Strategic Skills Assessment for the Creative Media Industries in Scotland

January 2010

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1 Introduction

1.1 Introduction

Skillset is the Sector Skills Council (SSC) for the Creative Media industries, comprising TV, radio, interactive content design, animation, content for computer games, facilities, photo imaging and publishing. Skillset is responsible for the production of Strategic Skills Assessments (SSA) for each of the UK's four constituent nations. This document sets out the SSA for the Creative Media Industries in Scotland.

1.2 Aims and Objectives of a Strategic Skills Assessment

The overarching aim of the SSA is to play a key role in influencing policy and informing industry investment regarding skills issues across the Creative Media Industries. In order to do so, this SSA:

- Analyses Scotland-specific skills data to produce a detailed report outlining the skills priorities facing the Creative Media sector in Scotland in 2010;

- Has drawn on feedback from consultations with businesses and stakeholders which were carried out to identify current and emerging skills needs of the sector;

- Uses a combination of data and feedback from industry consultations to explore the particular skills needs in Scotland and the extent to which they differ from, or match, those of the UK; and

- Aligns closely with the UK-wide Creative Media SSA document

1.3 Policy Context

Creative Media is an important sector for the economy, both at a Scottish and UK level. There have been a number of important policy developments which will have a direct bearing on the sector over the next 3 to 5 years. A brief summary of these is provided below:

- **Creative Scotland** – this will be the new strategic body tasked with leading the development of the arts and creative and screen industries across Scotland.

The new organisation will take over the functions and resources of Scottish Screen and the Scottish Arts Council as well as having a wider set of responsibilities for developing the Creative Media sector.

- **Skills for Scotland: A Lifelong Strategy** – This strategy sets the Scottish Government's objectives of developing a lifelong learning system which is centered upon the individual but is also responsive to employer needs. The strategy provides a framework for the Government to set out their new agenda for skills and learning in Scotland and outlines ambitions for skills in a lifelong learning context from early years to the work place.

- **Digital Britain –** Digital Britain sets out the UK Government's strategic vision for the UK's digital economy. The aim of the strategy is to ensure that the UK is at the leading edge of, and best utilises, global developments in digital technologically. The agenda is ambitious, spanning digital infrastructure, investment and participation.

- **Scottish Broadcasting Commission** – Established in 2007, the Scottish Broadcasting Commission was tasked with defining the strategic way forward for television production and broadcasting in Scotland.

- **Curriculum for Excellence** – Curriculum for Excellence is the Scottish Government's major programme of reform for the education sector. It starts in nurseries and continues through schools, colleges and beyond. The purpose of Curriculum for Excellence is to ensure that young people in Scotland develop the attributes, knowledge and skills they will need if they are to flourish in life, learning and work, now and in the future.

1.4 Creative Media and Gaps in Official Data Sources

Official data sources that rely on Standard Industrial and Standard Occupational Classifications are broadly effective for photo imaging and publishing for the purpose of collecting and representing employment and some skills data but less useful for capturing data for the rest of the industry.

- Key elements of the Creative Media industry sit in broad classifications that include activity outside of Creative Media preventing any discrete and crucial analysis e.g. Interactive Content Design, Content for Computer Games and Facilities.

- Official data sources to a greater or lesser extent systematically exclude the discrete and increasing freelance labour pool required to create and distribute the creative content upon which our digital economy is becoming increasingly reliant.

- In some cases sample sizes are too small to enable discrete analysis of data contained within SIC that do exist, particularly to the 5-digit SIC level.

- Few data can be cut by nation and region

The Creative Media Industries and Department for Culture, Media and Sport (DCMS) with Skillset first reviewed data available for this part of the industry from the ONS and other sources in 1999 and concluded that additional data are required to measure as a priority the size, shape and specific skills demand of the Creative Media Industries its constituent sectors and large freelance labour pool to a granular and commonly understood sub-sectoral level, using bespoke methodologies to ensure adequate sample sizes. In some cases equivalent data cannot be generated eg. Gross Value Added (GVA) and Gross Domestic Product (GDP) and so these measures exclude contributions from elements not served well by Standard Industrial Classifications (SIC) e.g. Interactive Content Design, Facilities (excl. post production), Content for Computer Games and freelancers.

In some cases, the SIC and SOC (Standard Occupational Classifications) systems simply do not provide the level of detail required, as noted above. In other cases within the SIC system, whilst the system itself provides the level of detail required, sample sizes of surveys that underpin the key data sources such as the ABI which measures productivity are in fact too small to offer robust detailed analysis. As well as systematically excluding sole traders, as far as business activity goes, little data are available at 5-digit SIC level and for example production and distribution activity cannot be disaggregated.

The data presented in this report is supplemented with industry consultations. A complete list of all of those who were involved in the consultations is included in Annex C.

1.5 SSA Structure

The remainder of the SSA is structured out under the following headings:

- Chapter 2 – What drives skills demand;
- Chapter 3 – Current skills needs;
- Chapter 4 – Anticipating what lies ahead.
- Chapter 5 – Geography
- Chapter 6 - Recommendations

2 What Drives Skills Demand?

2.1 Introduction

In this section of the SSA, we consider the range of factors which drive skills demand in the Scottish Creative Media sector. It commences with a description of the sector and its contribution to the Scottish economy, before going on to provide an overview of the business base and workforce. It then concludes with a discussion of the factors driving skills demand in the Creative Media sector in Scotland. It is structured under the following headings:

- Description and Contribution of the Creative Media sector in Scotland;
- The Business Base;
- Recruitment at Entry Level Onwards;
- Employment Profile; and
- Factors Driving Skills Demand in Scotland

2.2 Description and Contribution of the Scottish Creative Media Sector

Creative Media forms a major component of the wider Creative Industries and the Creative Industries in the UK contribute more than £50bn to the economy every year.[1] At the Scottish level, the Creative Industries contribute £5.2bn in turnover and £2.4bn in Gross Value Added (GVA) to the economy.[2]

Creative Industries in their entirety have been designated as a key sector within the nation's Government Economic Strategy (GES). Its presence within the six priority sectors in the GES is testament to the Scottish Government's acknowledgment of the sector's contribution to the national economy as well as its *"high growth potential and capacity to boost productivity".*[3] Furthermore, it also demonstrates the level of

[1] http://www.nesta.org.uk/areas_of_work/creative_industries - Please note that this includes software and reproduction of computer media.

[2] Creative Industries Key Sector Report, Scottish Government, (November 2009). Please note that this includes software and reproduction of computer media.

[3] Scottish Government, Government Economic Strategy (GES) 2007

commitment which the Scottish Government is prepared to make in order to support the sector to achieve its full potential.

Creative Media is made up of eleven sub-sectors which fall into four of eleven Creative Industries as defined by the DCMS:

- Animation
- Content for Computer Games
- Facilities (which includes Post Production, Studio and Equipment Hire, Special Physical Effects, Outside Broadcast, Processing Laboratories, Transmission, Manufacture of AV Equipment and Other Services for Film and TV)
- Film
- Interactive Content Design
- Commercials and Promos
- Corporate Production
- Photo Imaging
- Publishing (Books, Journals, Magazines, Newspapers, Directories and Databases, News Agencies and Electronic Information Services)
- Radio; and
- Television.

Economic Growth

According to a recent Scottish Government report the Creative Industries, at the heart of which is Creative Media, contributes as follows:[4]

- The Creative Industries in Scotland has an estimated turnover of £5.1 billion in 2007 and employed 60,700 people (3% of Scotland's total employment). The Creative Media Industries make a significant contribution to this.

- In 2008, there were 8,485 registered enterprises operating in the Creative Industries sector (or 5% of all registered businesses in Scotland) and the number of registered enterprises in the sector had increased by 27% over the last decade compared to 4% across all industries in Scotland. Just under a fifth of these are estimated to be within the Creative Media Industries.

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[4] www.scotland.gov.uk/Resource/Doc/289922/0088836.pdf

- The analysis also found that the Creative Industries in Scotland are characterised by small businesses (97% of enterprises had 0-49 employees in 2008). If this category is broken down further, it shows that 60% of registered enterprises had zero employees, whilst 37% had 1-49 employees. Skillset research on the levels on freelancing within the Scottish Creative Media Industries reveal that approximately 40% of the workforce – a total of 19,950 – work on a freelance basis.[5]

Looking specifically at Gross Value Added (GVA) data[6] for the available Creative Media sub-sectors within the Creative Industries, Table 2.1 reveals that the sector as a whole has experienced above-average growth in recent years and therefore has a key role to play in driving economic growth within Scotland:

- In 2007, the GVA generated by the Creative Industries was £2.4bn, representing 3% of total output in Scotland;
- GVA in the Creative Industries increased at faster rate than across the Scottish economy as a whole – 91% compared to 60% respectively; and
- Publishing and Video, Film and Photography have both exhibited below average levels of GVA growth in recent years.

Table 2.1 GVA in the Creative Media industries (1998-2007)**

GVA in the Creative Media Industries (1998-2007)				
	1998	**2007**	**Change (1998-2007)**	
	£m	**£m**	**£m**	**%**
Video, Film & Photography	£53.9	£71.1	£17.2	32%
Publishing	£308.2	£407.7	£99.5	32%
Radio and TV	*	*	*	*
Total Creative Industries GVA	**£1,276.7**	**£2,437.8**	**£1,161.1**	**91%**
Total Scottish GVA	**£47,137.2**	**£75,448.5**	**£28,311.3**	**60%**

Source: Scottish Annual Business Statistics, * Denotes disclosive data
**Data exclude Content for Computer Games, Interactive Content Design and Facilities

[5] Skillset (2009) Employment Census (all creative sub-sectors excluding film production freelancers, photo imaging and publishing), secondary analysis of unit lists for feature film productions (80 minutes or longer and minimum budget of £500K) involving UK based crew that were shot during 2006 (film production), and Labour Force Survey April - June 2009.

[6] Scottish Government (1998-2007), Scottish Annual Business Statistics.

Productivity levels vary greatly across the Creative Industries (as measured on a per employee basis, which of course excludes the contribution of the significant proportion of freelancers working in the sector). Some sectors have shown strong growth in recent years, whereas others have fallen somewhat below the average across all Scottish industries. Table 2.2 below reveals:

- In general, productivity levels within the Creative Industries as a whole were below the Scottish average in 2007. This is in direct contrast to the position in 1998 and is attributable to a slower than average rate of growth across the Creative Industries as a whole in recent years.

- Productivity levels in Publishing have exhibited a below average level of growth in recent years, meaning that overall productivity in this sector has fallen below the Scottish average.

Table 2.2 Productivity Levels per Employee in Creative Industries (1998-2007)**

Productivity in the Creative Industries (1998-2007)				
	1998	**2007**	**Change (1998-2007)**	
	£	**£**	**£**	**%**
Video, Film & photography	£17,171	£24,877	£7,706	45%
Publishing	£37,405	£43,347	£5,942	16%
Radio and TV	*	*	*	*
Total Creative Industries GVA	£33,123	£41,626	**£8,503**	**26%**
Total Scottish GVA	£30,389	£45,741	**£15,352**	**51%**

* Denotes disclosive data
**Data exclude Content for Computer Games, Interactive Content Design and Facilities
Source: Scottish Annual Business Statistics

Networks

Networks are also integral to the clustering of particular types of sub-sectors in specific geographical locations. Turok's[7] (2003) research considered the extent to which the concept of the clustering could be used to explain the structure of the Film and television industry in Scotland and found that although localised networks of social interaction existed in this sub-sector, they revolved around acquaintance and support networks, rather than business or creative relationships.

[7] Turok, I (2003) Cities, Clusters & Creative Industries: The Case of Film and Television in Scotland

In addition to the more supportive and collaborative elements of networks that much research has focused on, Shaw's[8] (2006) research on small firm networks in Scotland in the Creative Industries revealed complex patterns of networking, where networks and the contacts in them provided a source of information on competitors as well as enabling small firms to develop their client base and resources (especially when starting-up). This is evident in the relatively high levels of freelancing in both the TV and Film Industries in Scotland, with freelancers accounting for 40% and 64% respectively. [9]

2.3 The Business Base

Estimates show that there are around 15,695 businesses operating within the Creative Media sector in the UK[10]. Geographical detail is missing from official data sources but evidence from Skillset research has shown that around 7% of companies (excluding cinema exhibition, film production and publishing firms) are based in Scotland.[11] This equates to approximately 1,100 businesses operating within the Creative Media sector in Scotland.[12]

Table 2.3 provides a breakdown of the size of Creative Media workplaces in Scotland, relative to all other industries. The table shows that the Creative Media Industries in Scotland are characterised by a disproportionately high number of micro-businesses. Approximately 84% of Creative Media workplaces in Scotland employ fewer than 5 employees, compared with 63% across all other industries in general.[13]

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[8] Shaw (2006) Small Firm Networking: An Insight into Contents and Motivating Factors

[9] Skillset (2009) Employment Census (all creative sub-sectors excluding film production freelancers, photo imaging and publishing), secondary analysis of unit lists for feature film productions (80 minutes or longer and minimum budget of £500K) involving UK based crew that were shot during 2006 (film production).

[10] ABI ONS (March 2009). Key elements of the Creative Media industry sit in broad classifications that include activity outside of Creative Media e.g. Interactive Content Design, Content for Computer Games and Facilities and hence are not included in this estimate.

[11] Skillset (2006) Employment Census and Skillset (2007) analysis of Experian. Figures exclude Cinema Exhibition, Film Production and Publishing.

[12] Excludes businesses in some Creative Media sectors e.g. Interactive Content Design and Content for Computer Games. See Annex A for more details on the limitations of official data sources.

