Sector Skills Assessment for the Creative Media Industries in Scotland

April 2011

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Executive Summary

A global sector for Scotland

Scottish Creative Media companies operate in a global marketplace with many challenges and opportunities. TV broadcasting and production aims to secure a greater share of the UK market for example, but there are issues around availability of indigenous high-end production talent. Success in this drive will require a sharp focus on entrepreneurial and business development skills.

Other areas of the Creative Media footprint face different challenges: the Publishing sector (the largest single sector employer) needs to develop new approaches to exploiting emerging digital technologies; Scotland's Computer Games sector faces intense competition from overseas territories where tax regimes are more favourable to developers; and Scotland's Advertising industry sometimes struggles to compete against major London-based agencies for global brand accounts.

Distinctive and localised challenges

The Digital Inspiration[1] 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. The view from industry is that this will require an ongoing transformation in leadership skills across the Creative Media sector.[2]

Joining up long term visions and cultural, enterprise and skills agendas

Scotland's Creative Industries Partnership (SCIP) was established in 2009 to foster a shared agenda amongst Scotland's key public sector agencies to unite their cultural, enterprise and skills agendas. This partnership is chaired by Creative Scotland, the new public body responsible for supporting and developing Scotland's creative and cultural sector.

Creative Scotland published its first full corporate plan in March 2011 for Scotland's cultural and Creative Industries. Its 10 year ambition is to see Scotland recognized as a leading creative nation – one that attracts, develops and retains talent. Within this

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

[2] Unless otherwise specified information in this section is drawn from focus group carried out in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010

ambition there is clear scope for other partners and stakeholders to help heighten external perceptions of the sector's capacity for excellence, and creating greater self-confidence on the supply side that Scottish companies can deliver and play into new markets. Integrated work with Scottish Development International will be vital here, focusing on the export of cultural goods and services, linked to important 'international moments' for Scotland, such as the forthcoming Commonwealth Games in 2014.

Sustainable skills specialisms require a dynamic growing sector

Our industry consultations confirmed that future competitiveness of the Scottish Creative Media sector would need to 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 here.

However, there is also a vital demand-side dynamic to maintaining future success. A particular issue for Scotland is that whilst there is a strong emphasis on the need to develop clusters of specialist skills across the sector, viewed nationally there isn't the volume of work on the demand side within Scotland that is allowing those working across the Creative Media Industries to sustain their chosen specialisms in any straight forward way. This reflects familiar arguments about the Television broadcast and production sector in Scotland, in which the variability of the flow of television broadcast production activity, both inwards and indigenous, potentially undermines the future sustainability of the sector.[3] So for example, in terms of independent television production, there is an urgent need to demonstrate to commissioning editors that Scotland has the strength and depth of talent to originate, develop and deliver multi-million pound commissions. The TV Drama Training Programme[4] for emerging script editors and producers is going some way to meet this objective.

Emphasising Entrepreneurship

Given the relatively low level of business start ups in Scotland, and the growing supply of creative professionals, there is a need to strengthen entrepreneurship within learning and development provision. Research and intelligence gathered from the industry

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[3] Creative Scotland (2010) '*Growing the Television Broadcast and Production Sector in Scotland*.'

[4] A two year project involving BBC Scotland, STV, the independent production sector, Skills Development Scotland (SDS), BECTU, and the Scottish Trade Unions Congress (STUC).

suggests there should always be a strong ‘business component’ included within creative courses at HE / FE level.

Scotland’s new Curriculum for Excellence, which will provide a more coherent, flexible and enriched curriculum from 3 to 18 years, will offer opportunities to introduce different kinds of learning and development that will prepare students more effectively for the shift to the knowledge economy. For example, this might be a stronger general business focus, which could be mirrored in relevant university degrees for the sector, or creative experiences can be used to exemplify learning outcomes across multiple areas of the curriculum.

Running to stand still – sector skills and the digital challenge

The pace of change in the sector, particularly the impact of digital technologies and the shift to multi-platform requirements, are vital drivers across all parts of the sector. 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. For example across the Publishing sector, e-books are generating new products and business models, which means that both small and large companies are having to develop effective digital strategies. As a consequence the Publishing sector has a pressing need to deepen its digital skills base, both to exploit opportunities, but also to protect their content rights as new entrants to the market with larger scale digital media offerings begin to make their presence felt more directly.

Securing dynamic and responsive learning and development provision

Consultation with industry confirms that Scotland is well served in the overall educational provision offered to the Creative Media sector in comparison to other parts of the UK. In particular, there is a view that Scotland has educational strengths in Content for Computer Games and Interactive Media.

However, there are still some major areas of necessary development and improvement highlighted by our industry representatives, which include:

- Making the education system more responsive to industry needs: The technology-driven nature of the Creative Media sector means it can change quickly, creating sudden demand for new skill sets. The education system was felt to take too long to respond to these changes, creating a lag in delivery of suitably qualified graduates.

- Offering shorter, more flexible courses which meet industry needs: There was consensus that FE and HE is not currently set-up to meet the CPD needs of the Creative Media workforce. Feedback suggests employers and employees are looking for focused learning and development that could be completed quickly rather than demanding commitment of a year or more. CPD is usually provided by employers themselves or private providers. One of the stated aims of the Skillset Academy Network is to address this issue.

- Finding an intelligent way to address the fact that in many sub-sectors, the industry values practical skills more than qualifications: Recognising that this is 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. It should be noted however that there are never going to be enough jobs in the industry to match the number of graduates. Many students take these courses knowing they will not find work in these areas. Creative Media skills can be applied to other industries e.g. the graduate who joins a company with digital skills and works on their marketing website producing video, text and interactive facilities. The underlying view was that if skills supply was looked at more strategically, the money could be better spent in meeting the practical learning and development 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.

- Exploring what more could be done to upgrade the skills and current industry knowledge of key lecturers and trainers across the sector. This suggests a role for Skillset, working in conjunction with the larger employing firms, to foster a more continual cycle of industry placement and exposure to the relevant teaching staff from colleges and universities across Scotland. This would also require colleges and universities to sign up to the idea and allow their staff time to be released in to the relevant sectors.

Current skills gaps

Three in ten (31%) employers in the Creative Media Industries in Scotland report a skills gap (higher than the 28% of employers across the UK). Of these employers 44%

reported a skills gap amongst their employees, 17% amongst the freelancers they use and 39% amongst both employees and freelancers. The occupations in which a skills gap is most likely to exist amongst employees are technical development, sales, distribution and marketing and strategic management.[5]

There are also a number of current skills gaps which were identified by industry representatives including visual special effects; multi-platform; post production; editing; production management; and a wide range of technical skills such as lighting electricians and vision engineers. More generally industry representatives talked about the importance of multi-disciplinary skills – allowing individuals to move across content forms and delivery forms. Industry representatives also continued to identify the importance of key soft skills – such as drive, ambition, and curiosity. Business development and leadership skills were also identified as hugely important and increasingly built on the job.

Transforming the quality of careers advice and effective expectation setting

The Creative Media Industries in Scotland are characterised by a highly qualified workforce, with 52% of the workforce in possession of a Scottish Credit and Qualifications Framework (SCQF) Level 9 qualification. This is as high as 64% across the traditional Audio Visual sectors, falling to 42% in the Publishing sector.[6] Media is one of the most popular subject areas, with one third of all Creative Media graduates holding a media related degree.[7] Industry representatives expressed concerns that there are signs that the near future may bring a larger disconnect between the number and quality of graduates and the number of available jobs.

As a consequence the potential gap between the expectations of new entrants into the industry and the reality of working in the industry may be about to get bigger. Industry representatives felt that the quality of careers advice is not keeping pace with the changing reality of Creative Media careers, and that this remains a priority area for action.

The larger employers within the sector, particularly the major broadcasters, need to make sure they are giving clear signals to the market about the emerging shape of their future labour needs, and likely demand calls on the Scottish skills base.

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[5] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[6] Skillset (2010) Creative Media Workforce Survey and Labour Force Survey January to December 2010 (Publishing). Excludes Photo Imaging and Advertising due to low sample sizes in Scotland in these surveys.

[7] Skillset (2010) Creative Media Workforce Survey. Figures exclude Advertising.

Mid-career crunch alongside new entrant lockout

Current market conditions are producing an apparent paradox. Established practitioners are seeing their market positions strengthened, but at the same time within this same group there is a stronger divergence between winners and losers in the labour market. In terms of losers, our industry representatives confirmed that some mid career freelancers are currently struggling to maintain a viable portfolio of work, with some exiting the sector. At the same time, parts of this cohort are benefitting from the increasingly risk-averse hiring practices of established firms across the sector, which is benefitting seasoned practitioners and making it extremely difficult for new entrants into the labour market to secure work.

There is also concern that the more difficult funding environment will lead to the loss of a wide range of new entrant schemes, which help new graduates bridge the gap between their courses and job readiness in the industry.

1 Introduction

1.1 Introduction

Skillset is the Sector Skills Council for the Creative Media Industries, representing 14 sectors which are grouped into six sectors of the DCMS Creative Industries classification. At the heart of the Creative Industries, the Creative Media sector includes companies involved in: Advertising, Textiles, Fashion[8], Film, Television, Radio, Photo Imaging, Interactive Media, Publishing, Animation, Content for Computer Games, Commercials and Promos, Corporate Production, Post Production and Visual Special Effects and Other Specialist Facilities. For ease in some cases the following sectors are referred to and grouped under the umbrella heading 'Audio Visual': Broadcast (TV and Radio), Film, Corporate Production, Commercials and Pop Promos, Facilities, Animation, Interactive Media and Content for Computer Games. Skillset is responsible for the production of Sector Skills Assessments (SSAs) 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;[9]
- 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

[8] A separate SSA has been produced for the Fashion and Textiles Industry

[9] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

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 technology. 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. In its final report the Commission made recommendations for strengthening the industry.[10] The Scottish Digital Network Panel, the group tasked with planning a new £75 million digital television channel for Scotland, proposes funding it through the licence fee. The report recommends that the creation of a Scottish Digital Network could also be beneficial for creating and establishing careers and skills within the sectors in Scotland as well as commissioning and distributing Scottish created content and sustaining investigative journalism.[11]

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[10] 'Platform for Success', Scottish Broadcasting Commission, September 2008

[11] The Scottish Digital Network Panel's final report: www.scotland.gov.uk/Publications/2011/01/19140602/0

- **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.

Scotland's Creative Industries Partnership (SCIP) was established in 2009 to foster a shared agenda amongst Scotland's key public sector agencies to unite their cultural, enterprise and skills agendas. This partnership is chaired by Creative Scotland, the new public body responsible for supporting and developing Scotland's creative and cultural sector.

Creative Scotland published its first full corporate plan in March 2011 for Scotland's Cultural and Creative Industries. Its 10 year ambition is to see Scotland recognized as a leading creative nation – one that attracts, develops and retains talent. Within this ambition there is clear scope for other partners and stakeholders to help heighten external perceptions of the sector's capacity for excellence, and creating greater self-confidence on the supply side that Scottish companies can deliver and play into new markets. Integrated work with Scottish Development International will be vital here, focusing on the export of cultural goods and services, linked to important 'international moments' for Scotland, such as the forthcoming Commonwealth Games in 2014.

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, Publishing and Advertising 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 Industries sit in broad classifications that include activity outside of Creative Media preventing any discrete and crucial analysis e.g. Interactive Media, 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 e.g. 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 Media, 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.

Due to the low base sizes in Scotland, Labour Force Survey data for the Photo Imaging and Advertising sectors cannot always be included in cross-sector statistics.

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

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

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

The latest figures for the whole of the Creative Industries (which include the Creative Media sector), excluding Crafts, showed that Creative Media accounted for 5.6% of Gross Value Added (GVA) in 2008.[12] Exports of services by the Creative Industries totaled £17.3 billion in 2008. This equated to 4.1% of all goods and services exported.[13]

At the Scottish level, the Creative Industries contribute £5.3bn in turnover and £3.2bn in Gross Value Added (GVA) to the economy.[14]

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*

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[12] DCMS Economic Estimates December 2010. These are the latest figures available from DCMS, however, it is possible that economic trends occurring since the data was produced may have had an impact on these estimates.

[13] Ibid

[14] Scottish Government, ONS (ABS) 2008. www.scotland.gov.uk/Topics/Statistics/Browse/Business/KeySectors

capacity to boost productivity".[15] Furthermore, it also demonstrates the level of commitment which the Scottish Government is prepared to make in order to support the sector to achieve its full potential.

Economic Growth

According to the Scottish Government's Key Sector Statistics Database the Creative Industries, at the heart of which is Creative Media, contributes as follows:[16]

- The Creative Industries in Scotland had an estimated turnover of £5.3 billion in 2008 and employed 63,000 people (3% of Scotland's total employment). The Creative Media Industries make a significant contribution to this.

