 Finally, given the difficulties experienced in reaching many small companies in the sector by more conventional survey methods, an event-based methodology should be considered for future work. This could take the form of a conference dealing with wide sector development issues, for example the proposals made above to convene a wider employer forum with a focused sub-group for marketing. Discussion groups or workshops can then be run off this wider event. These could also be used, for example, to construct an employer panel for use in further research.

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Annex B: Welsh Sectors in Context

A Brief Overview of the Relative Size and Importance of Welsh Sectors

This paper presents an overview of the sectors selected for study within the Future Skills Wales Sectoral Skills project. It aims to give the relative scale of the sectors involved and some idea of their relative importance in Wales.

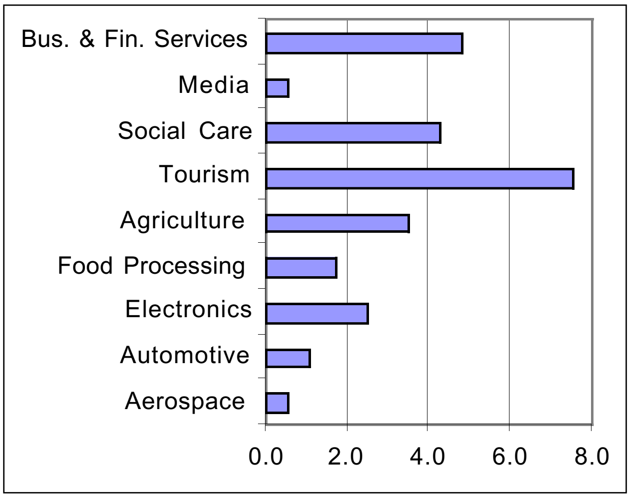
The data on employment used in this section is taken from the latest estimates from Business Strategies Limited (August 2000). Data on business units are taken from NOMIS. Some of the values given (for example for the number of businesses within Wales, or the size of the workforce, for a given sector) will not agree with estimates or calculations from other sources. This is due to differences in the detailed definitions of sectors, or in methods of estimation. However by using one source in this discussion, consistency in measurement or estimation is established, and better comparability is ensured. This is appropriate since here we are concerned with the relative sizes of sectors and their workforces, as much as with absolute numbers.

Sector Size: Workforce Numbers

Figure B.1 shows the employment figures for each of the sectors (employees and self employed) as a percentage of the total for Wales. By this measure Tourism, Leisure and Hospitality is the largest of the selected sectors, followed by Business and Financial Services, Social Care, and Agriculture and Farm Enterprises.

Together, the nine sectors selected for study in this project provide work (either as employees or in self employment) for around 26% of people working in Wales. This indicates the scope and potential importance of the exercise for the understanding of skills issues in Wales and the formulation of policy responses. (The rest of employment in Wales is accounted for by a large public sector, including government, education and public sector healthcare, and by the primary, construction, transport and distribution sectors, including retail).

Figure B.1: Employment as a percentage of Welsh Employment: by Sector

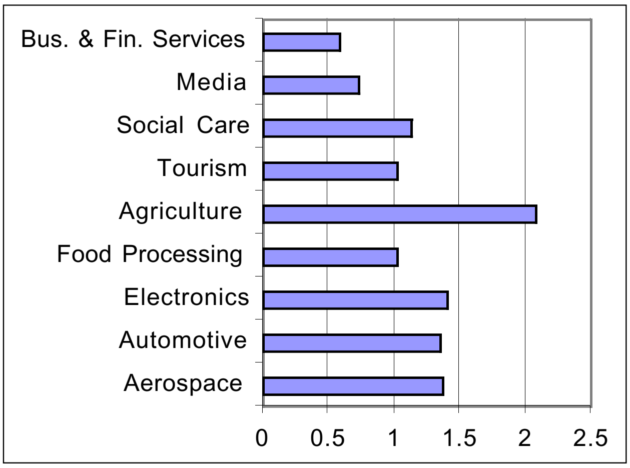


Source: BSL FSW Sector Forecast

Employment Location Quotients

Figure B.2 provides a different view of the sectors, in terms of their importance within Wales relative to the UK as a whole. It does this by comparing the employment location quotients for the sectors. Employment location quotients are used to express the degree to which employment in a given sector is located in a selected region. To calculate a location quotient, an average percentage is first calculated for all employment in the region. Using the BSL estimates, for example, one finds that 4.3% of all employment in the UK is located in Wales.

Figure B.2: Employment Location Quotients for Wales: by Sector



Source: BSL FSW Sector Forecast

Therefore, if employment in a given sector is distributed evenly over all regions of the UK, one would expect 4.3% of its employment to be in Wales. The sector's Welsh employment percentage, at 4.3%, will be equivalent to the average employment percentage for Wales.