[13] ONS (March 2008), Inter-Departmental Business Register. Does not include Facilities, Content for Computer Games, Interactive Content Design and all freelancers.

Table 2.3 – Size of workplaces, Creative Media & All Industries (2008)[14]

Size of workplaces, Creative Media & All Industries		
Size of Workplace	**Creative Media**	**All Industries**
0-4 employees	84%	63%
5-9 employees	7%	17%
10-19 employees	3%	10%
20-49 employees	4%	6%
50-99 employees	2%	2%
100-249 employees	0%	1%
250+ employees	0%	1%

Source: Inter-Departmental Business Register (IBDR), March 2008

2.4 Recruitment at Entry Level Onwards

The Creative Britain report claimed that some individuals within the sector felt that "*the chance to start a career in the Creative Industries means moving to London, working for free or knowing someone who can get you a foot in the door*."[15] This perception is validated by much of the available data, as it demonstrates the fact that entry into the sector quite often occurs through informal routes. The Creative Media Workforce Survey established that just under one-in-three (31%) entered the industry through an advertisement. However, less formal routes were very common – around one fifth (22%) of those surveyed heard about the job through a friend or relative, 19% through direct contact with a company, and 9% through word-of-mouth. [16] From an employer perspective, the Employers Survey Report has revealed that the most common method of recruitment for three quarters of employers is personal contact with individuals known to the organisation.[17]

Furthermore, the fact that Creative Media is an attractive sector has created a potential over-supply of new entrants into the industry. This is driven largely by the desirable nature of the work and the fact that it represents an opportunity for some people to turn a passion into a career. For example, professional photography has a high proportion of individuals who started photography as a hobby before earning a living out of it. Similarly, the interesting work offered in TV and Film Production has long acted as a draw to young people in search of a fulfilling career.

[14] Please note that this figure does not include those businesses within Facilities, Content for Computer Games, Interactive Content Design & All Freelancers.

[15] Creative Media New Talents for the New Economy, (2008) Department for Culture, Media & Sport

[16] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[17] Skillset (2006) Employer Survey

As a result, high levels of unpaid or voluntary work take place in the sector – almost half (45%) of those surveyed in the Creative Media Workforce Survey said they had done unpaid work at some point in their career. The survey revealed that the incidence of unpaid working was even higher in other content creation (75%), independent production for TV (56%) and studio/equipment hire (55%) but lower in transmission (13%), equipment manufacturing (19%) and cinema exhibition (22%).[18]

Despite this potential over-supply of new entrants to the industry, there remain some skills shortages within the sector. For example, the Photography industry is overcrowded with Photographers but some employers within the industry are concerned that new recruits lack some fundamental technical skills.[19] However, this potential over-supply is not a standard pattern across all sub-sectors. For example, 45%[20] of employers in Content for Computer Games, 41%[21] in offline multimedia and 40%[22] in studio/equipment hire have had difficulty obtaining the skills they need - the majority of which are reported to be industry specific.

A recent report on the impact of the recession on the UK's Creative Media industries highlighted the fact that 50% of employers interviewed in Wales, Scotland and Northern Ireland reported difficulties in trying to find new people with the skills they required and 15% expect it to become harder to find people with the right skills in the next 12 months.[23]

2.5 Employment Profile

The most up-to-date figures reveal that approximately 19,550[24] people are employed in the Creative Media Industries in Scotland. This represents a significant drop from approximately 27,000 in 2006.[25] Further analysis reveals that this fall is largely attributable to a drop in the number of people employed within Publishing and

[18] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[19] Skillset (2007) Photo Imaging Strategy Update

[20] Skillset (2006) Employer Survey

[21] ibid

[22] ibid

[23] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

[24] Skillset (2009) Employment Census (all creative sub-sectors excluding Film production freelancers, photo imaging and publishing), Skillset/UK Film Council Feature Film Production Workforce Survey 2008 (area live), and Labour Force Survey April - June 2009.

[25] Skillset (2006) Employment Census, Skillset/UK Film Council Feature Film Production Workforce Survey 2008, Experian (2007), Skillset/Equity Performing Arts Industry Workforce Survey 2005, Labour Force Survey 2005-2007. N.B. Excludes cinema exhibition and freelancers available on Census Day.

Interactive Content Design. However, there are also likely to be methodological reasons behind this. The recession has meant that a number of Creative Media companies have re-structured and now make less use of freelance staff than they previously did. Furthermore, the Employment Census does not count freelancers not working on the day the Census takes place. It is important to note that these individuals are still likely to work in the Creative Media sector, though less frequently than before the economic downturn.

The employment profile for Creative Media reveals that the industry is characterised by high levels of freelancing, which vary considerably across the different sectors contained within Creative Media. This section goes on to explore some of the key characteristics of employment within Creative Media in Scotland, including a breakdown of employment by:

- Occupation;
- Freelancers;
- Gender, Ethnic Background, Disability & Age; and
- Geography.

Occupational Breakdown

In order for the Creative Media industry to continue to support economic growth in Scotland, it relies on contribution from a wide range of occupations across the sector. These range from creative and technical such as content design, visual effects and animators through to management and professional roles. Table 2.4 provides a full breakdown of employment by occupation in the Creative Media Industries in Scotland, compared with the UK. This is taken from the Skillset's (2009) Employment Census. An occupational breakdown for Publishing is not available at a Scottish level. This is due to this sector only being classified under Creative Media in late 2008.

Table 2.4 Creative Media Employment by Occupational Group

	Creative Media Jobs Scotland (*Excl. Pub.)*	**Creative Media Jobs in UK** (*Excl. Pub.)*
	%	**%**
OCCUPATIONAL GROUP		
Strategic Management	6%	5%
Creative Development	1%	2%
Production	13%	11%
Legal	*	1%
Broadcast Management	5%	3%
Broadcast Engineering & Transmission	1%	2%
Editorial, Journalism and Sport	4%	5%
Content Development	1%	1%
Art and Design	7%	9%
Animators	4%	3%
Costume/Wardrobe	*	1%
Make Up & Hairdressing	*	1%
Camera/Photography	13%	10%
Lighting	1%	2%
Audio/Sound/Music	3%	3%
Transport	*	*
Studio Operations	*	*
Technical Development	1%	3%
Editing	2%	2%
Laboratories and Imaging Services	10%	5%
Manufacture	0%	1%
Servicing	*	1%
Retail and Exhibition	13%	10%
Libraries and Archives	*	2%
Distribution, Sales and Marketing	4%	2%
Business Management	8%	13%
Other	1%	2%
All	**100%**	**100%**

Source: Skillset (2009) Employment Census, Skillset (2008) Photo Imaging Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey
***** denotes a figure less than 0.5 but greater than 0. 'N/A' denotes the data are not available.

Freelance Employment

For the purpose of this document, a member of the Creative Media Industries workforce is considered to be 'freelance' when they have a contract of less than 365 days and an 'employee' when they have a contract of 365 days or more. 40% of the workforce in Scotland is freelance, higher than the average of 36% for the UK as a whole. Table 2.5 below shows how the proportion of freelancers within the workforce can vary quite significantly across different sectors within Creative Media. For example, individuals working in Post-Production, Terrestrial Broadcast and Content for Computer Games are less likely to be freelancers than within other sub-sectors. However, in Independent TV Production, Film Production and Online Content, freelancers account for a much larger share of the workforce.

Table 2.5 Freelance Employment in Scotland

Occupational Groups	Total Employed	% Freelance
TELEVISION	**1,950**	**40%**
Terrestrial TV	950	11%
Cable & Satellite Television	0	-
Independent Production (TV)	1,000	67%
RADIO	**1,650**	**29%**
Broadcast Radio	1,650	29%
Independent Production (Radio)	*	*
FACILITIES	**1,000**	**38%**
Post Production	100	6%
Studio & Equipment Hire	250	36%
Outside Broadcast	50	100%
Visual FX	*	-
Special Physical Effects	50	22%
Manufacture of AV Equipment	*	-
Processing Laboratories	*	-
Other Services for Film and Television	550	44%
FILM	**950**	**64%**
Cinema Exhibition	N/A	N/A
Film Distribution	300	29%
Film Production	650	78%
ANIMATION	**500**	**49%**
OTHER CONTENT CREATION	**150**	**31%**
Commercials Production & Pop Promos	*	-
Corporate Production	150	31%
INTERACTIVE CONTENT DESIGN	**1,050**	**42%**
CONTENT FOR COMPUTER GAMES	**500**	**16%**
PUBLISHING	**9,000**	**N/A**
Book Publishing	2,000	N/A
Newspaper Publishing	7,000	N/A
PHOTO IMAGING	**N/A**	**N/A**

Source: Skillset (2009) Employment Census (all creative sub-sectors excluding film production freelancers, photo imaging, publishing), secondary analysis of unit lists for feature film productions (80 minutes or longer and minimum budget of £500K) involving UK based crew that were shot during 2006 (Film production), and Labour Force Survey April - June 2009.

Gender, Ethnic Background, Disability & Age

Table 2.6 below provides an overview of the key characteristics of the Creative Media workforce in Scotland, looking specifically at gender, ethnic background, disability and age. The table reveals that:

- Representation of females in the Creative Media Industries is lower than for men. In fact, women account for just one-third (33%) of the total workforce in Scotland.
- A very small proportion (2%) of the workforce belongs to a Black Asian and Minority Ethnic (BAME) background.
- Approximately 6% of the Creative Media workforce has some form of disability.
- In terms of employment, the Creative Media Industries are relatively young, with 40% of the workforce aged less than 35.

Table 2.6 Diversity in Scotland's Creative Media workforce

Creative Media Workforce	Scotland
	%
Gender	
Male	67%
Female	33%
Ethnic Background	
White	98%
BAME	2%
Disability	
Disabled	6%
Not Disabled	94%
Age	
16-24	10%
25-34	30%
35-49	43%
50+	18%

Source: Skillset (2009) Employment Census (all creative sub-sectors excluding film production freelancers, photo imaging, publishing), Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey, and Labour Force Survey April - June (2009).

2.6 Factors Driving Skills Demand in Scotland

The Creative Media Industries in Scotland have identified a number of key factors currently driving skills demand in Scotland[26]. These are set out below:

Growth in Scottish Television Production

The recommendations of the Scottish Broadcasting Commission[27] have resulted in a commitment from the BBC to increase network TV production in Scotland to 9% (in line with its proportion of UK population) by 2016. This will have an effect on the growth of the sector and is widely expected to increase the requirement for high-end production staff in Scotland. Those with the skills to produce 'returning series' and able to deliver within the budgets and timescales set.

In addition, this increase is expected to have a knock-on effect amongst Scottish Independent Television Production companies with the amount of commissions gained expected to increase. Industry representatives feel that if Scotland is to capitalise on this increased throughput, it must develop the production capacity which currently exists. A key component of making this happen will be to demonstrate to commissioning editors that Scotland has the strength and depth of talent to originate, develop and deliver multi-million pound commissions.

Technology Convergence

The rapid pace of digital technology development has led to diffusion in the ways creative content is distributed. Content originally created for Computer Games is increasingly used in TV and Film, meaning that across the Creative Media sector the lines between sub-sectors are becoming ever more blurred. This has led to the need for traditional incumbents to broaden their skill set and develop an awareness of the new ways in which content can be monetised.

Advanced digital technology is also making geographical location less of an issue. If Scottish companies are to take advantage of the global opportunities which exist, the broad consensus from industry is that traditional core skills, such as TV production, will need to be supplemented with an understanding of how the end product can be distributed. A key component in this will be finding and developing new audiences.

Innovation

[26] Results from Skillset consultations with Scottish industry representatives in January 2010.

[27] Platform for Success, Scottish Broadcasting Commission, September 2008.

Innovation is at the heart of the Creative Media sector as emphasised in 'Digital Britain'.[28] As outlined above, innovative new technologies are a key factor in driving the demand for skills. However, the need to continually keep pace with market demand also requires innovative capacity. This cuts across the Creative Media sectors: from the need of the Film industry to develop ideas which attract funding - to games development companies anticipating the future needs of their customer base. To do this, requires employees and freelancers with experience and understanding of their field. Something that can be hard to find in the Scottish labour market, particularly with regards to TV production and Content for Computer Games. In addition, innovation will drive demand for content that can be 'versioned' in a number of ways depending on the distribution channel e.g. Film for online markets.

Globalisation

Scottish Creative Media companies operate in a global marketplace. However, the industry consultations[29] also found the view that it must be realistic about what it can aspire to given its relatively small size. Scotland was considered to have a key strength in Content for Computer Games development, with Scottish companies such as Real Time Worlds and Ruffian taking advantage of global opportunities. There were seen to be challenges for TV production, with securing a greater share of the UK market viewed as more of a priority than expanding into the other world English speaking nations. The view was that to do this required greater entrepreneurial and business development skills.

The Need to Move-Up the Value Chain

The recently published Digital Inspiration[30] strategy sets the ambition for *"a greater and more profitable role for Scottish companies in the chain of distribution and interactivity"*. The vision is to move up the value chain through increased exploitation of rights, greater control of Intellectual Property and distribution and more sophisticated business models to derive value from new opportunities. This view from industry was that this requires the leadership skills within the Creative Media sector to be developed.

Investment

There was general agreement within the industry that demand for skills was directly linked to levels of investment in the Creative Media sector. Higher investment leads to greater activity which in turn leads to greater demand for skills. Investment can take a

[28] Digital Britain Final Report, Department for Culture, Media and Sport (DCMS), June 2009.