- In 2010, there were 9,005 registered enterprises operating in the Creative Industries sector (or 6% of all registered businesses in Scotland) and the number of registered enterprises in the sector had increased by 35% over the last decade compared to 3% across all industries in Scotland. [17]

- The analysis also found that the Creative Industries in Scotland are characterised by small businesses (97% of enterprises had 0-49 employees in 2010). If this category is broken down further, it shows that 59% of registered enterprises had zero employees, whilst 33% had 1-49 employees. Skillset research on the levels of freelancing within the Scottish Creative Media Industries reveal that approximately 19% of the workforce is freelance.[18]

Looking specifically at Gross Value Added (GVA) data[19] for the available Creative Media sub-sectors within the Creative Industries, Table 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 2008, the GVA generated by the Creative Industries was £3.2bn;

- Growth in GVA in the wider Creative Industries was high at 162%; and

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

[16] Scottish Government, ONS (ABS and ABI) 2008. www.scotland.gov.uk/Topics/Statistics/Browse/Business/KeySectors

[17] Scottish Government, ONS (IDBR) 2010

[18] Skillset (2009) Employment Census, secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer) and Labour Force Survey, January to December 2010.

[19] Scottish Government, ONS (ABS) 2008. www.scotland.gov.uk/Topics/Statistics/Browse/Business/KeySectors

- Publishing and to a lesser extent Advertising have both exhibited a decline in GVA in recent years.

Table 1: GVA in the Creative Media Industries (1998-2008)**

GVA in the Creative Media Industries (1998-2008)				
	1998	**2008**	**Change (1998-2008)**	
	£m	**£m**	**£m**	**%**
Video, Film & Photography	£54	£86	£32	59%
Publishing	£308	£330	£22	7%
Advertising	£79	£227	£148	187%
Radio and TV	*	*	*	*
Total Creative Industries GVA	**£1,213**	**£3,173**	**£1,960**	**162%**

Source: Scottish Annual Business Statistics, * Denotes disclosive data

**Data excludes Content for Computer Games, Interactive Media and Facilities

Networks

Networks are also integral to the clustering of particular types of sub-sectors in specific geographical locations. Turok's[20] (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.

In addition to the more supportive and collaborative elements of networks that much research has focused on, Shaw's[21] (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 Production Industries in Scotland, with freelancers accounting for 40% and 91% respectively.[22]

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

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

[22] Skillset (2009) Employment Census and secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer)

2.3 The Business Base

There are an estimated 2,600 Creative Media companies (not including sole-traders) in Scotland and a breakdown by broad sector can be found in Table 2.[23] In terms of company size it is likely that companies based in Scotland will follow the same trend as the wider UK, where SMEs dominate numbers. The vast majority (84%) of companies across the UK Creative Media Industries are small (fewer than 10 people) and just 2% of companies are large (100 people and more).[24]

Table 2: Company breakdown

Sector	Number of Companies
Television	100
Radio	100
Film[25]	Less than 25
Animation	50
Interactive Media	500
Content for Computer Games	Less than 25
Other Content Creation (Corporate, Commercials and Pop Promos)	50
Facilities	200
Publishing	600
Photo Imaging	500
Advertising	550
TOTAL	**2,600**

NB: All totals are rounded to the nearest 50.

2.4 Employment Profile

The most up-to-date figures reveal that approximately 29,550[26] people are employed in the Creative Media Industries in Scotland. The largest sectors in Scotland in terms of workforce are Publishing (13,200 people), Film[27] (2,450 people), Advertising (2,250 people), Television (1,950 people) and Photo Imaging (1,900 people) see Annex B for

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[23] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. NESTA (Content for Computer Games) and IDBR 2009 (Photo Imaging, Publishing and Advertising).

[24] Skillset (2009) Employment Census and IDBR 2009 (Photo Imaging, Publishing and Advertising).

[25] Excludes Cinema Exhibition

[26] Skillset 2009 Employment Census (all creative sub-sectors excluding Film Production, Photo Imaging, Publishing and Advertising), secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer) and Labour Force Survey, January to December 2010.

[27] Includes Cinema Exhibition

sub-sector employment data. Since 2006 Scotland, like much of the UK, has seen a fall in the number of people employed within many sectors e.g. Publishing and Interactive Media.

The employment profile for Creative Media reveals that the industry is characterised by high levels of freelancing, which varies considerably across the different sectors contained within the Creative Media Industries. This section goes on to explore some of the key characteristics of employment within the Creative Media Industries 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 Industries to continue to support economic growth in Scotland, it relies on a contribution from a wide range of occupations across the sector. These occupations range from creative and technical such as content design, visual effects and animators through to management and professional roles. Table 3 provides a full breakdown of employment by occupation in the Creative Media Industries in Scotland. As a breakdown is not available for Advertising and Publishing in Scotland, figures for the UK have been included.

Table 3: Occupational Breakdown - Creative Media Industries in Scotland[28]

Occupational Group – Creative Media and Advertising	Total – Creative Media (%)	Total – Advertising (All UK)[29] (%)
Strategic Management	6%	6%
Creative Development	1%	11%
Production	13%	6%
Legal	*	0%
Broadcast Management	5%	0%
Broadcast Engineering & Transmission	1%	0%
Editorial, Journalism and Sport	4%	0%
Content Development	1%	22%
Art and Design	7%	9%
Animators	4%	0%
Costume/Wardrobe	*	0%
Make Up & Hairdressing	*	0%
Camera/Photography	13%	0%
Lighting	1%	0%
Audio/Sound/Music	3%	0%
Transport	*	0%
Studio Operations	*	0%
Technical Development	1%	0%
Editing	2%	0%
Laboratories and Imaging Services	10%	0%
Manufacture	0%	0%
Servicing	*	3%
Retail and Exhibition	13%	0%
Libraries and Archives	*	2%
Distribution, Sales and Marketing	4%	0%
Business Management	8%	41%
Other	1%	0%

Occupational Group – Publishing (all UK)	Total (%)
Managers and Senior Officials	28%
Professional Occupations	5%
Associate Professional and Technical	38%
Administrative and Secretarial	11%
Skilled Trades Occupations	4%
Personal Service Occupations	0%
Sales and Customer Service Occupations	6%
Process Plant and Machine Operatives	2%
Elementary Occupations	7%

Sources: Creative Media - Skillset (2009) Employment Census, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey and Skillset (2008) Photo Imaging Workforce Survey reported in Skillset (2009) Photo Imaging Labour Market Intelligence Digest. Advertising – IPA (2009) Census. Publishing - LFS, ONS January - December 2010.

* denotes a figure less than 0.5 but greater than 0.

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[28] Publishing and Advertising occupations show only UK data (no comparable data is available for Scotland only) and in the case of Publishing cannot be disaggregated further.

[29] Occupations mapped to Skillset's Occupational Functional Map.

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. A fifth (19%) of the workforce in Scotland is freelance, lower than the average of 24% for the UK as a whole. [30] However, the Publishing industry makes up a higher proportion of the Scotland workforce and has comparatively low levels of freelancing (7% in Scotland). Table 4 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 Publishing, Post Production, Terrestrial TV and Content for Computer Games are less likely to be freelancers than within other sub-sectors. However, in Independent TV Production and Film Production, freelancers account for a much larger share of the workforce.

[30] Skillset (2009) Employment Census, secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer) and LFS, ONS January to December 2010.

Table 4: Freelance Employment in Scotland

Sector	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	**1,050**	**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	**2,450**	**29%**
Cinema Exhibition	1,450	0%
Film Distribution	300	29%
Film Production	700	91%
ANIMATION	**500**	**49%**
OTHER CONTENT CREATION	**150**	**31%**
Commercials Production & Pop Promos	*	-
Corporate Production	150	31%
INTERACTIVE MEDIA	**1,050**	**42%**
CONTENT FOR COMPUTER GAMES	**500**	**16%**
PUBLISHING	**13,200**	**7%**
Book Publishing	1,700	N/A
Newspaper Publishing	4,500	N/A
Journals & Periodicals Publishing	3,750	N/A
Other Publishing	1,700	N/A
PHOTO IMAGING	**1,900**	**43%**
ADVERTISING	**2,250**	**27%**

Sources: Skillset (2009) Employment Census, secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer) and LFS, ONS January to December 2010.

Overall, 46% of employers in the Creative Media Industries in Scotland reported using freelancers in the last 12 months; this is slightly lower than the 50% of Creative Media employers across the UK.[31]

Changes in employer demand for freelancers over the past year were also explored in Skillset's (2010) Creative Media Employer Survey. Approaching two fifths (37%) of employers in Scotland stated that their company's requirement for freelancers had *increased* over the last 12 months (compared to a UK average of 30%). A further 36% said that their need had not changed in the past 12 months and 24% said that their need had *decreased*.[32]

In addition, 26% of Creative Media employers in Scotland believed their company's requirement for freelancers would *increase* over the next 12 months, 61% believed it would *stay the same* and just 6% thought it would *decrease*.[33]

Skillset's (2010) Creative Media Workforce Survey asked freelancers whether there had been any change in the number of days worked over the past year in comparison to the previous 12 months. Despite employers reporting an increase in freelance recruitment over the past year, two fifths (40%) of freelancers responding to the workforce survey said that the number of days worked had *decreased*. A further third (33%) saying it stayed the same and a quarter (24%) experiencing an increase in the number of days worked.[34]

A third (34%) of the Scotland Creative Media workforce use their skills across more than one sector. This is particularly pronounced in Outside Broadcast, Corporate Production, Post Production and Animation. It varies greatly by contract type, with over half (52%) of freelancers working across more than one sector compared to 19% of employees.[35]

Gender, Ethnic Background, Disability & Age

Table 5 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:

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[31] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[32] Ibid

[33] Ibid

[34] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[35] Ibid

- Representation of females in the Creative Media Industries is lower than for men. In fact, women account for two fifths (39%) of the workforce in Scotland;
- A very small proportion (2%) of the workforce are from a Black, Asian and Minority Ethnic (BAME) background;
- Approximately 10% of the Creative Media workforce has some form of disability;
- The Creative Media workforce in Scotland is older than the wider UK Creative Media workforce, with 31% aged under 35 compared to 39% across the UK.

Table 5: Employment Profile of Creative Media Industries in Scotland and UK

Characteristic	Scotland[36]	UK[37]
16-34 years	31%	39%
35 years and over	99%	61%
Female	39%	39%
BAME	2%	6%
Disabled	10%	9%

2.5 Recruitment at Entry Level Onwards

Approaching half (48%) of Creative Media employers in Scotland have taken on new employees or short-term contracted staff over the past 12 months (slightly higher than the proportion of Creative Media employers across the UK – 46%). Two thirds (66%) had actually taken on freelancers, with 32% taking on employees and just 2% taking on both.[38]

Of those employers in Scotland to have recruited in the last 12 months, 32% recruited from other Creative Media Industries and slightly more (38%) recruited from outside of the Industries. This gap is less polarised than amongst all Creative Media employers,

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[36] *Age and Disability figures* from Skillset (2010) Creative Media Workforce Survey and LFS January to December 2010. *Gender and Ethnicity* from Skillset (2009) Employment Census, Skillset (2010) Creative Media Workforce Survey and LFS January to December 2010. All figures exclude Photo Imaging and Advertising due to low sample sizes in Scotland in these surveys.

[37] *Age and Disability figures* from Skillset (2010) Creative Media Workforce Survey and LFS January to December 2010. *Gender and Ethnicity* from Skillset (2009) Employment Census, Skillset (2010) Creative Media Workforce Survey and LFS January to December 2010.

[38] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

where just 28% recruited from other Creative Media Industries compared to the 41% who recruited from outside of the Industries.[39]

Over half (52%) of Creative Media employers in Scotland have recruited direct from education in the last 12 months (compared to 45% across the UK).[40]

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*."[41] 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 2010 established that just under three-in-ten (29%) entered the industry through an advertisement (varying from 36% of employees to 19% of freelancers). However, less formal routes were very common – 28% of the workforce in Scotland made direct contact with the employer (again higher amongst employees 38%, than freelancers 16%). A further one in ten (12%) of those surveyed heard about the job through either a friend or relative or via word-of-mouth. Both of these methods were more common amongst freelancers (18% and 21% respectively).[42]

Most sectors of the industry have long been characterised by highly motivated individuals wanting to work in an industry commonly seen as glamorous and exciting. It is estimated that in 2008-09 around 720,000 learners in FE were studying courses relevant to Skillset industries (from here on referred to as 'Skillset relevant courses'[43]), including 121,600 in Scotland[44], whilst over 757,000 were studying Skillset relevant courses at UK HE institutions, including 58,400 in Scotland.[45] In terms of outcomes,

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[39] Ibid

[40] Ibid

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

[42] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[43] Skillset-relevant courses are those defined through course codes within the HESA Joint Academic Coding system (JACs) and FE 'learning aims' as potentially relevant to Skillset key sectors and the functions and occupations within them.

[44] Scotland Scottish Funding Council 2008/09 as reported in Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

[45] HESA 2008/09 as reported in Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

10% of all Skillset relevant students who have gained employment 6 months after graduating have done so within Skillset industries.[46]

The demand from individuals wanting to work in the sector 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.