To calculate the employment location quotient, the sector's percentage is expressed as a ratio of the Welsh average percentage. For example if a sector has 5.2% of UK employment, the employment location quotient will be the ratio of 5.2 to 4.3, or 1.2. Quotients of more than 1 therefore indicate over-representation of employment in the Welsh sector relative to the UK as a whole. Quotients of around 1 indicate that employment in the sector in Wales is much as one would expect given the overall distribution of employment across the UK; and quotients below 1 indicates that the sector in Wales is relatively under-represented in terms of employment.

Figure B.2 shows that the strongest Welsh sectors, in these terms, are Agriculture, plus three of the manufacturing subsectors - Automotive, Aerospace and Electronics Manufacturing. UK employment is relatively concentrated in Wales for these sectors, despite the fact that some of them are small in relation to Welsh employment as a whole (Figure B.1). The Social Care sector also shows employment strength, while Food Processing and Tourism, Leisure and Hospitality are approximately in line with the Welsh share of UK employment.

Media and New Media, and the Business and Financial Services sector, are both under-represented in Wales in employment terms, with employment location quotients well below 1.

Sector Size: Number of Businesses

An alternative method of comparing sectors is by the number of business units in each sector. This can be less straightforward than the employment location quotient method used above. Here we are using data on business units in Wales and for Great Britain as a whole, provided in NOMIS. The main difficulty is the definition of a business unit within the published figures. This does not make a distinction between separate businesses, and locations representing branches or sites within one business. It also omits small 'one-person' business sites without formal employees.

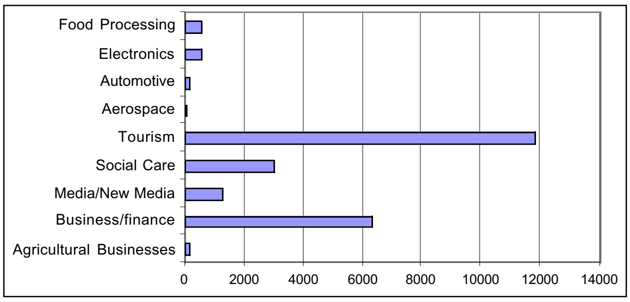
This means, in particular, that these figures are apt to be misleading as applied to the agricultural sector, since they represent agricultural businesses with employees, rather than all farms. They therefore greatly under-represent the number of agricultural enterprises in Wales. Although the business unit figures for agriculture have been included in the following analysis, they are therefore **not a reliable guide to agricultural sites in Wales**.

Figure B.3 shows the sectors studied in terms of the number of business units in Wales. It shows that, by this measure, the Tourism, Leisure and Hospitality sector is by some way the largest. According to the NOMIS figures, this sector contains 12.4% of all Welsh business units, - around 1 in every 8.

A further 6.6% of Welsh business units are in the Business and Finance sector, and 3.2% in Social Care. The next largest sector, Media and New Media, includes a large number of businesses classified under 'Other computer related services'. Many of these may be 'New Media' businesses within our study definition. Others, however, may be providing services which are not relevant within this definition. As explained above, the figures for agriculture do not represent the farming sector accurately.

In total the sectors covered by the study account for over 25% of business units located in Wales.

Figure B.3: Number of Business Units - Selected Sectors



Source: NOMIS

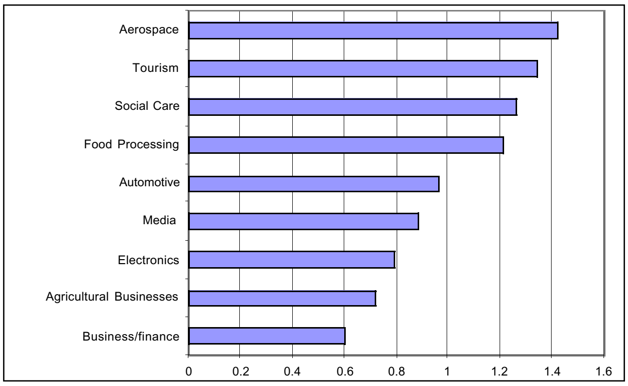
Site Location Quotients of Welsh Sectors

Figure B.4 shows the site location quotients calculated for the sectors covered by this study. These are calculated as for the employment location quotients used earlier, but using business unit figures instead of employment numbers. Four of the sectors have quotients greater than 1. In other words, these sectors are 'over-represented' in Wales relative to what one might expect taking Great Britain as a whole. These quotients represent a degree of concentration of business units in these sectors within Wales. These sectors are Aerospace, Tourism, Hospitality and Leisure, Social Care, and Food Processing.