[29] Results from Skillset consultations with Scottish industry representatives in January 2010.

[30] Digital Inspiration: Strategy for Scotland's Digital Media Industry,(2009)

number of forms: increased commissions from inside and outside Scotland; traditional equity based investment; and project based investment through companies like Channel 4's '4iP'. The common factor underpinning all is that investors require confidence in the leadership and management of the company before investing.

3 Current Skills Needs

3.1 Introduction

In this section of the SSA, the current level of skills in the Creative Media sector are profiled before going on to consider evidence on the current skills needs of Scottish employers. The section finishes with an overview of the education infrastructure and supply side interventions which currently exist in Scotland. The chapter is set out around the following themes:

- Overview of Skills in the Sector;
- Sectoral Skills Needs; and
- Skills Supply.

3.2 Overview of Skills in the Sector

The Creative Media Industry in Scotland is characterised by a highly qualified workforce, with 62% of the workforce in possession of a Scottish Credit and Qualifications Framework (SCQF) Level 9 qualification.[31] Media is one of the most popular subject areas, with a total of one-third of graduates holding a degree level qualification in a media-related subject. Furthermore, more than one-in-five members of the workforce (22%) holds a postgraduate qualification. [32] Relative to the UK, a greater proportion of Scotland's Creative Media workforce are educated to a higher level. Across the UK, 57% have a graduate/level 4 degree and 18% have a postgraduate qualification.[33]

Research undertaken in 2008 showed that more than two-thirds (68%) of the Scottish Creative Media workforce had participated in training over the preceding 12 months.[34] Demand for training remains high, with almost one in every two members of the workforce indicating that they have a current training or development requirement.[35] This highlights the challenge that the Creative Media Industries face in keeping pace

[31] Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey, and Labour Force Survey April - June 2009.

[32] ibid

[33] ibid

[34] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[35] Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey.

with the technological advances that drive demand (and need) for training and development within the sector. However, the onset of recession in 2008/09 meant that almost one in two employers (43%) in Wales, Scotland and Northern Ireland had to reduce their training budgets.[36] This could have implications on the sector's ability to emerge from the recession in a strong position.

Despite the potential oversupply of new entrants to the sector, skills gaps and shortages in the Creative Media Industries arise for a number of reasons and can vary significantly across the constituent sub-sectors. A skills gap occurs when the existing workforce have lower skill levels than are necessary to meet business or industry objectives whereas a skills shortage exists when there is a lack of adequately skilled individuals in the labour market.

In general, the sector is characterised by a relatively young workforce, many of whom are new to the Creative Media Industries. This trend is largely positive as it is testament to the attractiveness of the sector to new graduates. However, it does have some implications for the skills base within the industry. Many employers consider the skills gained on-the-job to be the most relevant, however there is recognition that it takes time to embed these practical skills in raw graduates. In addition, the speed at which the sector develops is a contributor to many of the skills shortages across the sector. Where employers do experience a skills shortage or gap, they are often unable to locate suitable training provision which can deliver the required training in a tight timescale.

3.3 Sectoral Skills Needs

This section provides an overview of the main skills needs, shortages and gaps within the constituent sectors of the Creative Media Industry in Scotland.

Television

Overview

Television is a major sector within the Creative Media Industries in Scotland. It comprises Broadcast Television, Cable and Satellite Television and Independent

[36] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

Production. Latest estimates from our research programme reveal that there are approximately 1,950 people working within TV across Scotland – around 4% of the UK total.[37] Employment within this sector is split almost equally between Terrestrial TV (49%) and Independent Production (51%).[38]

The sector also has an almost exact distribution of males and females working within the industry. TV has the largest representation of women than across any other sectors within Scottish Creative Media Industries – at 47%. [39] At a UK level, women are also well represented within this industry, although to a lesser extent (41%) than across Scotland.[40]

Our research shows that, on average, 40% of Scotland's TV workforce are freelancers.[41] However, the Independent Production sub-sector relies more heavily on freelancers (67%) when compared with Terrestrial TV (11%).[42] A relatively high proportion of freelancers can have implications on the skills base. Freelancers are generally not able to access affordable training as readily as employees, and as such, are particularly vulnerable to being left behind unless their skills are updated.[43]

The Independent Production sub-sector is made up of around a dozen companies providing content in specific genre for the Scottish market, but also seeking commissions across the UK, including companies such as Tern, Shed Productions and RDF Media. There are also a large 'tail' of around 90 micro-businesses and freelancers. A characteristic of the Independent Production sub-sector is flexible alliances between some forms to provide specialist 'teams' to meet the needs of specific commissions. Both the BBC and STV have in-house development teams based within the organisations, and in the case of STV, this team may soon be allowed to compete for commissions with other independent producers.

There are also around 25 firms active in the producing content in the Gaelic language. Again the sector is dominated by small number of SME's, meeting specific niche requirements and a long tail of freelancers and micro-businesses.

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[37] Skillset (2009) Employment Census (excludes film production freelancers, photo imaging and publishing).

[38] ibid

[39] ibid

[40] ibid

[41] ibid

[42] ibid

[43] http://www.skillset.org/skillset/press/releases/article_6060_1.asp

A number of factors suggest a potential growth in the TV sector as an employer within the Creative Media Industries in Scotland. To a large extent these mirror the factors observed in the UK as a whole and in the other nations and regions. These include:

- Regulatory and other commitments to increase output outside of London including a commitment by the BBC to increase Scotland's share of the television network expenditure;

- Technological developments including high definition, interactive and online TV which have provided new opportunities for professionally produced content; and

- Proliferation of digital TV channels providing an increasing market for the Scottish Production sector;

Skills Shortages

Evidence reveals that employers in Terrestrial Television and Cable & Satellite were the most positive about skills, with none stating that new recruits had few or no skills. [44] However, more recent data indicates that 40% of employers in Television and Radio across the UK are finding it difficult to find new people with the skills they need and 28% expect it to become more difficult over the next 12 months.[45]

Findings from the Scottish Broadcasting Commission's Survey of Television Production in Scotland, published in 2008, revealed that *"attracting and retaining high-end talent was an increasingly important issue for Scotland."* [46] The report, of which the aim was to describe the scale and nature of the sector and the issues affecting its sustainability and growth, goes on to make specific reference to the lack of Series Producers and Heads of Department. The potential solutions suggested to address this skills shortage – either developing 'home-grown' talent or importing the talent from elsewhere – had significant cost implications for businesses in the industry. The report also highlighted key skill shortages in two main areas of:

- the exploitation of secondary rights; and

[44] Skillset (2006) Employer Survey

[45] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

[46] Survey of Television Production in Scotland, Scottish Broadcasting Commission, 2008

- the distribution of multi-platform content.

In addition to published data and sources of information, feedback from industry[47] also pointed to the following skills shortages within the TV sector in Scotland. These included:

- A shortage of entrepreneurial skills (and confidence) both in terms of those employed at various levels within the industry, and also amongst freelancers, particularly freelancers who may have been forced to take this route as a result of redundancy;

- A shortage of senior executives with higher level business skills and management and leadership skills;

- A limited supply of TV producers with track record and experience to compete more effectively for commissions particularly those with experience of delivering ‘returning series’ productions;

- A concern expressed by some that with anticipated increased levels of production in Scotland, combined with Feature Film Production, may on occasion lead to short-term skills shortages due to capacity limitations in the workforce (e.g. in freelance camera operators);

- The need to develop the ‘tiers’ of skills below the high-end production talent, specifically production assistants and technical/craft skills;

- Skills in special effects generation (which is also a problem in the context of the Film Production sub-sector) resulting in special effects for both TV and Film Productions having to be outsourced to companies outside of Scotland;

- A shortage of project administration and organisational staff (e.g. in Archiving, Compliance and Rights); and

- A shortage in senior production talent across all genres and especially those able to speak and work in Gaelic.

[47] Results from Skillset consultations with Scottish industry representatives in January 2010.

Skills Gaps

Research highlights that within the Creative Media Industries across the UK, Terrestrial Television employers are the most likely to report a skills gap amongst their workforce, with 63% doing so. [48] In contrast, Cable & Satellite and Independent Production companies were less likely to report skills gaps at 21% and 25% respectively.[49]

Across Scotland, 20% of Creative Media workforce respondents stated that they had received training in editing in the past 12 months.[50] However, 14% of the workforce indicated that they still had a need for training in this area.[51]

In addition, the industry has pointed to a number of skills gaps affecting the TV sector in Scotland[52]. These include:

- Leadership, management and business growth skills within Independent Production companies in Scotland;

- In terms of Broadcasting, there is the potential for gaps to emerge in the commercial sector to accommodate multi-channel delivery and extended digital content through existing technologies;

- Skills relating to new technologies (such as high definition and 3D);

- The fast moving nature of the sector means that skills gaps often emerge in technical skills around the introduction of new technology. These are often transient and addressed through on the job training, but they can lead to challenges in sourcing staff – or rather staff with particular skills at the right time;

- A significant gap in terms of Script Writers. This was thought to be an issue across Scotland, but particularly so for those who possess Gaelic language skills; and

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[48] Skillset (2006) Employer Survey
[49] ibid
[50] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).
[51] ibid
[52] Results from Skillset consultations with Scottish industry representatives in January 2010.

- In the production of TV for Gaelic language, the consultations suggested that recent activity to address new entrants to the sector had addressed many skills shortages. Nevertheless the polarisation of the workforce, which significant numbers of younger entrants and a body of experienced – and older – staff meant that there were some particular skills gaps in some occupations. These included presentation skills, directorial skills and technician skills, particularly in post production.

Discussions with industry found concerns that the introduction of a 'tapeless environment' in Television production could have implications for content management, storage, archiving and other workflows such as editing.

In summary, there is a need to ensure that the 'technical aptitude skills' relating to the convergence agenda are current and relevant in Scotland and that there is a concerted effort to improve linkages between 'story-telling and technical skills'. A key part of this is to ensure that experts within the TV sector are flexible and can undertake a wider range of tasks driven by the convergence and multi-platform agendas.

Film

Overview

The Film industry in Scotland employs in the region of 950 people, accounting for approximately 3% of the UK total.[53] The majority of this employment (71%) is based within Film Production, with the remainder (29%) in Film Distribution.[54] In Scotland, 64% of the Film industry's workforce operate on a freelance contract compared with just 34% across the UK-wide Film industry.[55]

In terms of female representation within the workforce, approximately just over one-third (35%) of the Scottish Film industry's workforce is female – this is lower than the corresponding figure of 41% for the UK Film industry.[56]

[53] Skillset (2009) Employment Census (all creative sub-sectors excluding film production freelancers, photo imaging and publishing), secondary analysis of unit lists for feature film productions (80 minutes or longer and minimum budget of £500K) involving UK based crew that were shot during 2006 (film production). Data for Cinema Exhibition is not available for Scotland

[54] ibid

[55] ibid

[56] ibid

Estimates from Scottish Screen reveal that there are approximately 80 production companies and more than 300 facilities companies operating across the country.[57] Furthermore, Scotland attracts in the region of £20 - £25 million of location spend each year from production companies shooting on location all over the country.[58] Film is still seen as being a strategically important industry due to the potential economic benefits of a buoyant indigenous Film industry and the cultural impact across the country as a whole. [59]

2009 was described as a tough year for Film Production in Scotland – with only 3 feature length films in production. The inconsistency and relative lack of scale when compared to other small countries such as Ireland and Denmark with around 25 Films a year in production, presents challenges in terms of sustaining and developing the skills of the workforce. This is a point emphasised strongly by the Scottish Film industry.[60] Nevertheless in spite of a 15% fall in spending on UK productions in the first 9 months of 2009, inward investment was at an all time high, while cinema going remained buoyant.[61] In addition to film production, companies are also involved in commissioning short films, producing adverts and corporate film work.

The view was that skills development should be targeted at entry level recruits and also at improving the transferability of skills between TV and Film Production from within the existing workforce in Scotland. Primary data suggests that this skills transfer between TV and Film is more prevalent in Scotland than in the UK as a whole.[62] Indicative UK level data on the Film Production sub-sector suggests that 'Production' occupations take up the highest single proportion with 24% of the workforce reportedly working in this role. Similarly, 23% worked in 'Art and Design' and 10% Camera/Photography giving rise to concerns that freelancing may be overly concentrated in these occupational groups.[63]

Skills Shortages and Gaps

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[57] http://www.scottishscreen.com/content/main_page.php?page_id=20

[58] ibid

[59] Skillset (2008) Sector Skills Agreement Scotland update 2008 - 11

[60] Results from Skillset consultations with Scottish industry representatives in January 2010.

[61] UK Film Industry Press Release October 2009: WEATHERING RECESSION WELL – INWARD INVESTMENT BOOMING

[62] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[63] Skillset (2009) Employment Census and Skillset/UK Film Council (2008) Feature Film Production Workforce Survey. Caution should be taking in drawing conclusions based on these findings due to sample sizes

The most robust data on skills shortages and gaps in the Film Industry is available at a UK level. Using this, First Aid/Health and Safety was the most common type of training undertaken, received by 17% of those in the sector in the past 12 months.[64] Job specific training such as Camera, Construction and Art/Design was the next most common undertaken by 12% of the workforce.[65] Interestingly, craft and technical skills training such as Sound/Audio/Music and Lighting/Electrical were less popular undertaken by around 3% of the workforce.[66] On the whole, freelancers in the UK Film industry were found to be less likely to undertake training than those permanently employed.