As a result, high levels of unpaid or voluntary work take place in the sector – over half (51%) of the Scotland workforce surveyed in the Creative Media Workforce Survey 2010 said they had undertaken unpaid work at some point in their career. The survey revealed that the incidence of unpaid working was higher amongst Scottish freelancers (54%) than employees (48%). This is much higher than the UK average of 40%.[47]

Two fifths (39%) of the Scotland workforce also undertook work experience prior to working in the Creative Media Industries (similar to the UK Creative Media average of 38%). Of those undertaking work experience just 13% were paid (compared to a UK average of 18%).[48]

Scotland based employers reported that skills shortages exist in occupations like Production and Distribution, Sales & Marketing.[49] A lack of information on the range of occupational roles may be a contributing factor. Across the Creative Media Industries in Scotland, employers report that skills in short supply from new entrants include leadership and management (28% of employers), using sector specific software packages (27%), sales and marketing skills (23%) and multi-skilling (22%).[50]

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[46] Since 2002/03 HESA have administered a survey of HE leavers called the Destinations of Leavers from Higher Education (DLHE). This replaced the previous First Destinations Supplement (FDS) and seeks to collect a richer set of data then held previously particularly focused upon on the employment and further study graduates move in to after their studies.

[47] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[48] Ibid

[49] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[50] Ibid

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.[51] These are set out below:

Growth in Scottish Television Production

TV broadcasting and production activity has seen notable growth over the past 18 months driven in part by the BBCs commitment to increase the proportion of 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 more widely and will lead to an increasing requirement for high-end production staff in Scotland. Those with the skills to produce genres such as returning drama or light entertainment within budget and timescales will thrive in this environment.

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 believe 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.

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[51] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

Innovation

Innovation is at the heart of the Creative Media sector as emphasised in 'Digital Britain'.[52] As outlined above, innovative new technologies are a key factor in driving the demand for skills. However, the continual need to 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. Employees and freelancers with experience and understanding of their field are needed to achieve this. 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 also found the view that it must be realistic about what it can aspire to given its relatively small size. The demise of Realtime Worlds in September 2010, with the loss of more than 200 jobs highlighted just how uncertain this market is for firms with fragile business models. 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 Digital Inspiration[53] 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. The view from industry was that this requires the leadership skills within the Creative Media sector to be developed and we must explore and identify viable options to deliver these.

Investment

There was general agreement within the industry that demand for skills is 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

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

[53] 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. 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

Learning and Development

The Creative Media Industries in Scotland is characterised by a highly qualified workforce, with 52% of the workforce in possession of a Scottish Credit and Qualifications Framework (SCQF) Level 9 qualification. This is as high as 64% across the traditional Audio Visual sectors, falling to 42% in the Publishing sector.[54] Media is one of the most popular subject areas, with one third of all Creative Media graduates holding a media related degree.[55] Furthermore, a quarter (25%) of the workforce holds a postgraduate qualification.[56] Across the UK, 57% have a graduate/level 4 degree[57] and 31% have a postgraduate qualification.[58]

Over two fifths (43%) of the Scottish Creative Media workforce had participated in learning or skills development during the preceding 12 months. This varies hugely by contract type, with employees (51%) much more likely than freelancers (33%) to have

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[54] Skillset (2010) Creative Media Workforce Survey and Labour Force Survey January to December 2010 (Publishing). Excludes Photo Imaging and Advertising due to low sample sizes in Scotland in these surveys.

[55] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[56] Ibid

[57] Skillset (2010) Creative Media Workforce Survey and LFS January to December 2010 (Publishing and Photo Imaging).

[58] Skillset (2010) Creative Media Workforce Survey. Figures exclude Advertising.

undertaken learning or skills development in the preceding 12 months.[59] The most common subjects undertaken were computer skills in specific software packages (33%), management and leadership (17%), health & safety (15%), business development and commercial awareness (13%), online and social media publishing or content distribution (13%) and writing and copy editing (10%).[60]

Demand for learning and development remains high, with half (50%) of the workforce indicating that they have a current learning or development requirement. In this instance there is no difference by contract type.[61]

This highlights the challenge that the Creative Media Industries face in keeping pace with the technological advances that drive demand (and need) for learning and development within the sector. Despite employee and freelance demand for learning and development being high the latest evidence suggests that employer's provision to meet the demand is perhaps not at the same level. Skillset's (2010) Creative Media Employer Survey showed that just 19% of Creative Media employers in Scotland have a plan that specifies the type and level of learning and development that their company will invest in over the coming year (similar to the UK Creative Media employer average of 18%). In terms of budget, just 7% of Creative Media employers in Scotland had to reduce their budget for learning and development over the last year, which is lower than Creative Media employers across the UK (12%). For 76% of employers in Scotland the budget remained unchanged, whilst 10% have actually seen an increase in it (compared to 16% across the UK).[62]

Over the last 12 months two fifths (39%)[63] of employers have funded or arranged learning or development for their workforce (compared to 45% across the UK). Of

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[59] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[60] Ibid

[61] Ibid

[62] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising. These figures vary with data from the Scottish Employer Skills Survey 2010 which shows that 35% of establishments have a staff training plan and 15% of establishments increased their expenditure on training compared to 31% that decreased and 49% that stayed the same. However, this data excludes many of those working in Interactive Media, Content for Computer Games and Facilities. The Skillset sourced figure is preferred due to the limitations of Creative Media data extracted from SESS and the fact that statistical testing shows that SESS data should be treated with caution.

[63] This figure varies significantly with data from the Scottish Employer Skills Survey 2010 which shows that 60% of establishments had provided training in the past 12 months. However, this data excludes many of those working in Interactive Media, Content for Computer Games and Facilities. The Skillset sourced figure is preferred due to the limitations of Creative Media data extracted from SESS and the fact that statistical testing shows that SESS data should be treated with caution.

those employers who do provide learning or development, 66% extend provision to freelancers.[64]

Within those companies in Scotland that had funded or arranged learning and development for staff in the past 12 months the most common method of delivery was through an external course or seminar (63%). Around half of employers funded or arranged learning and development delivered through both structured and non-structured support on the job by another member of their workforce (55% and 53% respectively) and books and other printed materials (47%). Interestingly, just 36% of employers had funded or arranged learning and development delivered through internet based/online resources.[65] This area of learning and development is set to expand exponentially due to the potential cost savings and reach. As yet it has not reached a tipping point where most major employers and providers have developed on-line resources. The BBC's increased investment in on-line learning resources is a sign that major change is upon the Creative Media sector as a whole.

Skills Shortages

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.

Employers highlighted a mismatch of applicants' skills to the needs of the job and tended to prioritise experience in work over academic qualifications.[66] In fact, a recent survey reveals that half of employers state they do not value formal qualifications.[67] This might be attributable to a perception among employers that qualifications do not necessarily make new recruits to the sector 'job ready'.

Across the Creative Media Industries in Scotland, employers report that skills in short supply from new entrants include leadership and management (28% of employers),

[64] Ibid

[65] Ibid

[66] Skillset's employer and stakeholder qualitative framework 2010

[67] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising. 50% of employers reported that they do not value formal qualifications.

using sector specific software packages (27%), sales and marketing skills (23%) and multi-skilling (22%).[68]

Of those employers based in Scotland reporting vacancies in Skillset's (2010) Creative Media Employer Survey 42% reported vacancies that are hard to fill (46% across the UK) representing 6% of all Creative Media employers. These hard to fill vacancies were most frequently based in occupations like Production and Distribution, Sales and Marketing. The majority of employers in Scotland experiencing hard to fill vacancies went on to report that this was due to applicants lacking the relevant work experience or lacking the skills or talent the company demands. Only around a fifth identified an applicant's lack of relevant qualifications as a reason.[69]

In response to these hard to fill vacancies employers in Scotland were most commonly increasing recruitment spend, using new recruitment methods/channels or skilling up the existing workforce to take on some of the responsibility.[70]

In the Creative Media Industries in Scotland, the most common areas of learning and development provided by employers in the past 12 months are related to using sector specific software packages (52% of employers) and technical skills, most commonly computer programming and usage (41%). Other common areas of learning and development provided include leadership and management (28%) and sales and marketing (27%). A fifth of employers (22%) specified skills to develop content for multiple platforms and the areas cited most frequently was the 'design and development of web sites or web applications'.[71]

The Scottish Employer Skills Survey 2010 shows that vacancies exist within 15% of all establishments[72], which is very similar to the Skillset sourced figure of 14% of employers (which is preferred due to the limitations of Creative Media data extracted from SESS). Data from the Scottish Employer Skills Survey 2010 relating to number of vacancies and hard-to-fill vacancies has been deemed to be not of publishable quality after statistical testing.

Visual Effects (VFX) is dependent on highly specialised technical and artistic skills that are in considerably short supply globally. Visual effects companies have traditionally

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[68] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[69] Ibid

[70] Ibid

[71] Ibid

[72] This data should be treated with caution after statistical testing of SESS data.

recruited from all over the world to meet the demand for specialised technical roles, and VFX has been placed on the Home Office shortage occupation list.[73]

Skills Gaps

Three in ten (31%)[74] employers in the Creative Media Industries in Scotland report a skills gap (higher than the 28% of employers across the UK). Of these employers 44% reported a skills gap amongst their employees, 17% amongst the freelancers they use and 39% amongst both employees and freelancers. The occupations in which a skills gap is most likely to exist amongst employees are technical development, sales, distribution and marketing and strategic management. Camera/photography is the most common occupation for skills gaps amongst freelancers.[75]

For two thirds of Creative Media employers in Scotland, sales and marketing was the most common skills gap area amongst their employees (66%). This was followed by skills in using sector specific software packages (50%), leadership and management (42%), business skills (most commonly commercial awareness, 38%), technical skills (36%) including common specific mentions of ‘computer programming’, ‘editing’ and ‘CGI: 3D/Animation/VFX/Graphic design’, skills to develop content for multiple platforms (most commonly in relation to writing and editorial - 30%) and multi-skilling (30%).[76]

The skills gaps most commonly reported for employees above were similar to those reported for freelancers. Three fifths (59%) of employers reported a skills gap amongst the freelancers they use specific to skills in using sector specific software packages, 43% for technical skills (computer/software usage and photographic skills this time being most prevalent) and 43% multi-skilling.[77]

Of the 50% of the Scottish Creative Media workforce who had current learning or skills development needs a number of common subjects were cited. The most common subjects were specific technical or craft skills (19%), writing and copy editing (16%),

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[73] Skillset worked with UK Screen to submit evidence in response to the consultation informing the Migration Advisory Committee report on limits for Tier 1 and Tier 2 for 2011/12 (Nov 2010). VFX occupations are currently included in Tier 2 of occupations open to immigration from non-EU nationals. MAC has recommended that the criteria used to identify skilled occupations be reconsidered and the limits on occupations currently on the shortage list be reviewed.

[74] This figure comprises the whole of the Creative Media Industries and is preferred to using Scottish Employer Skills Survey 2010 data due to the exclusion of many of those working in Interactive Media, Content for Computer Games and Facilities. After statistical testing data from SESS was also deemed to be not of publishable quality.

[75] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[76] Ibid

[77] Ibid

computer skills in specific software packages (13%), management and leadership (13%), general computer skills (12%) and design and development of web sites or web applications (11%).[78]

A third (32%) of Creative Media employers in Scotland attributed the skills gaps they currently had to a failure to train and develop staff. A further 24% cited the lack of experience of recently recruited staff.[79]

Skills gaps had various effects on the companies experiencing them including delaying the development of new products/services (66% of employers in Scotland), increasing operating costs (50%), experiencing difficulties in meeting quality standards (45%) and the actual loss of business to competitors (43%). However, two thirds (64%) of employers have taken actions to address the skills gaps they're experiencing. The actions most commonly taken are skilling up the existing workforce (70% of employers), increasing or expanding trainee programmes (61%) and redefining existing jobs (52%).[80]

There are a number of skills gaps which were identified by industry representatives in our qualitative research stage including visual special effects; multi-platform; post production; editing; production management; and a wide range of technical skills such as lighting electricians and vision engineers. More generally, industry representatives talked about the importance of multi-disciplinary skills – allowing individuals to move across content forms and delivery forms. Industry representatives also continued to identify the importance of key soft skills – such as drive, ambition, and curiosity. Business development and leadership skills were also identified as hugely important and increasingly built on the job.[81]

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

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[78] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[79] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[80] Ibid

[81] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

sector. Where employers do experience a skills shortage or gap, they are often unable to locate suitable provision which can deliver the required learning and development 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 Industries in Scotland.

3.3.1 Television

Overview

Television is a major sector within the Creative Media Industries in Scotland. It comprises Broadcast Television, Cable and Satellite Television and Independent Production and numbers approximately 100 companies.[82] 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.[83] Employment within this sector is split almost equally between Terrestrial TV (49%) and Independent Production (51%).[84]

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 sector within the Scottish Creative Media Industries – at 47%.[85] At a UK level, women are also well represented within this industry, although to a lesser extent (41%) than across Scotland.[86]

Our research shows that, on average, 40% of Scotland's TV workforce is freelance.[87] However, the Independent Production sub-sector relies more heavily on freelancers (67%) when compared with Terrestrial TV (11%).[88] A relatively high proportion of freelancers can have implications on the skills base. Freelancers are generally not able

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[82] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. There are some companies within the database for which no postal address is held.