The Automotive Manufacturing sector in Wales, with a location quotient of 0.96, is close to the size one might expect (in terms of numbers of business units). In other words, Wales has 'a fair share' of business units in this sector, according to these NOMIS figures. At the other end of the scale, the Business and Finance sector, with a site location quotient of only 0.6, is under-represented within Wales - confirming the findings of the first Future Skills Wales study in 1998.

Again, the quotient for 'Agricultural Businesses' reflects the limitations of the method, although it may indicate that Welsh farms and agricultural businesses tend to be smaller than the average for Great Britain, inasmuch as fewer of them are large enough to be included as business units.

Figure B.4: Site Location Quotients



Source: NOMIS

Selection of Sectors for the Study

The above discussion sheds light on the reasons for selecting this set of nine sectors. The reasons vary, but can be simply expressed as follows (some sectors are selected for more than one reason):

- sectors with significant proportions of Welsh businesses and/or workforce (Tourism, Business and Finance, Social Care);
- sectors which are important components of manufacturing industry within Wales (Aerospace, Electronics, Automotive, Food Processing);
- sectors which are relatively strong in Wales (Aerospace, Tourism, Social Care, Food Processing);
- sectors which are relatively weak in Wales, but are important for future growth (Business and Finance, Media/New Media);
- sectors with particular significance for Welsh culture and communities (Agriculture, Media/New Media).

The Manufacturing Sector

Manufacturing has been more important in the Welsh economy than for the UK as a whole. In 1998 employment in manufacturing (including but not limited to the sectors studied in this project) accounted for 19.7% of Welsh employment. This contrasted with 16.6% for the UK - a difference of 3.4 percentage points. Projections for 2004 show manufacturing employment as a lower percentage of employment in both cases - 17.3% in Wales, against 14% for the UK. Although the percentages are smaller, the difference between Wales and the UK, at

3.3 percentage points, remains almost unaffected. (DfEE, Skillsbase/IER, June 2000).

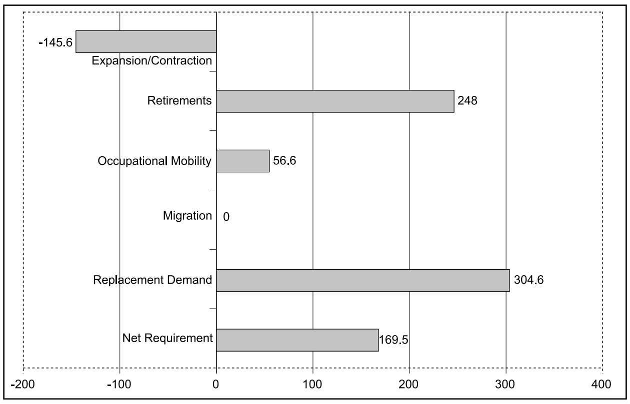
Although these projections show a fairly significant decline in the size of the manufacturing sector as a percentage of overall Welsh employment, the absolute numbers involved change less significantly. This is due to a projected rise in the total numbers employed in Wales over the period 1998-2004. Thus, the figure of 227,000 for those employed in manufacturing in 1998, becomes 205,000 in 2004 - a decline of 22,000, or just under ten percent.

When considering the future demand for skills it is important to keep in mind that, as illustrated above, relative decline in the manufacturing sector does not imply lack of future demand for manufacturing skills. This was one of the insights behind the original Future Skills Wales project methodology.

This point is further illustrated by the replacement demand projections for occupations associated with manufacturing. **Figure B.5** shows the replacement demand projection for skilled metal and electrical trades (SOC 52) for the period 1998-2004, across the UK. In this period, 145,600 jobs in these trades are expected to disappear - part of the overall decline in employment in manufacturing noted above. However, losses from these trades are projected consisting of 248,000 from retirement, and 56,600 from occupational mobility (movement into other jobs), a total of 304,600 workers to be replaced. This more than offsets the effects of declining employment, leaving a net requirement figure of 169,500. This represents the requirement for new, trained entrants to these trades in these six years. These may be new entrants to the workforce, or existing workers who have upgraded or added to their skills and qualifications.

Based on the assumption that Wales would require about 4.5% of this number (this being the approximate size of the Welsh workforce relative to that of the UK), this implies a net requirement for some 7,600 skilled metal and electrical tradespeople over this period for Wales.

Figure B.5: Replacement Demand: Skilled Metal and Electrical Trades, 1998-2004 (UK)



Source: DfEE Skillsbase/IER

Notes

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Stephen Burniston, August 2000.