Over half (52%) of the UK Film Production workforce stated they needed training in the future.[67] Training in core business/management and leadership skills, such as finance, marketing and management, was high on the agenda – given by 19% and other areas for training included art/design (16%), camera (13%), and general computer/admin (12%).[68] Further research on skills gaps and shortages has revealed that current generic skill needs in the context of the Film sector included:[69]

- Management and leadership (for example, team motivation and conflict resolution);

- Commercial skills (commercial acumen, knowledge of the firm's value chain, finance for non-finance managers); and

- Negotiation and diplomacy (with colleagues and customers).

It is anticipated that future skill needs within Film will centre on developments in new digital technology.[70] Specifically, this will require skills in change management and exploiting opportunities such as online and digital sales as well as dealing with threats such as file sharing. Research also noted the need to:

[64] Skillset/UK Film Council (2008) Feature Film Production Workforce Survey
[65] ibid
[66] ibid
[67] Skillset/UK Film Council (2008) Feature Film Production Workforce Survey.
[68] ibid
[69] Skillset (2009) Film Sector Employers Skills and Training Needs in Production, Distribution and Exhibition
[70] ibid

- Develop management skills specifically around the introduction of new business models;

- Keep up to date in camera technology;

- Upskill in data management (particularly in relation to the logistics of tracking master materials in digital format); and

- Take full consideration of health and safety (especially risk assessment by Heads of Department and Producers).

Feedback gathered from the Scottish Film Industry[71] supported much of the existing evidence and suggested that many of the skills shortages and gaps relating to the TV sector were also relevant to Film. In particular, industry underlined the need to:

- Increase the scale of Film Production in Scotland in order to expand the capacity to develop new talent;

- Ensure that Film Production crews contain a high proportion of Scottish based staff. This will ensure skills are transferred and remain in Scotland;

- Create the conditions needed to retain more Scottish Film (and TV) Production talent in Scotland, creative and entrepreneurial, and slow the 'brain drain' to London; and

- Continue to closely align the vocational skills needs of the industry with that supplied by the Higher and Further Education system through initiatives such as the Skillset Screen Academies.

Radio

Overview

As with other regions in the UK, the Radio sector in Scotland is made up of Publicly Funded Radio, Commercial Radio, and the Community and Voluntary sector. The BBC

[71] Results from Skillset consultations with Scottish industry representatives in January 2010.

runs the national Radio Scotland channel which attracted just under a million listeners in an average week in 2008 – roughly 1 in 5 of the population. [72]

The Radio industry in Scotland employs in the region of 1,650 people, the vast majority of whom work in broadcast radio.[73] Women are well represented in this industry, accounting for 45% of the Scottish Radio workforce. [74] The Radio industry also contains the highest representation of BAME (4%) than any other of the Creative Media sectors in Scotland.[75] The radio market in Scotland is currently facing a number of challenges. These include:

- Falling demand and revenue - average weekly listening hours in the UK fell every year between 2003 and 2008 and in total by 9%.[76] Radio's share of advertising has fallen by more than one-fifth in this period. [77] This has been accompanied by falls in the revenues generated by Commercial Radio in Scotland down by 5% in 2008 on 2007 (£43.7m to £41.5m). Similarly, BBC expenditure on the national stations for Scotland declined by 16% from £45.4m in 2007/08 to £38m in 2008/09.[78]

- Increased competition - there was a 9% increase in stations in the UK between 2003 and 2008. [79]

- Increased use of Digital technology - recommendations in Digital Britain report are for an analogue to digital 'migration' of the majority of radio services in the UK by 2015. [80] Just over a quarter (26%) of adults in Scotland owned a DAB radio in the first quarter of 2009, below the UK average of 41%.[81] Uptake was higher in urban areas than rural areas (27% against 22%).[82]

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[72] Skillset (2008) Sector Skills Agreement Scotland update 2008 - 11

[73] Skillset (2009) Employment Census (excluding Film production freelancers, photo imaging, publishing and performers).

[74] Ibid

[75] Ibid

[76] The Communications Market: Radio, Ofcom, 2008

[77] ibid

[78] The Communications Market Report: Scotland, Ofcom, 2009.

[79] The Communications Market: Radio, Ofcom, 2008

[80] ibid

[81] The Communications Market Report: Scotland, Ofcom, 2009.

[82] ibid

- Increased demand for multi platform output and content - although this is a rising phenomenon across the UK, Scottish listeners have been less embracing of Radio via Digital TV, online and mobile phones than those across the UK as a whole. [83]

All this points to future skills demand not only in relation to core roles - like Sound and Broadcast Engineering - but also, increasingly, in relation to digital technology and multi platform and multi-media content.

Skills Shortages

Skillset's Radio Industry Skills Strategy (2007) highlights some key skills shortages which have been identified by employers across the UK Radio Industry. Although the nature of these skills shortages can vary due to the presence of a diverse range of business models and occupations within the Radio industry, the Strategy highlights that there is common concern across the industry around the shortage of Radio Engineers who possess the skills and versatility necessary for the industry.

Anecdotal evidence from the Scottish radio sector also points to skills shortages in: commercial sales and marketing; and experienced writers, specifically in the radio advertising field.

Skills Gaps

At the UK level, 3% of the Creative Media workforce that had received training in the previous 12 months, stated that this was in Radio Broadcasting.[84] However, none of those surveyed in Scotland identified a future need for training specifically in Radio Broadcasting. Our research programme established that 44% percent of Broadcast Radio employers across the UK highlighted a skills gap within their workforce.[85] The Radio Industry Strategy highlights some areas of potential skills gaps for employers in the Radio industry. Key examples include:

- In developing a multi-platform digital offering, the BBC has identified an emerging skills need for many of their staff for archiving skills to help them deal with the management of digital files; and

[83] ibid

[84] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[85] Skillset (2006) Employer Survey

- Entry level training for volunteers in Community Radio stations to gain fundamental skills and establish a basic minimum standard. These stations are also increasingly reporting specific needs for skills relating to social enterprise management, i.e. knowledge of fundraising and managing volunteers etc.

Animation

Overview

The Animation sector employs around 500 people in Scotland, accounting for approximately 12% of total employment within the UK Animation industry. [86] Almost half (49%) of this workforce are employed on a freelance basis, less than a third (29%) are females and 2% are from a minority ethnic group.[87] Although levels of qualifications are not available specifically for Scotland, Animation in the UK is characterised by a highly qualified workforce. Around 92% of those working in Animation are graduates – this is higher than any of the other Creative Media sectors and is also considerably greater than the average for the UK Creative Media Industries as a whole (73%).[88] Furthermore, 31% of the Animation workforce possesses a Postgraduate qualification,[89] well above the average of 18% for the Creative Media Industries as a whole across the UK. [90]

The Scottish Animation sector has been growing in credibility in recent years. The academy award nominated Sylvain Chomet[91], has established his Django Films studio in Edinburgh. Whilst Red Kite Animation, also based in Edinburgh, currently produce the 'Dennis and Gnasher' animated series. Both companies have an ever growing international reputation.

Key drivers of change within the Animation sector include:

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[86] Skillset (2009) Employment Census (excluding film production freelancers, photo imaging and publishing)
[87] ibid
[88] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).
[89] ibid
[90] ibid
[91] Sylvain Chomet wrote and directed Les Triplettes de Belleville (The Triplets of Belleville / Belleville Rendez-Vous) which was nominated for an academy award in the Best Animation Picture category.

- Technology and convergence – Animation spans a range of Creative Media outputs including animated feature films and online advertising. The growth in CGI has created new markets demanding new digital skills.[92]

- Market forces – reduced spending by advertisers and commissioners is presenting challenges to small Animation companies. Although internet advertising has increased, it has not yet made up the shortfall. [93]

- Policy and regulation – the restrictions on advertising to children are estimated to have cost more than £39m[94] in lost advertising revenue and in turn affected the volume of new children's programmes. Animation also does not qualify for tax credits in the same way as other parts of the sector. [95]

- Globalisation – companies specialising in 2D series are increasingly outsourcing their Animation work overseas. If this trend continues it will reduce the demand for Animators and increase demand for Pre-Production staff with strong artistic, storyboard and layout skills.[96] Therefore creative Intellectual Property development and exploitation will be vital for the Scottish Animation sector.

Furthermore, the need for technical skills such as software development and core business/management and leadership skills such as client liaison, financial management and marketing are also likely to continue to grow.

Skill Shortages

Across the UK, Skillset's Animation Sector Profile[97] highlights a "*shortage of people with industry relevant IT and drawing skills, particularly storyboard artists*". This report also points to a concern amongst some employers that graduates are not equipped with all of the skills that the industry requires and that there is a need for training for

[92] Skillset (2008) Sector Skills Agreement Scotland update 2008 - 11
[93] ibid
[94] Ofcom and PACT
[95] Skillset (2008) Sector Skills Agreement Scotland update 2008 - 11
[96] Ibid
[97] Skillset (2008) Animation Sector Profile

new entrants. Some of the areas in which employers felt that new entrants required training included:

- Technical skills including pre-production skills from story and character development to storyboard, layout and doping;

- Animators with a broad understanding of the commercial production process; and

- Softer skills such as team work and communication of new recruits were also criticized by employers.

Skills Gaps

Across Scotland, 1% of the Creative Media workforce stated that they had received training in 'Animation' over the last year. [98] Two percent stated they still needed training in these areas. [99] However, just over one quarter (26%) of Animation employers across the UK[100] say that there is a gap between existing skills and those needed to meet business objectives and these were described as being "*mainly deficiencies in fundamental animation industry specific skills*."[101]

Content for Computer Games

Overview

The Content for Computer Games sector in Scotland is estimated to employ around 500 people, representing around 7% of the UK total for this sector.[102]   The sector is characterized by an extremely high proportion of males (only 7% of the workforce is female) – which is similar to the position across the UK. In addition, the proportion of the workforce on a freelance contract (16%) is considerably below the Scottish Creative Media sector average of 40%.[103] Although qualification level data is not

[98] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).
[99] Ibid
[100] Turquoise Thinking for Skillset, report on provision of training and education relevant to the animation industry, May 2007
[101] Skillset (2008) Animation Sector Profile
[102] Skillset (2009) Employment Census (excludes film production freelancers, photo imaging and publishing).
[103] ibid

available exclusively for Scotland, across the UK, the Content for Computer Games workforce is well qualified – 80% are graduates, compared to the Creative Media average of 73%.[104]

Realtime Worlds specialises in the growing online gaming market and its latest release, 'All Points Bulletin', will launch in 2010. Other notable games companies in Scotland include the Dundee based Ruffian, Dynamo Games, and Tag. In addition, Edinburgh based Rockstar North's 'Grand Theft Auto IV' was one of the highest grossing entertainment products in the world in 2009. Outperforming the latest feature film installment of Indiana Jones in the week it was launched.

However, increasing competition from (often subsidised) international competitors together with increasingly low cost of entry places significant pressure on the Scottish sector. At the UK level a lack of global scale publishers, limited access to finance and skill shortages have been identified as key barriers to sectoral growth.[105]

Skills Shortages

Content for Computer Games developers look to recruit skills in three broad areas: Software Engineering; Design and Art. Commercial skills particularly in relation to negotiation, intellectual property, and online distribution are also in demand, together with more traditional business/management and leadership skills such as those associated with managing technical teams.

The proportion of graduates in the UK developer population is slowly increasing. However, only 18% of games specific graduates in 2007 succeeded in gaining jobs in the industry.[106] The quality of undergraduate programmes seems to be key: graduates from courses accredited by Skillset are nearly three times more likely to get a job in the Content for Computer Games sector than those from a non-accredited course.[107] Indeed feedback from gaming industry stakeholders found that despite there being hundreds of Computer Games Development courses across the UK, only 10 to 12 were rated by employers.

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[104] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

[105] Nesta (2008) Raise the Game: The competitiveness of the UK's games development sector and the impact of governmental support in other countries.

[106] ibid

[107] ibid

Feedback from the Content for Computer Games industry found that recruitment at entry level was not generally an issue[108]. The quality of graduates produced by Abertay in particular was highly regarded. Where it becomes more difficult is at the senior level. Skill shortages were reported in relation to Software Engineers with gaming experience, with one company stating that it currently had two Lead Software Engineers vacancies open for more than a year.

In order to overcome these challenges, Scottish Content for Computer Games developers now recruit globally with some employers having over 25% of their staff originate from outside the European Economic Area (EEA). The feedback from industry noted a number of challenges in doing this. These were:

- Location – with it being challenging to attract the best talent to Scotland. Interestingly, this was said to be more of an issue when dealing with candidates from the South of England rather than farther afield such as Canada or the Far East.

- Scarcity – competition for talent is global. Scottish companies are competing with other international games developers to attract the best.

- Specificity – at the senior level, it was said to be important that prospective employees had a proven track record in Computer Games development. Transitioning Software Engineers from more traditional backgrounds such as financial services was reported to be challenging due to differences in culture and ways of working.

Skills Gaps

Survey results reveal that 4% of the Scottish Creative Media workforce (that had received training) stated that they had received training in 'on-line/web design/interactive media/electronic games' over the last year.[109] The survey also showed that 12% of the workforce stated they needed training in these areas. Our Employer Survey revealed that around one quarter of employers (24%) reported a gap between the skills that their employees had and the skills needed to meet business

[108] Results from Skillset consultations with Scottish industry representatives in January 2010.

[109] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).

objectives.[110] One of the key skills gaps noted was the lack of management skills in junior staff – this relates to a need for senior or advanced positions managing technical teams of artists and programmers.[111]

Across the UK, the attraction of high wages and more stable / better financed companies has led to talent loss to North America, particularly in relation to senior developers and managers. That said, the UK has also benefited from immigration, particularly from Eastern Europe.[112]

Related to the difficulties in recruiting senior developers and managers, feedback from the industry suggested that companies sometimes promote junior staff quicker than would have been the case otherwise. Although junior staff can have the technical skills needed to perform a higher level role the managerial and leadership skills may still be developing.