[83] Skillset (2009) Employment Census

[84] Ibid

[85] Ibid

[86] Ibid

[87] Ibid

[88] Ibid

to access affordable learning or development as readily as employees, and as such, are particularly vulnerable to being left behind unless their skills are updated.[89]

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 is also a large ‘tail’ of around 100 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.

There are also around 25 firms active in producing content in the Gaelic language. Many of these programmes are made for MG Alba, Scotland’s Gaelic media service, one of the biggest programme commissioners in Scotland. Again the sector is dominated by a small number of SME’s, meeting specific niche requirements and a long tail of freelancers and micro-businesses.

A number of factors suggest potential growth in the TV sector 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.[90]

Skills Shortages

A third (32%) of TV employers across the UK have current vacancies, and of these employers three in ten (31%) report having ‘hard to fill vacancies’ and hence skills shortages (varying from 22% of TV Broadcasters to 43% of TV Production companies). The TV average is actually lower than the Creative Media employer average of 46%.

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[89] www.skillset.org/skillset/press/releases/article_6060_1.asp

[90] Creative Scotland (2010) ‘*Growing the Television Broadcast and Production Sector in Scotland*.’

The occupation in which these skills shortages exist most commonly is Production (for 38% of TV employers).[91]

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."*[92] 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
- the distribution of multi-platform content.

A more recent report also highlights the importance of developing creative leadership in order to build the talent base in Scotland. A recommendation of the report is for Scotland's public service broadcasters, independent production companies and public sector to commit to implementing Sector Skills Agreements to increase and improve the scale and capacity of skills and businesses in Scotland, to foster and develop creative leadership and to retain skills in Scotland.[93]

In addition to published data and sources of information, feedback from industry[94] 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;

[91] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

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

[93] Creative Scotland (2010) '*Growing the Television Broadcast and Production Sector in Scotland*.'

[94] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

- 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;
- 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.

Skills Gaps

A third (32%) of TV employers across the UK report a skills gap within their current workforce, with little variation by sub-sector.[95] More than half of these employers highlighted leadership and management (53%), and sales and marketing (53%) as broad areas in which skills gaps exist amongst employees. Creative talent (40%), skills in using sector specific software packages (32%) and technical skills (32%) were also highlighted as skills gap areas by between three and four in ten TV employers. Within the broad category of ‘technical skills’ – editing, TV/video production, camera and sound were the most common specific areas of skills gaps. Amongst freelancers areas of skills gaps are very similar. TV employers most frequently mentioned skills gaps relating to sales and marketing (36%), skills in using sector specific software packages (32%), leadership and management (30%), creative talent (29%) and technical skills (28%). Again camera, sound and editing were the most frequently mentioned types of technical skills.[96]

Across Scotland, 51% of the Television workforce indicated that they had a need for learning or skills development. The most common areas of learning or skills

[95] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[96] Ibid

development need are computer skills in specific software packages (21%), editing (13%), accounting and finance (13%), specific technical or craft skills (12%) and camera (10%).[97]

In addition, the industry has pointed to a number of skills gaps affecting the TV sector in Scotland.[98] 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 learning or development, 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
- In the production of TV for Gaelic language, consultations suggest that recent activity had addressed many skills shortages. Nevertheless the polarisation of the workforce, with 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.

The introduction of YouView next year is also particularly likely to create related skills needs around the production of content for multiple-platforms.[99]

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[97] Skillset (2010) Creative Media Workforce Survey. The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[98] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

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.

3.3.2 Film

Overview

The Film industry in Scotland employs in the region of 2,450 people, accounting for approximately 8% of the UK total.[100] The majority of this employment (60%) is based within Cinema Exhibition, with 29% in Film Production and the remaining 12% in Film Distribution.[101] In Scotland, 29% of the Film industry's workforce operate on a freelance contract (varying from 91% in Film Production to 0% in Cinema Exhibition) compared with just 34% across the UK-wide Film industry.[102]

In terms of female representation within the workforce, 45% of the Scottish Film industry's workforce is female – this is a little higher than the corresponding figure of 43% for the UK Film industry. Just 2% are from a BAME background[103]

Estimates from Scottish Screen reveal that there are approximately 80 production companies and more than 300 Facilities companies operating across the country.[104] 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.[105] 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.

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

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[99] YouView is a partnership between the BBC, ITV, BT, Channel 4, Five, Arqiva and Talk Talk to develop a common interface for Internet Protocol Television (IPTV) in the UK. To be launched in 2011, YouView will attempt to replicate the success of Freeview for internet television. See www.youview.com

[100] Skillset (2009) Employment Census and Skillset (2010) Creative Media Workforce Survey.

[101] Ibid

[102] Ibid

[103] Ibid – Scotland figure excludes Cinema Exhibition.

[104] www.scottishscreen.com/content/main_page.php?page_id=20

[105] Ibid

a year in production, presents challenges in terms of sustaining and developing the skills of the workforce. In addition to Film Production, companies are also involved in commissioning short films, producing adverts and corporate film work. Across the UK 2009 was the year cinema bucked the recession. UK cinema visits of 174 million made 2009 the second highest year for admissions since 1971, while the UK box office grew to a record £944 million. 2009 was also an excellent year overall for film production in the UK, with studios busy with inward investment films such as *Harry Potter and the Deathly Hallows*, *Robin Hood*, *Gulliver's Travel*s and *Clash of the Titans*. The UK spend on inward investment films reached £753 million, the highest on record, while the total UK spend of £957 million was, after 2003, the second best year on record. However, within this positive scene, domestic UK films had a tougher time, finding it harder to raise money and lowering their budgets as a result. Co-productions have been most affected by changes in the regulatory and economic environment. Only 22 were made in 2009, with a combined UK spend of £35 million.[106]

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. 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.[107]

Skills Shortages and Gaps

Across Scotland, 48% of the Film workforce indicated that they had a need for learning or skills development. The most common areas of learning or skills development need are computer skills in specific software packages (19%), accounting and finance (19%), general technical or craft skills (18%), writing and copy editing (12%) and business development and commercial awareness (10%).[108]

Four in ten (37%) employers in the Film sector across the UK feel that a skills gap exists amongst their workforce. These employers highlight skills gaps amongst employees in sales and marketing (53%), using sector specific software packages

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[106] UK Film Council (2010) Statistical Yearbook

[107] 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.

[108] Skillset (2010) Creative Media Workforce Survey. The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

(43%), business skills (41%, around half of whom specifically mentioned business planning/strategy) and leadership and management (39%). Similar skills gap areas were highlighted amongst freelancers with the addition of multi-skilling and developing content for multiple platforms (commonly the design and development of web sites or web applications).[109]

Further research on skills gaps and shortages has revealed that current generic skill needs in the context of the Film sector included:[110]

- 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).

Skillset's 2010 Creative Media Employer Survey also asked employers to identify any potential future skills gaps. Interestingly Film employers across the UK predicted that there would be gaps in a wide variety of broad skills areas: leadership and management (40%), sales and marketing (30%), finance (30%) and skills to develop content for multiple platforms (28%, within which the most common future skills gap mentioned related to digital broadcasting and digital projection). It is anticipated that future skill needs within Film will centre on developments in new digital technology.[111] 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:

- 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).

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[109] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[110] Skillset (2009) Film Sector Employers Skills and Training Needs in Production, Distribution and Exhibition

[111] Ibid

Feedback gathered from the Scottish Film Industry[112] 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 Academy Network.

3.3.3 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 runs the national Radio Scotland channel.

The Radio industry in Scotland employs in the region of 1,650 people[113] across approximately 100 enterprises[114], the vast majority of whom work in Broadcast Radio. Women are well represented in this industry, accounting for 45% of the Scottish Radio workforce.[115] The Radio industry also has the highest representation of BAME members of the workforce (4%) compared to other Creative Media sectors in Scotland.[116] The following statistics relate to the Radio market in Scotland:

- RAJAR (Radio Joint Audience Research Ltd) figures released for the fourth quarter of 2010, show that radio listening figures were significantly up across

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

[113] Skillset (2009) Employment Census

[114] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. There are some companies within the database for which no postal address is held.

[115] Ibid

[116] Ibid

the board throughout Scotland during the last three months of last year. Around half of Scotland's radio stations enjoyed a year-on-year increase in their reach (as measured by at least five minutes' listening, by adults, per week) by over ten per cent.

- BBC Radio Scotland has a reach of 931,000 (21.4 per cent), a share of 8.4 per cent and 7.28 hours per listener per week (all increases both year-on-year and quarter-on-quarter).[117]

- 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.[118] 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%.[119] Uptake was higher in urban areas than rural areas (27% against 22%).[120]
- 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.[121]

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

A third (32%) of Radio employers across the UK have current vacancies, and of these employers 35% report having hard to fill vacancies and hence skills shortages (lower than the Creative Media employer average of 46%).[122] The occupations in which these skills shortages exist most commonly are distribution, sales and marketing, editorial, journalism and sport and performers. Recent redundancies and consolidation in radio news, particularly in the commercial sector in Scotland provide contrasting evidence.

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[117] RAJAR (Radio Joint Audience Research Limited), 2010 Quarter 4

[118] The Communications Market Report: Ofcom, 2008.

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

[120] Ibid

[121] Ibid

[122] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

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

Skills Gaps

Across the UK, 51% of the Radio workforce stated that they had a learning or skills development need. The most common subjects needed were computer skills in specific software packages (24%), specific technical or craft skills (16%), management and leadership skills (13%), online and social media publishing or content distribution (10%) and journalism/presenting (10%).[123]

Three in ten (31%) employers in the Radio sector across the UK feel that a skills gap exists amongst their workforce. These employers stated that skills gaps amongst employees were most likely to relate to sales and marketing (60%), leadership and management (50%), finance (40%) and business skills (35%). Similar skills gap areas were highlighted amongst freelancers.[124]

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
- Entry level learning and development 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.

3.3.4 Animation

Overview

The Animation sector employs around 500 people in Scotland, accounting for approximately 12% of the total employment within the UK Animation industry.[125] There

[123] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[124] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[125] Skillset (2009) Employment Census

are approximately 50 businesses active in the sector in Scotland.[126] Almost half (49%) of the workforce are employed on a freelance basis, less than a third (29%) are female and 2% are from BAME groups.[127]

The Scottish Animation sector has been growing in credibility in recent years. The academy award nominated Sylvain Chomet[128], produced the 2011 Oscar nominated animation "The Illusionist" from studios in Edinburgh, whilst Edinburgh's Red Kite Animation currently produce the 'Dennis and Gnasher' animated series. Both companies have a growing international reputation.

However, the sector's reliance on other Creative Media sectors such as Television, VFX and Games, means it is susceptible to changes in those Industries.[129] Furthermore, the UK sector is seeing competition from low cost but increasingly highly quality producing international competitors from countries such as China, Korea and Singapore and from tax-friendly regimes in other countries, notably Canada.[130]

Nevertheless, 2009 was a good year for the UK Animation Industry with 191 hours of Animation worth £102m produced (or co-produced) by British Companies, more than any year since Screen Digest started monitoring. The UK was behind the US (330 hours), Canada (382) and France (259), but unlike these, saw a rise from the previous year.[131]

Growth in computer generated animation has opened up new markets but the need for novelty and innovation has led to a revisitation of stop frame animation (Fantastic Mr Fox and Tim Burton's Frankenweenie both shot in the UK). However, falling advertising revenues for children's programmes – linked to new restrictions on advertising to children – have seen a reduced number of broadcasting commissions for

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[126] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. There are some companies within the database for which no postal address is held.

[127] Skillset (2009) Employment Census

[128] 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.

[129] Skillset contributed to the BIS/DCMS commissioned NESTA review of skills in Games and VFX chaired by Ian Livingstone and Alex Hope. Published on 1st February 2011 the review provides a comprehensive overview of current skills issues and policy recommendations for these sectors.

[130] news.bbc.co.uk/1/hi/entertainment/8225954.stm

[131] Screen Digest figures reported in 'The Global Animation Industry: facts and stats' in IMAGINE Nov/Dec 2009

animation.[132] Indeed animation productions made in the UK have more than halved in the last five years.[133]

We can see two levels of skills – core and specialist – intertwined within today's Animation companies.

There is the creativity, inventiveness and innovation of small companies supplying the Broadcast and Advertising Industries and harnessing new cross-platform opportunities and exploiting European markets. Companies compete in a global market with music promos, commercials and TV idents, built on a bedrock of traditional art skills. Whilst relatively small in terms of employees they represent and feed a strategically important industry for the UK - that of Advertising.