Facilities

Overview

The Facilities sector provides specialised technical equipment and services to every other audio visual sector in Scotland. Key roles include Post Production, Studio and Equipment Hire, Outside Broadcast, Visual Effects, Special Physical Effects, Manufacture of Equipment, Processing Laboratories and Other Services for Film and Television.

In Scotland, this sector employs around 1,000 people – almost 3% of the total UK Facilities workforce.[113] More than half (52%) of the jobs in this sector are located within Other Services for Film and Television.[114] A further 21% of jobs are located within Studio & Equipment Hire and 12% are in Post Production and the remainder of the employment within this sector is divided between Special Physical Effects (7%) and Outside Broadcast (4%).[115]

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[110] Skillset (2006) Employer Survey

[111] Skillset (2008) Computer Games Sector Profile

[112] Nesta (2008) Raise the Game: The competitiveness of the UK's games development sector and the impact of governmental support in other countries

[113] Skillset (2009) Employment Census (excludes film production freelancers, photo imaging and publishing).

[114] ibid

[115] ibid

More than one in three of the sector's workforce (38%) in Scotland is freelance.[116] This level of freelancing is higher than across the UK Facilities sector as a whole (29%). However, in terms of freelancing, there is substantial variance across different Facilities roles. For example, in Post Production only 6% of the Scottish workforce freelance whereas in Outside Broadcast it is as high as 100%.[117]

Around one third of the total Facilities workforce in Scotland is female – a higher representation than throughout the industry at a UK level, where the level is one-in-four. The distribution of women in the workforce varies across the different sub-sectors. In Post Production, for example, only 16% of the workforce is female compared with 44% in Other Services for Film & Television.[118]

Consultation with industry found some anecdotal evidence that Scottish Facilities providers are now diversifying. For example, once focused edit companies are now increasingly moving into commercials production.

Skills Shortages

Research has highlighted that UK Facilities employers experience skills shortages in areas such as[119]:

- Outside Broadcast – Vision Engineers and other high calibre technical staff.
- Studio's with Equipment and Equipment Hire – Vision Engineers; Productions assistants; Pyrotechnic stage hands; IT technicians / engineers; high definition technical staff; and Electricians in equipment hire.
- Post Production – IT competent staff with knowledge of file based media; Business/management and leadership skills around sales, negotiation and client management.

[116] ibid

[117] Skillset (2009) Employment Census (excludes film production freelancers, photo imaging and publishing)

[118] ibid

[119] http://www.skillset.org/facilities/industry/article_6812_1.asp

- Special Physical Effects – Staff with combined technical and artistic skills are needed. Due to the great breath of skills needed to work in this sector, recruitment is continually a problem.

Demand for Facilities is much driven by demand from productions. With Television Production in Scotland expected to grow over the next two years, the need for Facilities and accompanying skilled Post Production staff and freelancers is also likely to grow.

Skills Gaps

Looking across the UK Facilities sector, a little more than one quarter (27%) of employers identified a skills gap within their existing workforce. [120] Those who did report a skills gap highlighted a number of areas which required development:

- Technical skills - such as broadcast engineering, editing technical equipment skills, motion capture and Macintosh IT skills: rapid technological advances across the industry (such as the change to high definition and from video tape to networked media) has meant that the existing workforce has had to be retrained to adapt to these changes.

- General industry experience as well as business skills – recent Skillset research has revealed that when training does take place, for the most part budgets are spent on software and equipment training rather than on personal professional development.[121]

Interactive Content Design

Overview

The Interactive Content Design sector covers a range of specialist companies and jobs including online (e.g. mobile internet, networking sites) and offline (e.g. mobile phone audio) content and technology, interactive television and others. The sector fulfils a key support function in the wider Creative Media Industries as well as other industries in Scotland. This role clouds measurement of the sector's output and importance - as

[120] Skillset (2006) Employer Survey

[121] http://www.skillset.org/facilities/industry/article_6812_1.asp

Skillset note "*Interactive Content Design is becoming more of a discipline than a sector*"[122]

Latest estimates reveal that the Interactive Content Design sector in Scotland employs around 1,050 people – approximately 3% of total UK employment in this sector.[123] Many of those working in the sector will work in Local Authorities, Colleges, Universities and the Financial Services. Eighty two percent of Scotland's Interactive Content Design workforce work within the online content sub-sector. The Scottish workforce is more reliant on freelancers, when compared with the UK (42% and 21% respectively).[124] Only 8% of the workforce is female. [125]

Skills Shortages

Across the UK, employers in the Creative Media require 'hybrid' skills which include technical and creative as well as business/management and leadership skills.[126] While individuals with deep, specific skills (such as graphic designers or programmers) are relatively easy to find, getting people with the right mix of skills can be difficult - particularly the combination of creative and technical thinking, and a solid foundation of transferable life and work skills.[127]

Skills Gaps

As with each of the other Creative Media sectors, skills gaps in Interactive Content Design companies are brought about mainly by technological advance. For example, the perpetual development of software packages which are used widely throughout the sector will require continual workforce training in order to keep pace with these advances. Therefore, the industry needs a workforce which is adaptable and committed to the constant updating of skills around industry tools and techniques.

A profile of the Interactive Content Design sector states that just under one-third of employers in the UK have identified a skills gap within their business.[128] The document highlights the main skills gaps as either in 'industry-specific transient skills' or in

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[122] http://www.skillset.org/interactive/industry/

[123] Skillset (2009) Employment Census (excludes film production freelancers, photo imaging and publishing).

[124] ibid

[125] ibid

[126] http://www.skillset.org/interactive/industry/article_6921_1.asp

[127] ibid

[128] Skillset (2006) Employer Survey

‘higher-level business management skills.’ The latter of these is concerned with a need to strike the right balance between creativity and entrepreneurialism within Interactive Content Design businesses. This skills gap is thought to exist because whilst the businesses are started by people with the creative & technical skills to do the job, they can often lack the necessary commercial skills to develop the business and capitalise on potential opportunities within the market.

Photo Imaging

Overview

The Photo Imaging sector contains four main broad sub-sectors: Photographers; Image Producers and Photo Retailers; Picture Libraries and Agencies and Manufacturing and Support services. Across the UK, the Photo Imaging sector employs approximately 48,000 people.[129] Scottish employment estimates were not available for this sector in 2009 but the most recent figures reveal that in Scotland, the Photo Imaging sector employed around 2,800 people in 2006.[130] The majority of businesses in the sector are estimated to be either sole traders or freelance photographers.

Skills Shortages

Skills shortages in the Photo Imaging sector have been driven in recent years largely by the transition to digital technology. The UK-wide Skills Strategy for Photo Imaging points out that there is no shortage of people wanting to enter Photography as a career and that, in fact, the market for Photographers is overcrowded. Therefore, the volume of potential new entrants is not of concern. However, research highlights difficulties around the recruitment of ‘keyworders’ (within Archives & Libraries) due to high staff turnover and points to an urgent demand for highly trained, visually literate Picture Researchers.[131]

Skills Gaps

Skillset research highlights the fact the most significant skills gap within this sector is in technical skills such as the use of digital technology and equipment as well as

[129] Labour Force Survey April - June 2009.

[130] Labour Force Survey 2005 - 2007

[131] Skillset Skills Strategy for Photo Imaging Update – http://www.skillset.org/uploads/pdf/asset_12205.pdf?3

knowledge of digital workflow. Research points to skills gaps within both experienced practitioners as well as new entrants. Specifically:

- There was concern that experienced practitioners may have been 'left behind' to some extent in the switch to digital technology. It was felt that these technological advances may have created a skills imbalance between experienced practitioners and newer practitioners (who are more likely to be more familiar with digital technology).[132] A key skills gap in new and experienced practitioners alike includes the use of digital equipment as well as post-production colour management skills.

- New entrants were considered to lack some of the fundamental skills involved in image capture and camera use – this is felt to be the case as many photography students are being taught digital skills without first having learnt the underlying photographic theory.[133] New entrants are also considered to lack business/management and leadership skills such as an awareness of the value of their work and an understanding of copyright issues.[134]

A survey of the Photo Imaging workforce revealed that almost half (44%) of the Scottish workforce had received training in the past 12 months. 44% of the workforce had undertaken training in specialist software skills, 12% in colour management, 12% in Mini-lab & printing skills, 10% in equipment & product knowledge and 10% in camera repair.[135]

In terms of training that was still required, more than half of those surveyed (56%) identified an existing training need.[136] 36% said they required training in specialist software skills, 26% in lighting skills, 13% in general IT and 12% in colour management.[137]

Anecdotal feedback from the industry highlighted the significant level of self-directed learning which takes place in the photo imaging sector. Practitioners were said to make extensive use of online forums and other colleagues working in the sector to update their skills and knowledge.

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[132] ibid
[133] ibid
[134] ibid
[135] Skillset (2007) Photo Imaging Workforce Survey
[136] ibid
[137] ibid

Publishing

Overview

The Publishing sector in Scotland is a well established industry. Historically, the industry was about the printed word but now has expanded to include multi-media and multi-format. The sector includes the publishing of books, newspapers, magazines and scholarly journals. In terms of economic contribution, Book Publishing is a significant contributor to the Creative Industries in Scotland. For example, looking specifically at Book Publishing, the value of the industry is estimated at £343m at invoice value.[138]

There is a relative lack of robust information on the Publishing workforce in Scotland due, in part, to the relatively new addition of the sector to Skillset's footprint. The latest employment estimates show that the Publishing sector accounts for the largest share of total employment in Scotland's Creative Media sector. Approximately 9,000 people work in the sector representing approximately 46% of total Creative Media employment. [139] Around 78% of the workforce are estimated to be based within Newspaper Publishing and the remainder in Book Publishing.[140] Although no detailed breakdown is available for the Scottish Publishing sector, the UK wide Publishing sector is characterised by relatively low levels of freelancing (13%) and a fairly equal representation of females in the workforce (47%).[141]

Across the UK the Magazine and Newspaper Publishing sub-sectors have undergone major structural changes. This has been driven by both the recession and a longer term movement away from the traditional advertising revenue model to more online content.[142] The result has been fewer titles and jobs – particularly freelance - and the loss of some functions such as sub-editing.[143] The migration to online content is however being hindered by a number of commercial challenges including how to monetise online content, ownership of content issues, and inertia amongst some socio

[138] Publishing Scotland (2009): A showcase of Publishing in Scotland.
[139] Labour Force Survey April - June 2009.
[140] ibid
[141] Skillset (2009) Employment Census all (excluding film production freelancers, photo imaging and publishing)
[142] From Recession to Recovery (2009) Skillset, September. Based on a sample of 262 employers.
[143] ibid

economic groups to access content online.[144] Elsewhere, while book sales have held firm the overall value of sales has fallen.[145]

Skills Shortages

The Publishing sector needs people with the skills to develop high quality content as well as those who know how to use it in many different formats, including in print, online, and with mobile technology. Rapid technological advances, including the introduction of digital technology such as e-books, have had an impact on consumers and the way they wish to view reading material. This has brought around a radical change in the way in which the Publishing sector operates.

Looking to the future, multi-platform publishing will present many opportunities for the sector, but can only be realised by those companies which have the skills and knowledge to understand and implement new developments.

There is little research which looks specifically at skills shortages within the Scottish Publishing industry so this document considers evidence from across the UK to reveal that the pace of change in the publishing sector has created many skills shortages within the industry. Evidence from the National Employer Skills Survey 2005 (NESS) reveals that 5% of the Publishing establishments across the UK reported a skills shortage vacancy. This varies across each sub-sector, with 7% of Journals and Periodicals companies reporting a skills shortage vacancy, compared with just 3% of Book Publishing. Sales & customer service occupations account for approximately 72% of all skills shortage vacancies within the sector.[146]

Of the employers who gave a 'skill-based' reason as to why they were having difficulty recruiting, amongst the most frequently mentioned skills considered to be the most difficult to obtain were oral skills (53%), technical & practical skills (44%) and written communication skills (41%).[147] Feedback from the Book Publishing industry highlighted that there is currently considered to be an ample supply of adequately equipped new entrants into the sector. However, because companies are currently not

[144] Deloitte Media Predictions 2009

[145] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

[146] LSC 2005 National Employer Skills Survey (NESS)

[147] ibid

training and developing editors in-house (as they now outsource most editorial work), there is concern that this may result in a skills shortage in future.[148]

Skill Gaps

Research reveals that skills gaps within the existing workforce appear to be more of an issue for Publishing employers than skills shortages. Approximately 12%[149] of Publishing employers across the UK have reported internal skills gaps. Professional occupations account for 28%[150] of skills gap jobs and this is followed by Sales & Customer Service roles (25%).[151]

Industry consultations carried as part of the Skillset 'Skills Needs Analysis for the Publishing Industry highlighted some key skills gaps. The feedback established that "*the prime concern over skills gaps was the inability of staff to keep up with change in business*"……and that "*this specifically referred to technological changes – not only a need to innovate and develop new business models, but to implement new standards.*" Furthermore, the consultations also revealed that employers were concerned that their senior staff were unaware of the potential opportunities that new media offered.[152]

At a Scottish level, industry feedback revealed that the introduction of new digital technology was leading to a number of emerging skills gaps in Book Publishing. Up-skilling staff on the range of ways in which published material could be distributed was seen as key development need in future.