This is all giving rise to demands for a highly skilled, specialist but flexible workforce. Increased outsourcing is also likely to reduce the demand for animators and increase the demand for pre-production artists, producers and technical directors. The need for technical skills such as software development and core business skills such as client liaison e.g. working with clients to develop briefs, financial management and marketing are also likely to continue to grow, especially as Television commissions for higher cost productions are being constrained by ever tighter budgets.[134]

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

A fifth (21%) of Animation employers across the UK reported having vacancies at the time of Skillset's 2010 Creative Media Employer Survey, and around half (51%) of these employers had hard to fill vacancies and hence skills shortages.[135] Those that did have hard to fill vacancies were mainly in Animator, Art & Design, Creative Development and Business Management roles.

Animation employers also highlighted a number of skills that they found difficult to obtain in applicants direct from education. Broad areas most commonly cited are skills

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[132] Ofcom and PACT

[133] news.bbc.co.uk/1/hi/entertainment/8225954.stm

[134] Skillset (2009) Employment Census; www.otakunews.com/article.php?story=1548

[135] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

in using sector specific software packages (27%), multi-skilling (25%), finance (24%), leadership and management (23%) and sales and marketing (21%).[136]

In addition, there is some indicative evidence of recruitment difficulties (though not necessarily skill shortages) in respect of producer roles, and at assistant producer level as with Television and Radio.[137]

Skills Gaps

Three in ten (30%) employers in the Animation sector across the UK feel that a skills gap exists amongst their workforce. These employers highlight skills gaps amongst employees in a broad range of areas but most commonly in technical skills, particularly computer/software usage and CGI: 3D/Animation/VFX/Graphic design (53%), using sector specific software packages (45%), sales and marketing (40%) and skills for developing content for multiple platforms (39%). Skills gap areas amongst freelancers related to multi-skilling, developing content for multiple platforms, creative talent and technical skills.[138]

Across the UK, 46% of the Animation workforce stated that they had a learning or skills development need. The most common subjects needed were computer skills in specific software packages (36%), general technical or craft skills (25%), writing and copy editing (17%), project management skills (17%) and animation (14%).[139]

We are also on the edge of huge demand for Stereo 3D skills (although these are of a different order and type to Film Cinematographic Stereo 3D skills, since the 3D can be applied retrospectively to any CGI file). Also skills in Nuke software are in demand.[140]

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[136] Ibid

[137] Skillset (2010) Creative Media Workforce Survey; Skillset (2008) Creative Media Workforce Survey

[138] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[139] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[140] Skillset's employer and stakeholder qualitative framework 2010

3.3.5 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.[141] More recent data collected by TIGA estimates growth from the 2009 figure, reporting that Scotland has 46 development companies employing around 650 development staff. Annually, Scottish games companies are estimated to invest £30.2 million in salaries and overheads, contribute £27.5 million in direct and indirect tax revenues to the Exchequer, and make a direct and indirect contribution of £66.8 million to the UK's Gross Domestic Product.[142]

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%.[143]

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 tax-relief incentivised) international competitors together with the increasingly low cost of entry place significant pressure on the sector. Monetising the rapidly proliferating mobile and MMO (Massive Multi User Online) area of the market is a challenge with limited access to finance and skill shortages having been identified as key barriers to sectoral growth.[144] The sector is currently lobbying hard for the reintroduction of a tax break, promised by the last government but recently a seeming casualty of the Coalition's deficit reduction plan. There have been stories of talent flight primarily to Canada, (the UK Industry's main rival, overtaking the UK in the world rankings last year) which can afford to pay higher

[141] Skillset (2009) Employment Census – please note this data was collected before the demise of Realtime Worlds and associated other redundancies in the sector in Scotland.

[142] Video games industry in Scotland - Scottish Affairs Committee - www.publications.parliament.uk/pa/cm201011/cmselect/cmscotaf/500/50002.htm

[143] Skillset (2009) Employment Census

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

wages to people in the sector due to the beneficial tax regime enjoyed by the industry there and elsewhere.

Skills Shortages

A third 31% of Content for Computer Games employers across the UK reported having vacancies at the time of Skillset's 2010 Creative Media Employer Survey, and around half of these employers had hard to fill vacancies and hence skills shortages.[145] Those that did have hard to fill vacancies were mainly in Technical Development roles.

Competitive companies in the sector will be seeking to recruit and/or develop a mix of very high level skills, particularly in programming and computer science, as well as more creative skills in games art and animation. Commercial skills particularly in relation to negotiation, intellectual property generation and exploitation, and online 'freemium' distribution are also in demand, together with more traditional business skills such as those associated with managing and leading technical teams. Nesta also notes that there are currently too few indigenous UK publishers of global scale, and see this as an area for future focus.[146]

The proportion of graduates in the UK developer population is high. However, only 18% of games specific graduates in 2007 succeeded in gaining jobs in the industry.[147] 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.[148] 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.

Feedback from the Content for Computer Games industry found that recruitment at entry level was not generally an issue.[149] 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.

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[145] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

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

[147] Ibid

[148] Ibid

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

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

Three in ten (30%) employers in the Content for Computer Games sector across the UK feel that a skills gap exists amongst their workforce. These employers highlight skills gaps amongst employees in more generic areas such as leadership and management, sales and marketing and finance. Skills gap areas amongst freelancers were very similar, with the addition of multi-skilling.[150]

Across the UK, 31% of the Content for Computer Games workforce stated that they had a learning or skills development need. The most common subject was management and leadership (50%), followed by computer skills in specific software packages (36%), sales and marketing (12%), design and creation or repurposing of content across platforms (11%) and specific technical or craft skills (11%).[151]

The attraction of high wages and more stable / better financed companies has led to some 'brain drain' to North America, particularly in relation to senior developers and

[150] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[151] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

managers. However the UK has also benefited from immigration, particularly from eastern Europe.[152]

The Livingstone Hope independent review of the Computer Games and VFX Industries published in February 2011 is a current debate of great importance to the VFX sub-sector.[153]

3.3.6 Facilities

Overview

The Facilities sector provides specialised technical equipment and services to many other sectors 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.

It is important to recognise that the sector's reliance on other Creative Media Industries such as Television, Film and Commercials, means it is susceptible to changes in those Industries. Recent evidence from UK Screen states that the largest market for the Facilities sector is Television, which accounts for 52% of sector turnover. Film and Commercials each account for 18% of sector turnover followed by Corporate Production (8%) and Promos (3%).[154]

In Scotland, the sector employs around 1,000 people – almost 3% of the total UK Facilities workforce[155] - in approximately 200 companies[156]. More than half (52%) of the jobs in this sector are located within Other Services for Film and Television.[157] A further 21% of jobs are located within Studio & Equipment Hire, 12% are in Post

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[152] Skillset (2010) Creative Media Workforce Survey and Nesta 2008 *Raise the Game: The competitiveness of the UK's games development sector and the impact of governmental support in other countries*

[153] Skillset contributed to the BIS/DCMS commissioned NESTA review of skills in Games and VFX chaired by Ian Livingstone and Alex Hope. Published on 1st February 2011 the review provided a comprehensive overview of current skills issues and policy recommendations for these sectors.

[154] 'The UK Facilities Sector', UK Screen (2010).

[155] Skillset (2009) Employment Census

[156] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. There are some companies within the database for which no postal address is held.

[157] Skillset (2009) Employment Census

Production and the remainder of the employment within this sector is divided between Special Physical Effects (7%) and Outside Broadcast (4%).[158]

More than one in three (38%) of the Facilities workforce in Scotland is freelance.[159] 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 sub-sectors. For example, in Post Production only 6% of the Scottish workforce is freelance, whereas in Outside Broadcast it is as high as 100%.[160]

Around one third (33%) of the total Facilities workforce in Scotland is female – a higher representation than throughout the industry at a UK level, where the level is 26%. 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.[161]

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

Just 15% of Facilities employers across the UK have current vacancies, and of these employers 46% report having hard to fill vacancies and hence skills shortages (the same as the Creative Media employer average of 46%).[162] The occupations in which these skills shortages exist most commonly are Distribution, Sales and Marketing, Art and Design and Business Management.

Additionally UK Facilities employers experience skills shortages in areas such as[163]:

- Outside Broadcast – Vision Engineers and other high calibre technical staff.
- Studios and Equipment Hire – Vision Engineers; Productions assistants; Pyrotechnic stage hands; IT technicians / engineers; high definition technical staff; and Electricians in equipment hire.

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158 Ibid

159 Ibid

160 Ibid

161 Ibid

162 Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

163 www.skillset.org/facilities/industry/article_6812_1.asp

- Post Production – IT competent staff with knowledge of file based media; Business/management and leadership skills around sales, negotiation and client management.
- 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.

Skills Gaps

Three in ten (30%) employers in the Facilities sector across the UK feel that a skills gap exists amongst their workforce. These employers highlight skills gaps amongst employees in sales and marketing (51%), leadership and management (49%), multi-skilling (42%), business skills (40%, most commonly business planning/strategy) and technical skills (38%). Amongst freelancers, multi-skilling (38%), using software packages such as Photoshop, Avid and Final Cut Pro (41%) and technical skills (36%) were the most common skills gap areas.[164]

Across the UK, 55% of the Facilities workforce stated that they had a learning or skills development need. The most common subjects needed were computer skills in specific software packages (32%), general technical or craft skills (17%), specific technical or craft skills (13%), online and social media publishing or content distribution (9%) and general computer skills (6%).[165]

The UK wide review of the First Post scheme revealed:

- Skills gaps in the Visual Effects sub-sector workforce in relation to project management, people management, and basic administration;
- A growing fear that the industry doesn't have a sufficient culture of skills development in the area of leadership and management: many managers start out as 'runners' and progress from there without having formal management learning and development. However, there was also a level of distrust of management – many associating it mainly with cost cutting.

[164] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[165] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

The Livingstone Hope independent review of the Computer Games and VFX Industries published in February 2011 is a current debate of great importance to the VFX sub-sector.[166]

3.3.7 Interactive Media

Overview

The Interactive Media sector covers a range of specialist companies and jobs including the design and development of web sites and web applications, online content, offline multimedia experiences, mobile applications and content, and interactive television. 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 Skillset note "*Interactive Media is becoming more of a discipline than a sector".*[167]

Latest estimates reveal that the Interactive Media sector in Scotland employs around 1,050 people – approximately 3% of total UK employment in this sector.[168] Approximately 500 businesses are active within the sector in Scotland. [169] Many of those working in the sector will work in Local Authorities, Colleges, Universities and the Financial Services. Four fifths (82%) of Scotland's Interactive Media 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).[170] Only 8% of the workforce in Scotland is female.[171]

Skills Shortages

A fifth (21%) of Interactive Media employers across the UK have current vacancies, and of these employers 56% report having hard to fill vacancies and hence skills shortages (higher than the Creative Media employer average across England of

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[166] Skillset contributed to the BIS/DCMS commissioned NESTA review of skills in Games and VFX chaired by Ian Livingstone and Alex Hope. Published on 1st February 2011 the review provided a comprehensive overview of current skills issues and policy recommendations for these sectors.

[167] www.skillset.org/interactive/industry

[168] Skillset (2009) Employment Census

[169] Skillset 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). All figures have been verified with sector representatives. There are some companies within the database for which no postal address is held.

[170] Skillset (2009) Employment Census

[171] Ibid

46%).[172] The occupations in which these skills shortages exist most commonly are Technical Development and Distribution, Sales and Marketing.

Employers have also reported ‘hybrid’ skills which include technical and creative as well as business/management and leadership skills.[173] 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.[174]

Skills Gaps

Three in ten (28%) employers in the Interactive Media sector across the UK feel that a skills gap exists amongst their workforce. These employers highlight skills gaps amongst employees that relate to sales and marketing (55%), technical skills (44%, half of which specifically mention computer programming), leadership and management (43%), business skills (32%) and using sector specific software packages (31%). Amongst freelancers, technical skills (40%, again half of which specifically mention computer programming) and using sector specific software packages (30%) were the most common skills gap areas.[175]

As with each of the other Creative Media sectors, skills gaps in Interactive Media 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 learning or development 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.

Across the UK, 61% of the Interactive Media workforce stated that they had a learning or skills development need. The most common subjects needed were business development and commercial awareness (17%), software development skills in specific languages (16%), computer skills in specific software packages (14%), management

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[172] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[173] www.skillset.org/interactive/industry/article_6921_1.asp

[174] Ibid

[175] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

and leadership skills (13%) and online and social media publishing or content distribution (11%).[176]

3.3.8 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. There are an estimated 500 companies within the sector located in Scotland.[177] The sector is characterised by micro-businesses – 91% of businesses across the UK have 1-4 staff.[178] The majority of businesses in the sector are estimated to be either sole traders or freelance photographers. The most recent employment estimate for Scotland is that about 1,900 people are employed in the sector. Around 43% are freelancers.[179]

Although no detailed breakdown is available for the Scottish Photo Imaging sector, women make up approaching half (47%) of the UK wide sector and 7% are from BAME backgrounds.[180]

Copyright

Copyright legislation is frequently misunderstood and abused with severe consequences for photographers' earnings. In general under UK copyright legislation, any freelance photographer is the default copyright owner of any photograph they take. However, many of those who commission photographers assume that they automatically own copyright by the act of commissioning a photographer. Recent evidence produced by the British Photographic Council reports that 59% of photographers are aware of copyright infringement of their work in the last three years at an average market value cost of £3,605 per photographer. Failure of photographers to protect their copyright can have a significant effect on an individuals earning power, meaning that on average they earn a third less than photographers that do protect their copyright. Even so, 70% of photographers did not pursue copyright infringements with

[176] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[177] IDBR 2009 – some very small businesses operating without VAT or PAYE schemes (self employed and those with low turnover and without employees) may be missing from this estimate

[178] Ibid

[179] Labour Force Survey January to December 2010

[180] Ibid

the difficulty of the legal process cited as the main reason. This was supported by 82% of photographers who stated that quicker and easier copyright would benefit their business.[181]

Skills Shortages

Just 6% of Photo Imaging employers across the UK have current vacancies, and of these employers, 65% report having hard to fill vacancies and hence skills shortages (higher than the Creative Media employer average of 46%).[182] The occupation in which these skills shortages exist most commonly is Distribution, Sales and Marketing.