[148] Results from Skillset consultations with Scottish industry representatives in January 2010.

[149] LSC 2009 National Employers Skills Survey

[150] ibid

[151] ibid

[152] Skillset (2008) Skills Needs Analysis for the Publishing Industry

3.4 Skills Supply

Skillset is currently undertaking an overview and analysis of training and vocational provision relevant to the UK Creative Media Industries. This work is due to be completed during 2010 and will enable a more rigorous analysis of the skills supply situation concerning the Creative Media sector in Scotland.

The Education System

In Scotland, the Creative Media workforce as a whole is well qualified. To recap, 62% of those working in the sector are graduates and approximately one-third of those with degrees hold one in a media related subject.[153]

There has been a growth in demand for related courses, at both College and University level. [154]

In direct response to feedback from the Creative Media Industries, Skillset has developed a network of Screen and Media academies across the UK. These were established to better meet the vocational skills needs of industry and provide a more responsive approach than traditional media courses. Through the Academies, Skillset supports collaboration between Universities/Colleges and industry partners to develop new curricula, undertake research and development and enhance the business acumen of graduates.

Skillset Screen Media Academies have been designated as centres of excellence by the UK Film industry in Film education and training. There are six Screen academies across the UK. Similarly, Skillset Media Academies are centres of excellence in Television and Interactive Content Design, with a network of 22 academies across the UK.

Within Scotland, there are three Academies: the Creative Loop Media Academy; the Edinburgh Screen and Media Academy; and the University of Abertay Dundee Media Academy. As well as Skillset support, the Scottish Academies have been awarded £5.8m of funding over five years from the Scottish Funding Council. Skillset's ambition for the Scottish Academies has been to collaborate strategically and develop integrated provision and progression routes on the SCQF.

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[153] Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey, LFS 2005 (publishing total employed) and LFS Apr-Jun 2009 (publishing permanent/freelance).

[154] Scottish Funding Council (SFC), Infact Database

Creative Loop Skillset Media Academy

In order to bridge the gap between industry and education the Creative Loop partnership, was formed in 2006. Initially supported by £1.2m from the Scottish Funding Council's Horizon Fund, the partnership brought together six Further Education Colleges: Aberdeen, Adam Smith (Fife), Cardonald (Glasgow), Dundee, Perth and Reid Kerr (Paisley) to develop high quality practice orientated media education in a number of key areas. Creative Loop is the only all FE College partnership in the network of Skillset Media Academies across the UK.

The aim of Creative Loop is to produce industry ready graduates for the Film and TV industries. With a focus on developing the practical skills needed for entry level jobs, the Colleges provide first-hand experience of associated working practices in a range of specialist areas as well as furnishing students with the interdisciplinary skills, vision and judgment to work in the sector. The courses offered by the College partners have been developed in conjunction with industry and aim to meet the skills shortages in Film and TV through producing well trained Editors, Cameramen and Women, and Technical staff. This has been achieved through industry/Skillset support for SQA Higher National course provision and ensuring industry consultation around the use of National Occupational Standards (NOS) to design units.

Edinburgh Skillset Screen and Media Academy

The Edinburgh Academy is a partnership between Edinburgh Napier University and Edinburgh College of Art. Established in 2005, the Academy has dual Screen and Media status. It offers degree courses and CPD in a range of Creative Media disciplines including: Animation; Film Practice, Interactive Content Design, Journalism, Photography, Producing and Screen Project Development, Screenwriting and Television.

As with Creative Loop, course content has been developed in partnership with industry and students learn using industry standard equipment. The aim of the Edinburgh Academy is to produce graduates with the core skills required to succeed in the Creative Media sector but who are also comfortable working in business and using new technology.

University of Abertay Dundee Skillset Media Academy

Abertay delivers a range of digital media production courses in the areas of broadcast, Computer Games, digital and interactive media. The Academy considers its two key strengths to be: the industry focused nature of its academic staff; and its strong links with industry – where partners include the BBC, Channel 4, Electronics Arts (EA) and Realtime Worlds. Abertay offers a mix of state-of-the-art facilities and innovative programmes. These include:

- White Space – an interactive learning environment designed to simulate a real working environment. Students work alongside industry professionals on the development of projects with the aim of developing business focused knowledge and experience. White Space also houses HIVE (Human Interactive Virtual Environment) a multi-purpose space with video/green screen studio and digital image realisation capabilities.

- Prototype – a collaborative project with BBC Scotland, games developers and start-up companies where students develop content aimed at engaging with future audiences.

- 'Dare to be Digital' – a UK wide video games development competition for students at Universities and Colleges of Art. The competition brings teams together for 10 weeks in Dundee every summer to work up a game prototype. Students are mentored by gaming industry professionals and the winning teams have a chance to compete for a BAFTA video games award.[155]

Demand for places at the University of Abertay is high and competitive, particularly with regards to Computer Gaming courses. Consultation with University representatives found that the minimum rise in student applications on the nine gaming courses is 29%, with one course seeing a 55% rise in applications on academic year 2009/10.

[155] www.daretobedigital.com

Additional Creative Media Provision

In addition to the Screen and Media Academies, there is a range of high quality provision available elsewhere in Scotland. Glasgow School of Art's Digital Design Studio (DDS) is a postgraduate research and commercial centre. It provides one and two year masters degrees and PhDs in the field of advanced 3D visualisation and interaction technologies.

As well as Glasgow, the Schools of Art in Dundee, Edinburgh and Aberdeen also offer undergraduate and postgraduate courses with applications in Creative Media. The University of the West of Scotland offers courses in Computer Games Technology, one of which is Skillset accredited. Whilst, the University of Glasgow has a department of Theatre, Film and Television studies and the University of Stirling hosts a department of Film, Media and Journalism. There is also a range of courses related to Interactive Media, Photography and Production in FE Colleges across Scotland.

Industry Stakeholder Views on the Education System

Consultation with industry stakeholders provided recognition that overall in comparison to other parts of the UK, Scotland was relatively well served in the educational provision offered to the Creative Media sector. There was a view that Scotland had particular educational strengths in Content for Computer Games and Interactive Content Design. The consultations also elicited a number of other key points on the Scottish education system. Amongst these was the need to:

- Make the education system more responsive to the requirements of industry - The technology driven nature of the Creative Media sector means can change in a matter of months. This can result in demand for new skill sets quickly. The education system was felt to take years to absorb this change and start to produce those with the new skills needed – by which time the immediate skills need has usually passed.

- Offer shorter, sharper courses which meet the needs of industry practitioners - There was consensus that on the whole FE and HE was not currently set-up to meet the CPD needs of the Creative Media workforce. The view was that employers and employees were looking for focused training which could be completed in a short timeframe and did not require a year or more commitment. At the moment, CPD was usually provided by employers themselves or private training providers. The stated aim of the Skillset Academies is to address this issue.

- Produce graduates with 'softer skills' as well as academic/technical skills - This feedback is common amongst employers and not limited only to Creative Media. In a sector which is characterised by a high proportion of SMEs, stakeholders talked of the need to have graduates which were well-rounded, had strong communication skills and could adapt to the range of tasks required in an SME.

- Recognise that in many sub-sectors, the industry values practical skills more than qualifications - It was recognised that this was more of an issue in Film and TV than in Content for Computer Games. However, stakeholders pointed out the significant proportion of courses whose content is either not understood or not rated by the industry. In addition, they pointed out the high numbers of graduates who take Creative Media courses who end up not working in the industry. The view was that if skills supply was looked at more strategically, the money could be better spent in meeting the practical training needs of employers. This is a wider issue for the Scottish Funding Council and may become more so in the context of tighter public spending in the near future.

- Continued specialisation versus fragmentation - There was a view that the future competitiveness of the Scottish Creative Media sector would be driven by 'world-class' skills. In order to achieve this, it was felt that the education system had to focus on producing graduates with specialist skill sets. The Computer Games development courses at Abertay were seen as a forerunner in this sense.

Workforce Development

With rapid technological advances and cross-sector working throughout the Creative Media industries, workforce development is, and will continue to be, a priority for the industry. In Scotland, there is currently a significant level of training occurring within the industry with more than two-thirds (68%) of the Creative Media workforce having been in receipt of training in the past 12 months.[156] Despite this, approximately 47% of the sector's Scottish workforce has indicated that they have a current training or development need. [157]

Across the UK, there is a greater incidence (58%) of freelancers requiring training than employees (50%).[158] There is also a lower likelihood of freelancers having participated in training in the past 12 months (40%) when compared with employees (62%).[159] This document has already established that the Scottish Creative Media industries contain a greater proportion of freelancers, relative to the UK as a whole. Therefore, this suggests a potential future skills shortage based on Scotland's above average share of freelancers along with the tendency for lower levels of training, yet a greater need, amongst this cohort.

Whilst the evidence reveals that almost one in two people working in Scotland's Creative Media Industries require training, there are some barriers which are perceived to prevent this need from being met. Across Scotland, 84% of the workforce indicated that they had experienced some barriers to accessing training.[160] The most commonly cited barriers to training are[161]:

- Available training is in inconvenient places (34%);
- Fees are too high (33%);
- Difficult to assess the quality of the courses (29%); and
- Available training is at inconvenient times (24%)

There are some differences in the types of barriers to training which are reported by freelancers across the UK. For example, only 7% of employees considered fear of losing work through committing time in advance a barrier to training, compared with

[156] Skillset (2008) Creative Media Workforce Survey (excludes Film Production, Publishing and Photo Imaging).

[157] Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey.

[158] ibid

[159] ibid

[160] Skillset (2008) Creative Media Workforce Survey, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey (2008), Skillset (2007) Photo Imaging Workforce Survey.

[161] ibid

37% of freelancers.[162] Sixty two percent of freelancers also felt that fees were too high compared with 34% of employees.[163]

From a workforce development perspective, it is important to comment on the impact of the recession on Creative Media employers' ability to offer development opportunities to their staff. Training can often be one of the first areas of spending which a company cuts back on when money is tight. Skillset research explored the impact of the recession on the Creative Media sector across the UK, and in particular, its implications for the use of skills in the industry. Results are available collectively for Wales, Scotland and Northern Ireland. Some of the key findings for Creative Media employers in these countries include:[164]

- 85% of companies said that they had been affected by the recession;
- 43% indicated that they had decreased their training budget in response to the recession; and
- More than half of the companies (54%) stated that their ability to provide training had been affected by the recession.

Diversity

In the employment profile, this document has already demonstrated the fact that the Creative Media Industries have a relatively young workforce. However, ensuring a representative mix of people in the workforce is also important for the Creative Media sector. This is put eloquently in a joint Skillset/DCMS publication[165] which notes *"If your business is telling stories about the society in which you work, it makes sense to ensure the people who tell the stories are representative of the society as a whole".* Diversity also ensures a plurality of views feed into the content produced.

Table 3.1 considers the diversity of the sector's employment profile in Scotland, looking specifically at representation of women and Black, Asian and Minority Ethnic (BAME) within the workforce to reveal that:

- Television and Radio have the highest representation of females within the workforce – in both cases approaching 50%

[162] Skillset (2008) Creative Media Workforce Survey (excludes publishing, photo imaging and film production).
[163] ibid
[164] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.
[165] Skills for Tomorrow's Media, Skillset/Department for Culture, Media and Sport (DCMS), 2001

- BAME representation is also highest within TV & Radio, at 3% and 4% respectively

- Some sectors such as Content for Computer Games and Interactive Content Design are largely dominated by male employees – in both sectors, less than 1 in 10 of the workforce are females.

Table 3.1 Diversity by Sub sector

Sector	% Female	% BAME
Television	47%	3%
Radio	45%	4%
Other Content Creation	11%	0%
Animation	29%	1%
Archives & Libraries	*	*
Facilities	33%	1%
Film	35%	*
Interactive Content Design	8%	*
Content for Computer Games	7%	*

Source: Skillset (2009) Employment Census (excludes Film Production freelancers, Photo Imaging, Publishing), Skillset/UK Film Council (2008) Feature Film Production Workforce Survey.

4 Anticipating What Lies Ahead

4.1 Growth Potential

The recently published Digital Inspiration: Strategy for Scotland's Digital Media Industry was developed by the industry and sets a 'step-change' in growth firmly at the heart of its aspirations. The strategy sets the target to double the value of sector revenues to £6.3bn by 2012. This document's recent publication means that the fine detail of how this will be achieved is still being worked out by the Digital Media Advisory Group[166] , but it will involve targets related to:

- Increasing the number of companies;
- Increasing the number of companies of scale;
- Moving companies up the value chain;
- Increasing employment; and
- Growing the reputation of the Scottish digital media sector.

However, despite this aspiration, feedback from the various sub-sectors within the Creative Media Industries suggests that a 'one size fits all' approach may not suffice. In addition, it was recognised that skills is just one element of building economic capacity and capability.

Sectoral Growth Potential

The growth potential of selected sectors in the Creative Media Industries in Scotland is presented below. This builds on the analysis presented in the previous chapter.

Content for Computer Games

The evidence presented in this SSA points to Content for Computer Games as arguably the key asset in the Scottish Creative Media portfolio. It appears to have the key elements needed for success. Namely:

[166] The Digital Media Advisory Group is an industry body chaired by Scottish Enterprise which brings together key representatives from industry to advise on policy and strategy

World renowned companies which compete globally and have a proven track record in producing quality outputs;

A supportive policy environment where the Scottish Government and the national economic development agencies recognise the potential of the industry[167]; and

Well developed educational infrastructure, particularly at the University of Abertay, where the Skillset accredited degree programmes produce graduates which are considered by employers to be 'industry ready'.