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 has highlighted 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.[183]

Skills Gaps

Just a fifth (21%) of employers in the Photo Imaging sector across the UK feel that a skills gap exists amongst their workforce, the lowest of all Creative Media sectors. These employers highlight skills gaps amongst employees that relate to sales and marketing (72%), using sector specific software packages (58%), technical skills (46%, commonly computer programming and usage), business skills (36%, commonly commercial awareness and business planning/ strategy) and multi-skilling (35%). Amongst freelancers, using sector specific software packages (60%), technical skills (42%, many of which specifically relate to camera and photography skills) and sales and marketing (41%) were the most common skills gap areas.[184]

Skills gaps in technical skills such as the use of digital technology and equipment as well as knowledge of digital workflow can further be explained:

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[181] British Photographic Council (2010), Industry Survey of Photographers

[182] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[183] Skillset (2008) Profile of the Photo Imaging Sector

[184] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

- 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).[185] 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.[186] 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.[187]

Across the UK, 59% of the Photo Imaging workforce stated that they had a learning or skills development need. The most common subjects needed were computer skills in specific software packages (33%), sales and marketing skills (20%), business development and commercial awareness (18%), photography (16%) and specific technical or craft skills (11%).[188]

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.

3.3.9 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

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[185] Skillset (2008) Profile of the Photo Imaging Sector

[186] Ibid

[187] Ibid

[188] Skillset (2010) Creative Media Workforce Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

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.[189]

The latest employment estimates show that the Publishing sector accounts for the largest share of total employment in Scotland's Creative Media sector. Approximately 13,200 people work in the sector representing approximately 45% of total Creative Media employment in Scotland.[190] Around 34% of the workforce is estimated to be based within Newspaper Publishing, 28% within Journals & Periodicals with the remainder spread relatively evenly across Book Publishing and Other Publishing.[191] There are an estimated 450 companies within the sector located in Scotland.[192]

Around 7% of the Publishing workforce in Scotland are freelance. Two-fifths (41%) are women and 1% are from a BAME background.[193]

Across the UK the Magazine and Newspaper Publishing sub-sectors have undergone major structural changes. For example, in June of 2010 DC Thomson announced closure of its bookbinding operation in Dundee with the possible loss of up to 350 jobs. This has been driven by both the recession and a longer term movement away from the traditional advertising revenue model to more online content. The result has been fewer titles and jobs – particularly freelance - and the loss of some functions such as sub-editing. 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 economic groups to access content online.[194] Elsewhere, while book sales have held firm the overall value of sales has fallen.

Skills Shortages

Just 13% of Publishing employers across the UK have current vacancies, and of these employers, 36% report having hard to fill vacancies and hence skills shortages (lower than the Creative Media employer average across England of 46%).[195] The occupations in which these skills shortages exist most commonly are Distribution, Sales and Marketing, Art and Design and Technical Development.

[189] Publishing Scotland (2009): A showcase of Publishing in Scotland.

[190] Labour Force Survey January to December 2010

[191] Ibid

[192] IDBR 2009

[193] Labour Force Survey January to December 2010

[194] Deloitte Media Predictions 2009

[195] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

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 about 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.

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 developing editors in-house (as they now outsource most editorial work), there is concern that this may result in a skills shortage in future.[196]

Skills Gaps

Three in ten (28%) employers in the Publishing sector across the UK feel that a skills gap exists amongst their workforce, the lowest of all Creative Media sectors. These employers highlight skills gaps amongst employees that relate to sales and marketing (64%), technical skills (50%, commonly computer programming and usage), using sector specific software packages (46%), business skills (38%, commonly entrepreneurial skills) and leadership and management (36%). Amongst freelancers, sales and marketing (41%), technical skills (31%, commonly computer programming and web/internet design/development) and using sector specific software packages (26%) were the most common skills gap areas.[197]

Across Scotland, 57% of the Publishing workforce indicated that they had a need for learning or skills development. The most common areas of learning or skills development need are specific technical or craft skills (26%), writing and copy editing (24%), general computer skills (24%), management and leadership (23%) and the design and development of web sites or web applications (23%).[198]

[196] Interviews with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

[197] Skillset (2010) Creative Media Employer Survey. Data are not available for Scotland due to a low sample size so UK data is presented to give an indicative overview of the sector.

[198] Skillset (2010) Creative Media Workforce Survey. The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

Industry consultations carried out as part of the Skillset 'Skills Needs Analysis for the Publishing Industry highlighted some other 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.[199]

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. This was confirmed by our qualitative interviews which revealed that across the publishing sector e-books are generating new products and business models – which mean that both small and large companies urgently need to develop effective digital strategies. As a consequence the publishing sector has a pressing need to deepen its digital skills base, both to exploit opportunities, and to protect their content rights as new entrants to the market with larger scale digital media offerings begin to make their presence felt more directly.[200]

3.3.10 Advertising

Overview

It is estimated that 2,250 people in Scotland work in the Advertising sector (2% of the UK total) and around a quarter (27%) work as freelancers.[201] They are employed within around 550 companies.[202] If UK data proves indicative the diversity of the Advertising sector compares favorably with many other Creative Media sectors. The proportion of women in the sector (42%) is below average but more positively 9% are BAME, 10% are disabled and 56% are aged 35 and over.[203]

The Advertising industry is new to Skillset's footprint and full engagement with the industry as a whole across the UK has not yet been possible. The focus to date has been on the Advertising Agencies as included within the IPA membership. Despite the

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

[200] Interviews with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

[201] Labour Force Survey January to December 2010

[202] IDBR 2009

[203] Labour Force Survey January to December 2010

figures quoted above being for Skillset's footprint as a whole the remainder of this section therefore focuses on Advertising Agencies only.

In 2009, Cultural and Creative Skills (with TBR) conducted a survey across the UK of over 1,000 employers, which showed that 51% of employers reported at least some of their employees as having received learning and development in the past year. 48% were reported as having received informal learning and development, 42% formal learning and development and 15% external learning and development.[204] Moreover younger entrants to the sector were less careerist than previous generations, and were very keen to ensure good work/life integration.

10% of companies said their employees had a specific entitlement to learning or development and 8% that they had a learning and development budget.[205]

Skills Shortages

The CCS/TBR survey showed:

- Graphic design occupations to be the most common area in which recruitment difficulties were reported by employers, cited by 46%. The next most common problem area was retail/sales reported by 15% and ICT (13%).
- The skill areas most often found lacking in new entrants were design (cited by 41%), and ICT skills (20%).[206]

Skillset undertook a consultation exercise with industry representatives in October 2010 with representatives of firms across the UK and skills shortage areas highlighted were[207]:

- Digital creatives;
- Upstream creatives – big ideas people not just execution experts;
- Business analysts;
- Behavioural scientists;
- Diagonal thinkers – i.e. those people who can shift seamlessly between linear and lateral thinking, making them at once commercial as well as creative;
- Illustrators;
- Multi-skilled creatives i.e. an ability to work on online and offline briefs;

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[204] CCS/TBR Workforce Survey, 2009

[205] Ibid

[206] Ibid

[207] Skillset's employer and stakeholder qualitative framework 2010

- Social media specialists;
- Top quality intellects.

And from a purely digital perspective[208]:

- Digital strategists / Digital planners;
- Information Architects;
- Competent Digital Producers that have real knowledge of production, rather than just making sure deadlines are met;
- Capable Creative Technologists - someone with vast technical knowledge, but that can apply that to ideas and work in a creative function.

Skills Gaps

Approaching half (46%) of advertising companies report skills gaps among their current workforce. The skill areas most often cited are ICT (28%), business development (24%), digital (13%) and finance/accounting (13%).[209]

A quarter (26%) of companies report losing business due to skills gaps in their workforce.[210]

Skillset's consultation exercise with UK industry representatives in October 2010 suggested skills gaps specific to[211]:

- Multi-platform all–rounders (including IT support staff working between platforms);
- Management and leadership;
- Commercial/Business Skills;
- Sales.

And from a digital perspective[212]:

- Digital Strategy/Planning;
- Creative Technology;
- Creatives that understand digital.

[208] Ibid

[209] CCS/TBR Workforce Survey, 2009

[210] Ibid

[211] Skillset's employer and stakeholder qualitative framework 2010

[212] Ibid

3.4 Skills Supply

3.4.1 Overview

Across HE, FE and the private sector, in total there are over 1.4 million learners undertaking Skillset relevant courses in the UK. It is estimated that in 2008-09 around 720,000 learners in FE were studying Skillset relevant courses, including **121,600** in Scotland [213], whilst over 757,000 were studying Skillset relevant courses at UK HE institutions, including **58,400** in Scotland.[214] In terms of outcomes, 10% of all Skillset relevant students who have gained employment 6 months after graduating have done so within Skillset industries.[215]

In total, over 23,000 Skillset relevant courses were available through FE, HE and the private sector in 2008/09. HE is the main source of Skillset relevant courses with analysis identifying 18,250 Skillset relevant courses with students in UK HE institutions in 2008/09 (course provision was most common in the key sector areas of VFX, Film, and TV). This includes **1,300** in Scotland (7% of all courses in the UK). Just over 2,500 courses are available in FE across the UK (no data is available for Scotland) and the leading private sector providers identify a further 2,400 courses (again no data is available for Scotland).[216]

Funding for these activities is in excess of £96 million. Figures for HE are difficult to identify given the finance reporting requirements for HESA, but HE institutions attracted £35.4 million in research and contract work in Creative Media departments at UK HE institutions (approximately £3.4 million in Scotland). FE Skillset relevant courses

[213] Scotland Scottish Funding Council 2008/09 as reported in Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

[214] HESA 2008/09 as reported in Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

[215] Since 2002/03 HESA have administered a survey of HE leavers called the Destinations of Leavers from Higher Education (DLHE). This replaced the previous First Destinations Supplement (FDS) and seeks to collect a richer set of data then held previously particularly focused upon on the employment and further study graduates move in to after their studies.

[216] Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

attracted in excess of £60.7 million in tuition fees from a range of sources including the LSC, private individuals and employers in 2008/09 (no data for Scotland).[217]

Engagement between HE and the Creative Media Industries is crucial and a recent report acknowledges the vital contribution that universities make to Scotland's Creative Industries. Key amongst the recommendations is the need for Scotland to avoid the view being pursued in England that science and technology represent the only route to economic success. The report argues that creativity and STEM (science, technology, engineering and mathematics) are inextricably linked and successful knowledge economies need strength in both.[218]

3.4.2 The Education System

In Scotland, the Creative Media workforce as a whole is well qualified. To recap, 52% of the workforce are graduates – as high as 64% across the traditional Audio Visual sectors, falling to 42% in the Publishing sector.[219] Media is one of the most popular subject areas, with one third of all Creative Media graduates holding a media related degree.[220]

In direct response to feedback from the Creative Media Industries, Skillset has developed a Media and Film Academy Network 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.

There are three Film Academies across the UK. Similarly, Skillset Media Academies are centres of excellence in Television and Interactive Media, with a network of 23 Academies across the UK.

Some impressive statistics are available comparing the destinations of students from Skillset Accredited courses and Skillset Academy courses to more general Skillset

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217 Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

218 Universities Scotland (2011) Scotland's Creative Economy: the Role of Universities

219 Skillset (2010) Creative Media Workforce Survey and Labour Force Survey January to December 2010 (Publishing). Excludes Photo Imaging and Advertising due to low sample sizes in Scotland in these surveys.

220 Skillset (2010) Creative Media Workforce Survey. Figures exclude Advertising.

relevant courses. Students from Skillset Accredited and Skillset Academy courses are more likely to find Skillset relevant employment when they move into employment than their counterparts on more general Skillset relevant courses.

Consequently, over a third of all Skillset Accredited course students (34%) and over a quarter of Skillset Academy course students (26%) who find employment six months after their course find employment in Skillset industries. For Accredited courses this is over three times the 10% of students on all Skillset relevant courses who find employment in Skillset industries.[221]

Within Scotland, there are four Academies: the Creative Loop Media Academy; the Edinburgh Film and Media Academy; the University of Abertay Dundee Media Academy; and the University of the West of Scotland. 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.

3.4.3 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

[221] Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section.

Higher National course provision and ensuring industry consultation around the use of National Occupational Standards (NOS) to design units.

3.4.4 Screen Academy Scotland: Edinburgh Skillset Film 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 Film and Media status. It offers degree courses and CPD in a range of Creative Media disciplines including: Animation, Film Practice, Interactive Media, 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.

3.4.5 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 and Electronics Arts (EA). 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.[222]

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.

3.4.6 University of West of Scotland

University of West of Scotland (UWS) was approved as a Skillset Media Academy in 2010 and has become well integrated into the Scottish network since then. Their contributions focus on undergraduate provision in TV production, broadcast journalism, commercial music, filmmaking and screenwriting, performance, digital art and Post Graduate provision in Creative Media practise and screenwriting.

UWS also holds Skillset accreditation for its undergraduate Computer Games development course.

3.4.7 Additional Creative Media Provision

In addition to the Media and Film Academy Network, 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. The Royal Scottish Academy of Music and Drama delivers a well respected undergraduate course in Digital Film and Television production.

There are several other providers either based in Scotland, or with the ability to deliver in Scotland. Scottish Screen (now Creative Scotland) ran a highly-regarded New Entrants Programmes, NETS. NETS One was a one-year apprenticeship for eight trainees, while NETS Advance was a fast-track 12-week programme for more experienced participants. All 10 participants in the 2009/2010 programmes have now gained work in the industry, in areas as diverse as cameras, art department, make-up, research, location, animation, production and production co-ordination. Scottish Screen also ran one-day courses for 20 runners in association with Edinburgh Film Focus and the Glasgow Film Office, the film commissions for Scotland's two largest cities. All of the above courses were co-funded by Skillset. NETS is currently in development and

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[222] www.daretobedigital.com

will be remodelled. Managers are looking at working with other partners and new ways of delivery, which may involve short courses.

TRC Media (formerly The Research Centre) act as brokers and facilitators for a range of training programmes and industry events. Key partnerships include broadcasters, producers and public agencies to build content. TRC designs and delivers training and support programmes and these range from hot-desking to high-end training. TRC's on-site facilities include high speed internet access, an extensive regulatory library, viewing and multiple tape dubbing facilities. TRC conducts its own research and its training programmes are in response to identified industrial needs.

Publishing Scotland, the network body for the Book Publishing industry in Scotland, run courses in digital, design, communications and management. Academy Class is a digital media training company for print and design, web design and development and media production. The NUJ in Scotland have a range of online and in-class courses aimed at journalists, including digital convergence. Some are delivered in conjunction with Cardonald College, part of the Creative Loop Skillset Media Academy. BECTU's provision covers social networking, post-production editing and sound, finance for freelances and single camera directing. The Cultural Enterprise Office (CEO) offers specialist support and development services for creative business and practitioners via a combination of information, advice and events.

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, a Skillset Media Academy, offers courses in Computer Games Technology. 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. Further relevant provision comes from the RSAMD and Glasgow Caledonian University. There is also a range of courses related to Interactive Media, Photography and Production in FE Colleges across Scotland.

3.4.8 Industry Stakeholder Views on the Education System[223]

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 Media.

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[223] Focus group with Scotland employers and stakeholders undertaken in October 2010 as part of Skillset's employer and stakeholder qualitative framework 2010.

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 that it 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 learning and development which could be completed in a short timeframe and did not require a year or more commitment. CPD is usually provided by employers themselves or private providers. One of the stated aims of the Skillset Academy Network 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 learning and development 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.
- Explore what more could be done to upgrade the skills and current industry knowledge of key lecturers and trainers across the sector. This suggests a role for Skillset, working in conjunction with the larger employing firms, to foster a

more continual cycle of industry placement and exposure to the relevant teaching staff from colleges and universities across Scotland.

- 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.

- However there is also a vital demand side dynamic to maintaining future success. A particular issue for Scotland is that whilst there is a strong emphasis on the need to develop strong clusters of specialist skills across the sector, viewed nationally there isn't the volume of work on the demand side within Scotland that is allowing those working across the Creative Media Industries to sustain their chosen specialisms in any straight forward way.

3.4.9 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 learning and development occurring within the industry with over two fifths (43%) of the Creative Media workforce in Scotland having been in receipt of learning or development in the past 12 months.[224] Despite this, half (50%) of the sector's Scottish workforce has indicated that they have a current learning or development need.[225]

Within Scotland, there is little difference in the proportion of freelancers and employees needing learning or skills development (51% and 50% respectively). However, there is a lower likelihood of freelancers having participated in learning or development in the past 12 months (33%) when compared with employees (51%).[226] 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 learning or development amongst this cohort.

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[224] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[225] Ibid

[226] Ibid

However, only two fifths (39%)[227] of Creative Media employers in Scotland had funded or arranged learning and development for their workforce in the past 12 months. In addition, 24% of these Creative Media employers who fund or arrange learning or development do not make it available to freelancers.[228]

Half (50%) of employers in Scotland cited barriers that restricted their ability to provide more learning and development. The most common reason was interestingly that 'employees are already fully proficient' (mentioned by 42% of employers), followed by not having enough time (37%) and their company not being able to afford the investment in learning and development (36%).[229]

Whilst the evidence reveals that one in two people working in Scotland's Creative Media Industries require learning or development, there are some barriers which are perceived to prevent this need from being met. Across Scotland, 91% of the workforce indicated that they had experienced some barriers to accessing learning or development. There is no difference between the experiences of freelancers and employees.[230] The most commonly cited barriers are[231]:

- Fees are too high (52%);
- Lack of suitable opportunities in the nation I live/work in (46%);
- Difficult to assess the quality of the courses (37%);
- Available learning or development is in inconvenient places (34%);
- Domestic/personal arrangements (31%); and
- Employer not willing to pay (28%).

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

[227] This figure varies significantly with data from the Scottish Employer Skills Survey 2010 which shows that 60% of employers had provided training in the past 12 months. However, this data excludes many of those working in Interactive Media, Content for Computer Games and Facilities. The Skillset sourced figure is preferred due to the limitations of Creative Media data extracted from SESS and the fact that statistical testing shows that SESS data should be treated with caution.

[228] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising

[229] Ibid

[230] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[231] The Scottish Employer Skills Survey identified 'lack of funds for training/training expensive' (59%) and 'cannot spare staff time' (55%) as the most common barriers to establishments providing more training. However, this data excludes many of those working in Interactive Media, Content for Computer Games and Facilities. The Skillset sourced figure is preferred due to the limitations of Creative Media data extracted from SESS and the fact that statistical testing shows that SESS data should be treated with caution.

with 17% of freelancers; and just 4% of employees feared a loss of income as a result compared to 19% of freelancers. Three fifths (60%) of freelancers also felt that fees were too high compared with 46% of employees.[232]

Skillset's (2010) Creative Media Employer Survey also investigated the usage of apprenticeships, graduate internships and work placements/work experience posts. Just 8% of Creative Media employers in Scotland offer apprenticeships though a further two fifths (39%) would consider doing so in the future. The proportion of employers that offer apprenticeships ranges from 24% in Film Distribution and Exhibition to just 2% in Publishing of Journals and Periodicals across the UK. The occupations that employers in Scotland most frequently have or would consider offering apprenticeships in are distribution, sales and marketing; production; editorial, journalism and sport; camera/photography; art and design; and engineering and transmission.[233]

Employers in Scotland were twice as likely to offer graduate internships compared to apprenticeships (14%). In addition, another 39% would consider offering an internship. A significantly higher proportion of employers than average within Other Content Creation (44%), Film Production (43%) and Content for Computer Games (41%) offer graduate internships across the UK.[234]

Half (47%) of Scotland based Creative Media employers currently offer work placements or work experience posts, with a further 35% who would consider offering such posts. Across the UK, Community/Voluntary Radio (88%), Broadcast Radio (77%) and Publishing of Newspapers (73%) are the sectors most likely to offer already.[235]

Of the employers in Scotland who have not offered or considered offering apprenticeships and graduate internships a variety of reasons were given. The most common include not being worth the time for the money received and preferring to recruit fully trained or qualified staff.[236]

Our industry consultations confirmed that current market conditions are producing an apparent paradox. Established practitioners are seeking their market positions strengthened, but at the same time within this same group there is a stronger

[232] Skillset (2010) Creative Media Workforce Survey (excludes Advertising). The survey sample was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland.

[233] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

[234] Ibid

[235] Ibid

[236] Ibid

divergence between winners and losers in the labour market. In terms of losers, our industry representatives confirmed that some mid-career freelancers are currently struggling to maintain a viable portfolio of work, with some exiting the sector. At the same time, parts of this cohort are benefitting from the increasingly risk-averse hiring practices of established firms across the sector, which is benefitting seasoned practitioners and making it extremely difficult for new entrants into the labour market to secure work.

There is also concern that the more difficult funding environment will lead to the loss of a wide range of new entrant learning or development schemes, which help new graduates bridge the gap between their courses and job readiness in the industry.

3.4.10 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[237] 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 6 considers the diversity of the sector's employment profile in Scotland, looking specifically at representation of women and Black, Asian and Minority Ethnic (BAME) individuals within the workforce to reveal that:

- Television and Radio have the highest representation of females within the workforce – in both cases approaching 50%;
- BAME representation is also highest within TV and Radio, at 3% and 4% respectively;
- Some sectors such as Content for Computer Games and Interactive Media are largely dominated by men – in both sectors, less than 1 in 10 of the workforce are females.

[237] Skills for Tomorrow's Media, Skillset/Department for Culture, Media and Sport (DCMS), 2001

Table 6: Diversity by Sector

Sector	% Female	% BAME
Television	47%	3%
Radio	45%	4%
Other Content Creation	11%	*
Animation	29%	1%
Facilities	33%	1%
Film	35%	*
Interactive Media	8%	*
Content for Computer Games	7%	*
Publishing	41%	1%

Sources: Skillset (2009) Employment Census, Skillset (2010) Creative Media Workforce Survey (Film Production) and Labour Force Survey January to December 2010 (Publishing). No figures for Photo Imaging and Advertising due to low sample sizes in Scotland in the Labour Force Survey.

Looking specifically at HE across the UK the following demographic profile emerges with positive profiles particularly for ethnicity and disability[238]:

- Skillset relevant students are generally younger than their non-Skillset relevant counterparts. 45% of Skillset relevant students are aged 18-20 years compared with 29% of all students on non-Skillset relevant courses, whilst just 15% of Skillset relevant students are aged 30 or over, compared with 33% of students on non-Skillset relevant courses. Advertising, Radio, Publishing and Film courses are dominated by the youngest students (18-20 years of age);

- Male students make up a greater than average proportion of students on Skillset relevant courses with 57% off all students being men. This compares with 40% of students on non-Skillset relevant courses. TV, Film, and Advertising courses have the highest level of female students, whilst Facilities, Interactive Media and VFX tend to be more male dominated;

- Students from BAME backgrounds are slightly more common on Skillset relevant courses than non-Skillset relevant courses. 15% of Skillset relevant students come from a BAME background compared with 14% on non-Skillset relevant courses. Almost one fifth (17%) of all BAME students in the UK study Skillset relevant courses. Students from BAME backgrounds are most common on Interactive Media, Computer Games, and VFX courses;

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[238] All figures from HESA 2008/09 reported in Skillset/Research As Evidence (October, 2010) Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK. NB These figures include Fashion & Textiles which is not in the scope of this SSA. Further information regarding this study can be found in the methodology section. Data is not available at a Scotland level and hence UK data is presented for indicative purposes.

- Skillset relevant students are more likely to have disabilities than their counterparts on non-Skillset relevant courses. On Skillset relevant courses 11% are students with disabilities compared with 8% of students on non-Skillset relevant courses. Courses relevant to Animation, TV, Film, and Photo Imaging have higher than all Skillset relevant courses numbers of students with disabilities.

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[239] , 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. A further report, Growing the Television Broadcast and Production Sector in Scotland, was published in August 2010.

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:

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

[239] 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

- A supportive policy environment where the Scottish Government and the national economic development agencies recognise the potential of the industry[240]; and
- A 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.[241] 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 tax-relief incentivized overseas companies.[242]

Feedback from industry identified two interrelated 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. However, the demise of Realtime Worlds last year highlights just how uncertain this market is. 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 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.[243]

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

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

[241] Nesta Annual Review February 2009

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

[243] Digital Inspiration: Strategy for Scotland’s Digital Media Industry, 2009

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.[244] It was expected to bring in $6.6bn in 2009 according to research by Price Waterhouse Coopers.[245] Limited evidence exists on the collective performance of 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.[246]

Discussions with representatives of the Scottish Film industry highlighted several factors which are expected to impact 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

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

[245] Ibid

[246] Ibid

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.[247] 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. The changing consumption of newspapers is evident with the launch of Scotland's first online newspaper The Caledonian Mercury[248], which hit its December 2010 target for unique users on its first day of launch.