Scotland plays an important role in maintaining the UK's position as one of the leading gaming economies in the world. However, it is also considered to have considerable growth potential given the right support.[168] At the UK level, NESTA believe that threats to the nation's current position include the sector's slow response to online gaming, falling levels of new IP, rising labour costs, a lack of global scale publishers, limited access to finance, skill shortages and increased competition from often heavily subsidised oversees companies.[169]

Feedback from industry identified two inter-related challenges for Scottish Content for Computer Games developers: achieving critical mass; and attracting talent. In terms of achieving critical mass, it was felt important that the games cluster continue to grow and develop It competes on a global stage and must ensure that it is to keep its best performing companies it is competitive place to do business. Destinations such as Canada and France offer tax relief to games developers and the question of fiscal incentives is one which is central to any discussion on growing the sector.

Similarly, the attraction and retention of senior talent was given as a constant challenge. In this sense the attractiveness of Scotland as a place to live and work was seen as crucial. Games developers are confident they can offer the professional

[167] Creative Industries Key Sector Report, Scottish Government, November 2009.

[168] Nesta Annual Review February 2009

[169] Nesta 2008 Raise the Game: The competitiveness of the UK's games development sector and the impact of governmental support in other countries

opportunities, however that alone may not be enough. Promoting Scotland's cities as vibrant, culturally diverse and appealing will also be key in an internationally competitive talent market.170

Development of new technology, such as the iPhone has also made an impact in the way content is developed and distributed. Applications can now be completed in as little as six weeks from start to finish, which will require individuals with the skills to deliver in compressed timeframes in future.

Television

The commitment from the BBC to increase network TV production in Scotland to 9% (in line with its proportion of UK population) by 2016 will have an effect on the growth of the sector, as will STV's desire to increase locally produced content in Scotland. This will increase the requirement for high-end production staff in Scotland. Those with the skills to produce 'returning dramas' and can meet the expectations and quality standards of commissioners.

The movement of television content towards multi-platform distribution channels is also a growth opportunity. To take advantage of this will require those working in the industry to have the skills to identify and seize the business opportunities which exist through social networking sites, online gaming and other channels. This will require an increasingly collaborative approach which draws on the expertise of other professionals in the Creative Media sector.

Film

At the UK level, cinema going has gone from strength to strength. The UK is the largest market for Film in Europe, the Middle East and Africa grossing $6.5bn in 2008. 171 It was expected to bring in $6.6bn in 2009 according to research by Price Waterhouse Coopers.172 Limited evidence exists on the collective performance of

[170] Digital Inspiration: Strategy for Scotland's Digital Media Industry, 2009

[171] http://www.screendaily.com/news/production/uk-ireland/uk-independent-Film-producers-hit-as-recession-continues-to-bite/5004444.article

[172] ibid

Scottish independent production companies, however research in England and Wales highlighted small Independent Production companies had been hit due to the lack of finance and investment available.173

Discussions with representatives of the Scottish Film industry highlighted several factors which are expected on the growth of the industry in Scotland. The first relates to the volume of production. On average, Scotland produces around six feature films per year. Of these, it was estimated that 1 in 10 cover their costs and roughly 1 in 100 makes a substantial profit. In comparison to London, and indeed Hollywood at the extreme end of the scale, where volume is far in excess of Scottish levels, the potential to create 'hit' films was felt to be proportionately less.

The second refers to retaining entrepreneurial talent. Scotland was said to have no issues developing talent, however given the size and scale of the market, a large proportion of this was said to gravitate to London. The key to growing the sector will be creating conditions where film making talent remains in Scotland longer. And thirdly, the Film sector in Scotland (and in general) needs to consider new business models, that take account of the different ways in which Film can now be distributed and consumed.

Publishing

As with the Publishing industry worldwide, the emergence of digital technology represents a growth opportunity for the sector in Scotland. Technology has meant that more people can produce content, which has led to the rise of what one industry representative termed 'Citizen Publishing': where individuals are publishing content independently of established Publishers.

In Newspaper and Magazine Publishing a shift in the way news is consumed (with greater amounts moving online) has impacted on the traditional advertising revenue model – with it now less lucrative than before.174 At the UK level, this has resulted in a decline in profits in publishing groups such as Trinity Mirror, Newsquest and Johnston Press and a 'thinning-out' of newsprint titles, particularly at the regional level.175 The changing consumption of newspapers is evident with the launch of

[173] ibid

[174] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

[175] ibid

Scotland's first online newspaper The Caledonian Mercury176, which hit its December 2010 target for unique users on its first day of launch.

Book Publishing has fared better than newspaper and magazines, however the value of books sold has been in decline.177 Feedback from the book publishing industry identified a number of key challenges in realising future growth178. These were:

new entrants – giants such as Amazon and Google entering the online publishing industry and putting pressure on traditional Scottish companies; and

the adequacy of the traditional skills base in the digital revolution – historically Scottish publishers have operated with a skeleton staff, outsourcing work to freelancers as and when required. The ascendance of digital technology and the perceived future importance of this to the future of the publishing industry means that it may no longer be an option to leave these skills outside the business.

Across all three elements of the Publishing sub-sectors common challenges exist including the monetizing of online content; ownership of news and other output online; the differing demographics between online and paper readers and the culture of accessing online content for free.179

Radio

In common with other parts of the UK, the Scottish Radio sector has been hit by falling listening numbers and advertising revenues. Growth is likely to be driven by the shift to digital output and advances in internet radio through portable WiFi systems technology. The increase in Local and Community Radio is likely to continue, however the sector as a whole remains subject to delicate market forces. 180

Interactive Content Design

[176] http://caledonianmercury.com/

[177] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers.

[178] Results from Skillset consultations with Scottish industry representatives in January 2010

[179] Deloitte Media Predictions 2009

[180] The Communications Market report, Scotland, OFCOM, 2009.

The Interactive Content Design sector is widely predicted to grow in the medium to long-term.[181] This will be driven by the spread of new technology increasing the demand for content. Developments such as plasma screens in public spaces and the convergence of platforms through which content can be consumed e.g. television through mobile phones, will also increase the business opportunities in this sector.[182]

One of the key challenges facing the Interactive Content Design sector is how to generate revenue from social networking sites. This is a hitherto under-developed area and one which offers growth potential in the future. In addition, piracy and illegal downloading will remain a threat, whilst regulation and directives are likely to become more of feature, particularly in relation to content.[183]

Photo Imaging

The growth of digital photography technology represents an opportunity and a challenge for the Photo Imaging sector. An opportunity in that the process of creating and producing images is becoming more integrated. And a challenge in that increased access to technology is leading to a reduction in the perceived value of photo imaging amongst some end customers.[184]

4.2 Changing Skills Needs

The growth of the Scottish Creative Media sector will be driven largely by advances in digital technology. This will lead to convergence of technologies creating new distribution channels and greater scope to tap into the opportunities presented in global markets. A corollary of this will be that the lines between sub-sectors are likely to become blurred. Creative Media as a whole will increasingly demand individuals with 'T-skills': specialist skills in one core area combined with broad general skills and

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[181] UKCES Working Future 2007-2017 Evidence Report 2: December 2008

[182] Sector Skills Agreement Scotland Update 2008 – 11.

[183] ibid

[184] ibid

cross-disciplinary awareness. This will lead to the development of skills in three main areas in Scotland.

Core generic and business administration skills - In common with other parts of the UK, the key future skills needs in Scotland are likely to be leadership, management and business skills. Creative Media companies in Scotland have a strong track record in producing content, however to capitalise on the new opportunities will require increasing levels of business as well as creative skills. Changing business models also suggest the need for those who understand how to manage across multi-platform scenarios.185

Cross sector awareness - Some sectors like Interactive Content Design and Facilities are well versed in operating in support of clients across sectoral boundaries. However, the converging technological landscape has widened avenues and markets across these and all other Creative Media sectors. Employers seeking to exploit these opportunities will need new and incumbent employees and freelance staff that have appropriate levels of industry awareness across the client base and have the creative ability to identify commercial opportunities by applying the organisations own (existing) practices. Sectors without access to these skills will see their competitiveness eroded.

- Continued up-skilling in relation to specialist/technical skills - the findings presented so far do point to skills shortages across many sectors in specific technical areas like Production and experienced Content for Computer Games Developers. In Broadcast, and those sectors that support others like Facilities and Interactive Content Design, it is thought that the speed of technological change will continue to be substantial. As such, it might be envisaged that in these sectors relatively greater proportions of employer training budgets will be focused on specialist/technical skills development. In contrast, in the Photo Imaging sector there is some evidence that advancements in digital technology, specifically, have reached a plateau. In this respect, specialist/technical training may arguably be less prominent and

[185] Skillset (September 2009) From Recession to Recovery. Based on a sample of 262 employers; Skillset (2008) Creative Media Workforce Survey; Skillset (2009) A Skills Review for the TV & Radio Sector.

involve keeping up to date with modifications and improvements with the sector.

5. Geographical issues

Table 5.1 shows Scotland's share of the UK Creative Media workforce. The table reveals that the vast majority of the workforce is based in England (87%), with a significant proportion in London. It also shows that approximately 7% of UK's total Creative Media workforce is based in Scotland. Considering Scotland's share of total UK population – approximately 9% – the country's proportion of the Creative Media workforce is below its share of population. [186]

5.1 Employment

Table 5.1 Geographical Distribution of the UK Creative Media Workforce

Geographical Distribution of UK Creative Media Workforce	
	% of UK Workforce
Wales	4%
Scotland	7%
Northern Ireland	2%
England	87%
All London	28%
South East of England (excl London)	20%
South West of England	10%
West Midlands	5%
East Midlands	4%
North East of England	2%
Yorkshire & the Humber	6%
East of England	4%
North West of England	8%

Source: Skillset (2009) Employment Census, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, Skillset (2007) Photo Imaging Workforce Survey, Labour Force Survey April-June 2009.

Within Scotland, the vast majority of Creative Media activity is located within the country's central belt. In terms of geographical distribution areas of particular concentration are:

- Dundee has developed a significant cluster of firms in Content for Computer Games development;

[186] GRO Scotland; Mid-year population estimates (2008)

- Edinburgh is home to around half of Scotland's Book Publishing industry; and
- The Television industry is well represented in Glasgow with STV, BBC Scotland and a number of Independent Film Production companies located at the city's Pacific Quay.

5.2 Sectoral concentration

The majority of the Scottish **TV** sector is based in Glasgow with some representation in Edinburgh and Aberdeen. BBC Scotland and Scottish Television are both based in the recently established 'Digital Quarter' at Pacific Quay in Glasgow, which acts as a draw to the Independent TV Production companies. Companies producing content in the Gaelic language are also largely in and around Glasgow with some representation in the Western Isles.

Scotland also has a strong network of Commercial **Radio** stations across the country with household names such as Clyde 1, Forth FM, Real Radio and Galaxy – all of which are part of larger groups. Community Radio stations also have a growing presence with station broadcasting to local communities in areas such as Aberdeen, Orkney, Govan and St. Boswells.[187]

Dundee is widely considered to be home to some of the best gaming talent in the UK and indeed Europe, and is home to a significant cluster of **Content for Computer Games** Developers. Leading the way is Realtime Worlds, a 300-employee Computer Games development company based in the city. Members of the team have created some of the world's best selling games including Crackdown, which won two BAFTAs in 2007 and the well known franchises Lemmings and Grand Theft Auto.

Dundee is particularly well served in regard to the provision for the Content for Computer Games sector, with the Institute of Arts, Media and Computer Games (AMG) based at the University of Abertay. The nine Computer Games and Digital Media courses offered by AMG (six undergraduate and three postgraduate) are all Skillset accredited and AMG itself has been awarded Skillset Media Academy status. In addition, the Scottish Government also designated Abertay as the Scottish

[187] The Communications Market Report: Scotland, Ofcom, 2009.

University Centre for Excellence in Computer Games Education. The University of the West of Scotland also offers a Skillset accredited degree course in Computer Games Technology.

5.3 Supply – Media Academies

Skillset Media Academies are centres of excellence in Television and Interactive Content Design, with a network of 22 academies across the UK and three within Scotland. As described in Section 3.4 above, these are the Creative Loop Media Academy; the Edinburgh Screen and Media Academy; and the University of Abertay Dundee Media Academy. As well as Skillset support, the Scottish Academies have been awarded £5.8m of funding over five years from the Scottish Funding Council. Skillset's ambition for the Scottish Academies has been to collaborate strategically and develop integrated provision and progression routes on the SCQF.

6. Recommendations - Actions Needed To Raise Skills and Productivity in the Scottish Creative Media Sector

The Strategic Skills Assessment for Scotland has been based on a comprehensive review of relevant UK and Scottish data, primary LMI for Scotland gathered by Skillset, and feedback from industry stakeholders in the Creative Media sector in Scotland. This final chapter draws together the preceding evidence to propose a series of broad strategic areas for action designed to help Skillset achieve its mission statement:

"To support improvements to the productivity of our industry to ensure that it remains globally competitive… by leading; developing skills, training and education policy; and through opening up the industries to the UK's pool of diverse talent."

The strategic areas for action are set out under three themes:

- Supporting the industry to achieve its growth potential;
- Ensuring the skills to compete; and
- Preparing the next generation.

6.1 Supporting the Industry to Achieve its Growth Potential

The SSA has highlighted that Scotland has some key current and emerging strengths in the Creative Media Industries. It has also highlighted some significant growth opportunities within sub-sectors and these are reflected in the designation of the Creative Industries (of which Creative Media is a large part) as a Key Sector in the Scottish Government's Economic Strategy.

However these growth opportunities should not be taken for granted. If action is not taken to address to the skills needs related to securing these growth opportunities then the sector may fail to realise its potential.

Creative Entrepreneurs

The SSA has highlighted both Scotland's competitive strengths, but also the strength of the competition in global Creative Media markets. The growth of all sub-sectors will be closely linked to their ability to develop, attract and retain people with the skills to work across the product development cycle: from generating new ideas and content, identifying markets and audiences, devising business models to take advantage of them and retaining intellectual property rights and ownership.

Developing Leadership and Management Skills

A constant theme running throughout this document has been the need to develop the leadership and management skills in the Creative Media sector. This is in part explained by the polarisation of the workforce, with a large cohort of recent new entrants and a body of older, and more experienced staff; and an emphasis on on-the-job training. There is strong evidence in some sub-sectors, notably Content for Computer Gaming and Television, of staff developing strong technical and creative skills, but without management and leadership skills. These will be important to ensure that the sector maintains its reputation for excellence, retains staff – and manages the pressures that growth can bring.

Help Increase the Levels of Innovation and Creativity

Innovation and creativity is the lifeblood of the Creative Media sector. Maintaining competitive advantage is dependent on continually generating and exploiting new ideas. The Scottish Creative Media sector has some strengths in this area, most notably in Computer Games and increasingly in Animation.

In view of this it is vital that innovative thinking is encouraged at all levels within the Creative Media sector. Nobody has complete exclusivity on good ideas and it is important that businesses in the sector create working environments where new ways of thinking can be nurtured and developed.

Invest in Research and LMI

Increased investment in a current evidence base provides the strategic intelligence to routinely inform i) the ongoing development and currency of all the other policy recommendations listed here and ii) the introduction of other essential interventions yet to be determined based on new evidence.

Skillset has developed a suite of research that is steered by industry and Government representatives and this is beginning to provide an evidence base worthy of the sector’s strategic importance and potential. This has been achieved following a build up of research expertise specific to the Creative Media industry, and despite very limited resources and in sub-sectors that have been notoriously difficult to measure. A new level of urgency and commitment is required from all concerned parties to ensure that such vital intelligence gathering is not allowed to wither due to budgetary pressures. With increased resources and the continued support of industry and Government Skillset's Research programme can grow alongside the growth of the industry and do much more, efficiently providing a greater level of granularity.

6.2 Ensuring the Skills to Compete

The Creative Media sector is one of the fastest moving sectors in the economy and is characterised by high levels of technical and process innovation. It is also one of the first sectors to respond to – and often lead – the introduction of technological change in the way businesses and individuals communicate. The SSA has highlighted the central impact that digitisation will have on the future growth and development of the sector.

Moreover, the sector is also characterised by high levels of flexibility in terms of ways that companies collaborate and individuals organise themselves to deliver projects. Parts of the sector consist of large numbers of small and micro businesses and a very high proportion of freelancers. This presents significant challenges for the ways in which businesses and individuals engage with training.

Delivering Professional Digital Skills

The Digital Britain strategy document asserts that in order to be able to exploit the increased commercial opportunities provided by digital technology, the workforce must be equipped with professional digital skills. Within Creative Media, this will involve utilising the technology developments which are leading to increasing convergence across the sub-sectors. Developments in the education system mean that new entrants to the sector are likely to have a greater awareness than those who have may have entered the industry in the 1980s and 90s. The key will be to upskill existing incumbents through digital skills focused CPD.

Ensuring Collaboration between Education and Industry

Traditional sub-sectors within Creative Media such as Television and Film Production have made no secret of their preference for practical experience over academic qualifications. This stems in part from their lack of knowledge on the content and scope of FE and HE courses. The success of the Skillset Screen and Media Academies approach has shown that involving industry in the skills supply side can pay dividends in improving industry perceptions of the quality of graduates produced. Collaborations between education and industry have worked well and Skillset believe there is potential for these to be further developed in future.

Providing Flexibility to SMEs

Feedback from the industry found a call for a more demand-led approach to training, particularly in respect of SMEs. Providing greater levels of support direct to small companies in the sector has the potential to encourage greater levels of CPD, through providing the means to source training which suits their specific workforce needs. This approach may have particular value in empowering SMEs to upskill existing staff to meet the demands of new technology.

6.3 Preparing the Next Generation

The Creative Media sector is built on talent. In order to ensure its future competitiveness, it must continue to attract those which can take it to new levels. However, it must also recognise that it is operating in an increasingly multi-cultural context and strive to ensure the workforce reflects this. Similarly, ensuring that the next generation understands what it takes to compete in the modern Creative Media sector will be central to the continued growth of the Scottish sector.

Opening up the Sector

The Creative Media sector has been fortunate enough to have an over-supply of people looking to get into the sector. However, an ageing population means that all sectors of the economy will be competing for fewer young people in future. It is therefore important that Creative Media continues to advise and guide young people on the careers available and the entry routes open to them. In addition, there is scope to increase the diversity within the sector not only through increasing Black Asian and Minority Ethnic (BAME) representation, but also opening it up to those from different socio-economic backgrounds.

Developing Entrepreneurship at an early age

Initiatives such as the Scottish Government's 'Determined to Succeed' (DTS) aim to develop enterprise skills in young people and prepare them for a successful life beyond school. In common, with other sectors Creative Media will be driven by the next generation's ability to identify and seize opportunity. There has been a long standing debate over whether entrepreneurs are made or born, however there is general agreement that schemes such as DTS can help develop a healthy attitude to risk at an early age.

Embracing Technology

Technology permeates young people's lives more than at any point in human history. Devices such as the iPod, Nintendo Wii, DS and X-Box are almost ubiquitous amongst young people in Scotland. However, there remains a need to ensure that technology and ICT is at the heart of primary and secondary education. Familiarity with technology will be a pre-requisite for those entering the workforce in the next decade.

Annex A Limitation of Official Data Sources

The system for classifying industries used by official data - Standard Industrial and Standard Occupational Classifications (SIC and SOC) - is broadly effective for photo imaging and publishing but less useful for classifying the rest of the industry. As noted earlier,

- Key elements of the Creative Media industry sit in broad classifications that include activity outside of Creative Media preventing any discrete and crucial analysis e.g. Interactive Content Design, Content for Computer Games and Facilities.

- Official data sources to a greater or lesser extent systematically exclude the discrete and increasing freelance labour pool required to create and distribute the creative content upon which our digital economy is becoming increasingly reliant.

- In some cases sample sizes are too small to enable discrete analysis of data contained within SIC that do exist, particularly to the 5-digit SIC level.

In addition, sample sizes for Scotland are far too small to be published by official data sources for most SIC.

The Creative Media industry and DCMS with Skillset first reviewed data available for this part of the industry from the ONS and other sources in 1999 and concluded that additional data are required to measure as a priority the size, shape and specific skills demand of the Creative Media industry its constituent sectors and large freelance labour pool to a granular and commonly understood sub-sectoral level, using bespoke methodologies to ensure adequate sample sizes. In some cases equivalent data cannot be generated eg. GVA and GDP and so these measures exclude contributions from elements not served well by SIC eg Interactive Content Design, facilities (excl. post production), content for computer games and freelancers.

In some cases, the SIC and SOC systems simply do not provide the level of detail required, as noted above. In other cases within the SIC system, whilst the system itself provides the level of detail required, sample sizes of surveys that underpin the key data sources such as the ABI which measures productivity are in fact too small to offer robust detailed analysis. As well as systematically excluding sole traders, as far as business activity goes, little data are available at 5-digit SIC level and for example production and distribution activity cannot be disaggregated.

The table below provides a full breakdown of employment in the Creative Media industry from Skillset's primary research compared with estimates from official data sources. The table clearly shows the paucity of official data for the Creative Media industry in Scotland where as noted earlier interactive content design and Content For Computer Games and most of facilities are not included at all, and reliable figures for those sectors that are included are only provided for TV (programming and broadcasting) and book and newspaper publishing. The official data substantially underestimates the scale of employment within the Creative Media industry in Scotland, only accounting for a proportion of employment as illustrated by Skillset's industry endorsed primary research.

For more detail on the methodologies adopted please refer to: www.skillset.org.

Labour Force Survey and Skillset Creative Media Employment Estimates _ Scotland

LABOUR FORCE SURVEY[188]			SKILLSET[189]		
INDUSTRIES			INDUSTRIES		
SIC 2007	**Description**	**Total Employed**	**Main Sector**	**Sub-sector**	**Total Employed**
60.2	TV Programming & Broadcasting activities	3,000	**Television**	Broadcast TV	950
59.11/3	TV Programme Production activities			Cable and Satellite	0
59.13/3	TV Programme Distribution activities			Independent Production	1,000
	Sub-total	**3,000**		**Sub-total**	**1,950**
60.1	Radio Broadcasting	*	**Radio**	Broadcast Radio	1,650
				Independent Production	*
	Sub-total	*****		**Sub-total**	**1,650**
59.12	MP, V, and TV Programme Post-Production	*	**Facilities**	Post production	100
				Studio and Equipment Hire	250
				Outside Broadcast	50
				VFX	*
				Special Physical Effects	50
				Manufacture of AV Equipment	*
				Processing Labs	*
				Other Services for Film and TV	550
	Sub-total			**Sub-total**	**1,000**
59.11/1	Motion Picture Production activities	*	**Film**	Film Production[190]	650
				Film Distribution	300
59.13/1	Motion Picture Distribution activities	-			

[188]ONS Labour Force Survey April-June 2009.

[189] Skillset 2009 Employment Census except for Publishing, Photo Imaging, Creative Occupations outside the industry and where otherwise stated.

[190] Secondary analysis of unit lists for 2006 feature film productions (80 minutes or longer and minimum budget of £500K.

LABOUR FORCE SURVEY[188]			SKILLSET[189]		
59.14	Motion Picture Projection activities	*		Cinema Exhibition[191]	-
				Moving Picture Archives and Libraries	*
	Sub-total			**Sub-total**	**950**
59.11/2	Video production activities	*	**Other Content Creation**	Animation	500
59.13/2	Video Distribution activities	*		Commercials and Pop Promos	*
				Corporate Production	150
	Sub-total	*****		**Sub-total**	**650**
			Interactive Content Design	Interactive Content Design	1,050
				Sub-total	**1,050**
			Content For Computer Games	Content and Development	500
				Sub-total	**500**
			Additional Available Freelancers		**2,800**
74.2	Photographic activities	-	**Photo Imaging**[192]	Photographic activities	-
74.20/1	Portrait Photographic activities	*		Portrait Photographic activities	*
74.20/2	Other Specialist Photography not Portrait	-		Other Specialist Photography not Portrait	-
74.20/3	Film processing	*		Film processing	*
74.20/9	Other Photographic activities; n.e.c.	*		Other Photographic activities; n.e.c.	*
	Sub-total	*****		**Sub-total**	*****
58.11	Book Publishing	2,000	**Publishing**[193]	Book Publishing	2,000
58.12	Publishing of Directories & Mailing Lists			Publishing of Directories & Mailing Lists	-
58.13	Publishing of Newspapers	7,000		Publishing of Newspapers	7,000
58.14	Publishing of Journals & Periodicals	*		Publishing of Journals & Periodicals	-

[191] Data for Cinema Exhibition are not available by nation or region.

[192] ONS LFS April-June 2009.

* Figures suppressed due to unreliable estimates

[193] Ibid.

LABOUR FORCE SURVEY[188]			SKILLSET[189]		
58.14/1	Publishing of Learned Journals	*		Publishing of Learned Journals	-
58.14/2	Publishing of Consumer, Business and Professional Journals and Periodicals	*		Publishing of Consumer, Business and Professional Journals and Periodicals	*
63.91	News Agency activities	*		News Agency activities	-
63.99	Other information Service activities n.e.c.	*		Other information Service activities n.e.c.	*
58.19	Other Publishing	*		Other Publishing	-
	Sub-total	**9,000**		**Sub-total**	**9,000**
	TOTAL	**12,000**		**TOTAL**	**19,550**
OCCUPATIONS OUTSIDE THE CREATIVE MEDIA INDUSTRY[194]			**OCCUPATIONS OUTSIDE THE CREATIVE MEDIA INDUSTRY**		
SOC 2000	**Description**	**Total employed**	**SOC 2000**	**Description**	**Total employed**
3432	Broadcasting Associate Professionals	*	3432	Broadcasting Associate Professionals	*
5244	TV, Video and Audio Engineers	*	5244	TV, Video and Audio Engineers	*
3434	Photographers & Audio-Visual equipment operators	2,000	3434	Photographers & Audio-Visual equipment	2,000
3431	Journalists, Newspaper & Periodical Editors	*	3431	Journalists, Newspaper & Periodical	*
5421	Originators, Compositors & Print Preparers	-	5421	Originators, Compositors & Print Preparers	-
3421	Graphic Designers	2,000	3421	Graphic Designers	2,000
	TOTAL	**4,000**		**TOTAL**	**4,000**
INDUSTRIES + OCCUPATIONS			**INDUSTRIES + OCCUPATIONS**		
TOTAL		**16,000**	**TOTAL**		**23,500**

NB: '-' indicates data not available. All LFS data include all people working and not just those of working age. '*' indicates figures are suppressed due to unreliable estimates.

[194] Skillset's contract with UKCES does not include responsibility for these occupations outside the Creative Media industry. Due to the nature of the Creative Media labour pool it is likely that people working in these occupations will work in the Creative Media industry at some point and will benefit from the service Skillset provides.

Annex B Data Sources

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