Book Publishing has fared better than newspapers and magazines, however the value of books sold has been in decline. DC Thomson announced closure of its bookbinding operation in Dundee last year, showing how fragile the market is. Feedback from the Book Publishing industry identified a number of key challenges in realising future growth[249]. These were:

- New entrants – giants such as Amazon and Google entering the online Publishing industry and putting pressure on traditional Scottish companies; and

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[247] Deloitte Media Predictions 2009

[248] http://caledonianmercury.com

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

- 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 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.[250]

Radio

In common with the wider UK, the Scottish Radio sector has been hit by 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.[251]

Interactive Media

The Interactive Media sector is widely predicted to grow in the medium to long-term.[252] 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. the introduction of YouView[253] this year, will also increase the business opportunities in this sector.

One of the key challenges facing the Interactive Media 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

[250] Deloitte Media Predictions 2009

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

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

[253] YouView is a partnership between the BBC, ITV, BT, Channel 4, Five, Arqiva and Talk Talk to develop a common interface for Internet Protocol Television (IPTV) in the UK. To be launched in 2011, YouView will attempt to replicate the success of Freeview for internet television. See www.youview.com

downloading will remain a threat, whilst regulation and directives are likely to become more of feature, particularly in relation to content.[254]

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.[255]

Advertising

Opportunities from new online and web-based platforms will recast approaches and budgets.

4.2 Changing Skills Needs

Skillset's 2010 Creative Media Employer Survey asked employers in Scotland to think three to five years into the future and predict skills for which there will be a demand that will be difficult to meet. The skills identified by employers were consistent with those also identified as current skills gaps amongst the workforce. A third of employers identified sales and marketing skills as a future skills gap area (29%), followed by multi-skilling (25%), skills in using sector specific software packages (23%), technical skills (most commonly computer programming and editing, 23%) and management and leadership (20%).[256]

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

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[254] Ibid

[255] Ibid

[256] Skillset (2010) Creative Media Employer Survey. Figures exclude Advertising.

- Core generic and business administration skills - in common with other parts of the UK, other 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.

- Cross sector awareness - some sectors like Interactive Media 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 occupations in technical areas like Production and experienced Content for Computer Games Developers. In Broadcast, and those sectors that support others like Facilities and Interactive Media, 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 learning and development 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 learning and development may arguably be less prominent and involve keeping up to date with modifications and improvements with the sector.

5 Geographical Differences in Labour and Skill Needs

5.1 Sector Employment across Scotland

Table 7 shows Scotland's share of the UK Creative Media workforce. The table reveals that the vast majority of the workforce is based in England (90%), with a significant proportion in London. It also shows that approximately 5% of the UK's total Creative Media workforce is based in Scotland. Considering Scotland's share of the total UK population – approximately 9% – the country's proportion of the Creative Media workforce is below its share of population.[257]

Table 7 Geographical Distribution of the UK Creative Media Workforce

	% of UK Creative Media Workforce
Wales	**3%**
Scotland	**5%**
Northern Ireland	**2%**
England	**90%**
All London	38%
South East England (excl London)	12%
South West England	8%
West Midlands	5%
East Midlands	3%
North East England	2%
Yorkshire & the Humber	5%
East of England	7%
North West England	9%

Source: Skillset (2009) Employment Census, Skillset/UK Film Council (2008) Feature Film Production Workforce Survey, LFS January to December 2010. Cinema Exhibition excluded.

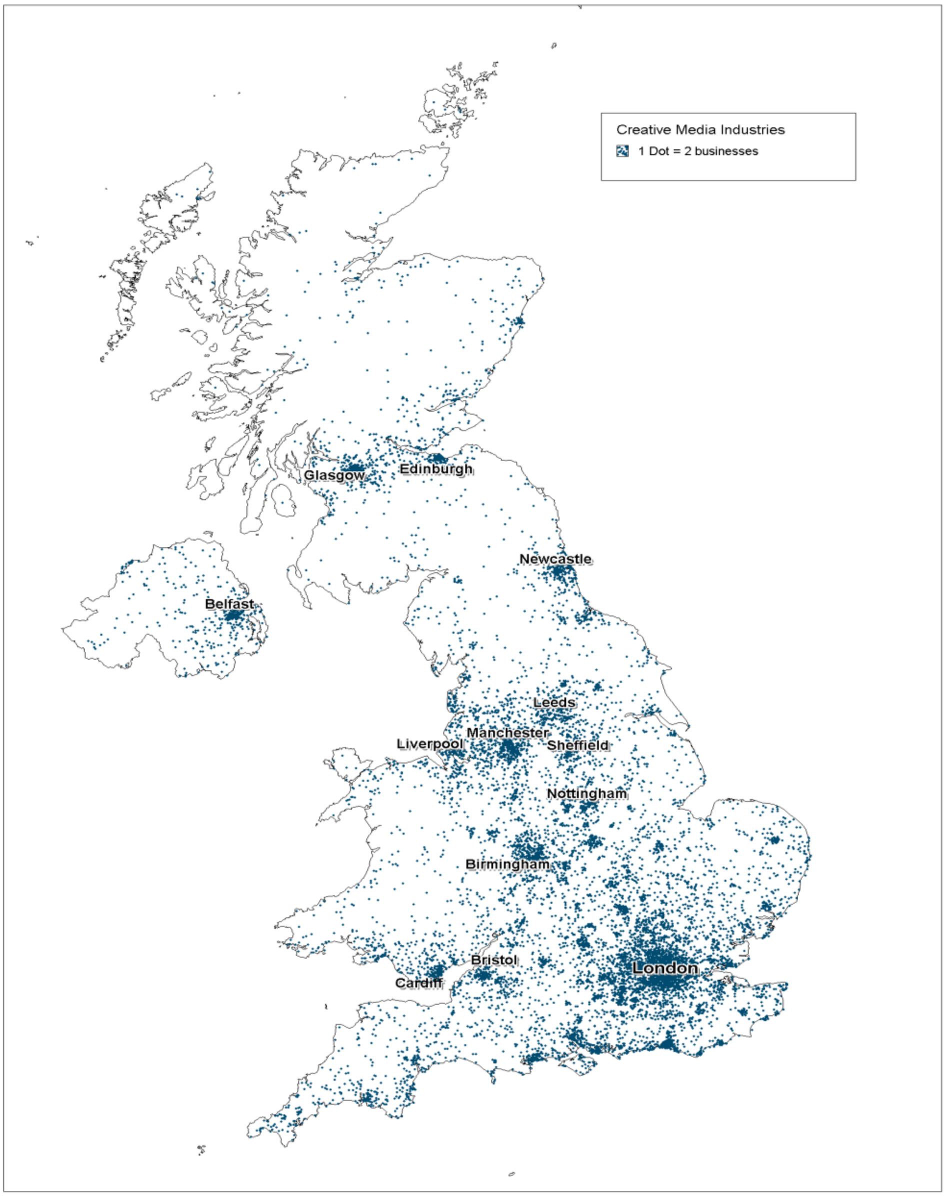
Within Scotland, the vast majority of Creative Media activity is located within the country's central belt. In terms of geographical distribution areas of particular concentration are:

- Dundee has developed a significant cluster of firms in Content for Computer Games development companies;
- Edinburgh is home to around half of Scotland's Book Publishing industry; and

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

- The Television industry is well represented in Glasgow with STV, BBC Scotland and a number of Independent Film Production companies located in the Digital Media Quarter at the city's Pacific Quay.

The following map illustrates the distribution of Creative Media companies contained in Skillset's 2010 Company Database[258] by post code district. This map clearly acknowledges Glasgow and Edinburgh as the main hubs of activity.



[258] Excluding Advertising and Cinema Exhibition. Database created from a variety of sources including previous research participants, Trade Association membership lists, Industry Directories and Experian.

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. In total, BBC Scotland has 12 production centres of varying sizes across Scotland. STV currrently has four.

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.[259]

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.

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 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 Media, with a network of 23 academies across the UK and four within Scotland. As described in Section 3.4 above, these are the Creative Loop Media Academy; the Edinburgh Film and Media Academy; the University of Abertay Dundee Media Academy; and the University of the West of Scotland. As well as Skillset support, the

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

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.[260]

[260] www.scqf.org.uk

Annex A: Methodology

- **Skillset's 2010 Creative Media Workforce Survey** was distributed for completion online between June – December 2010 by the research agency IFF. A round 5,000 paper copies were distributed later in the fieldwork period to boost areas of low response and also for Cinema Exhibition for which the paper form was the preferred method of completion. The survey was distributed and promoted in many different ways, including, via employers participating in the Creative Media Employer Survey, previous research participants and other Skillset contacts, Trade Association membership lists, Trade Unions and Guilds, industry directories, promotion on various websites and utilization of social media. A total of 3,027 responses were received. To account for non-response and in order to achieve total figures representative of the Creative Media Industries in scope, weightings cut by contract type (i.e. employees and freelancers) have been applied to each sector, based on information from Skillset's 2009 Employment Census and the Labour Force Survey. Data was also weighted to region/nation of work.

  In Scotland the survey was boosted by a Skills Development Scotland telephone survey of 249 freelancers based in Scotland. The sample consisted of Filmbang members who primarily worked in the Television or Film sectors.

  The sectors covered by the survey included Television, Radio, Animation, Film, Facilities, Interactive Media, Content for Computer Games, Corporate Production, Commercials and Pop Promos, Publishing and Photo Imaging.

  The full 2010 Creative Media Workforce Survey report will be available in 2011.

- **Skillset's 2010 Creative Media Employer Survey** was conducted via telephone interviews between June – August 2010 by the research agency IFF. A sample of Creative Media employers was compiled from Skillset's 2010 Company Database (created from a variety of sources including previous research participants, Trade Association membership lists and Industry Directories). A total of 2,634 interviews were completed. The data was weighted to known distributions of companies by sub-sector, size and region/nation to ensure representative of all Creative Media companies.

The sectors covered by the survey included Television, Radio, Animation, Film, Facilities, Interactive Media, Content for Computer Games, Corporate Production, Commercials and Pop Promos, Publishing and Photo Imaging.

The full 2010 Creative Media Employer Survey report will be available in 2011.

- **Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and Development Provision in FE, HE, and the Private Sector in the UK**

  This work was undertaken during 2010 by Research-as-Evidence, with on-going support and input from the Skillset research team and sector managers.

  The work aimed to fill an existing gap in supply-side knowledge to identify the specific nature of the supply side from FE, HE, and private sector training markets to the Creative Media Industries.

  This is the first time that Skillset have sought to define FE and HE provision in terms of relevance to its range of industry sector responsibilities. This is also the first time that datasets from the Higher Education Statistics Agency (HESA) and the Individualised Learner Record (ILR)[261] have been used in this way - and the first detailed analysis of the outcomes from HE/FE provision that Skillset directly influences (through course accreditation and/or the Film/Media Academy network).

  The research has produced a range of data on student demographics/ profiles, attainment and funding in FE and HE across the UK and additional data in relation to the most prominent commercial training providers serving Skillset sectors. The findings also include extensive analysis of data relating to early graduate destinations 6 months after students have completed their study, providing an important 'snapshot' of early career destinations of those who have undertaken HE courses relevant to employment in Skillset industry sectors.

  Defining Courses Relevant to Skillset Key Sectors

  The numbers of students and courses recorded for each key sector (Advertising, Animation, Computer Games, Facilities, Fashion and Textiles, Film, Interactive Media, Photo imaging, Publishing, Radio, TV) has been defined in a new and innovative way. This means that courses in FE and HE have been defined in

[261] See www.theia.org.uk/ilr for more details.

terms that assesses the relevance of each course to specific key sectors and the overall responsibilities of Skillset for the creative media and fashion and textiles industries.

Consequently, whilst the category Film will include Film Production, Direction or Scriptwriting courses it will also include those courses that include content directly relevant to the activities and occupations working in that sector like costume and set design, or computer animation for CGI. This avoids just identifying courses in broad categories such as Creative Arts and Design and Mass Communications and Documentation as had been done before which often meant including some non-relevant courses, but also missing out some relevant courses in other broad subject categories.

This does mean some courses will feature in multiple sectors because they may be relevant to a number of key sectors. For instance - Film and TV, and Computer Games and Animation. However, in the broad categories of Skillset relevant and non-Skillset Relevant courses only feature in one of these two categories.

Student and course numbers identified in the report show the numbers recorded against these categories when the individual course definitions are combined for Skillset relevant and key sector courses. The student count is the number who are studying that combination of courses whether in the first, middle, or final years of study.

- **Employer and stakeholder qualitative framework 2010 –** consists of a series of consultations and focus groups to contextualise quantitative data and begin to develop recommendations and solutions. In October 2010 three focus groups were held in Scotland, Wales and Northern Ireland with a representative group of industry employers and stakeholders from each nation. Telephone interviews were carried out to fill any gaps that remained after the focus groups. A further consultation was held with Skillset Directors, with additional input from Sector leads within the organisation where required. An email questionnaire was distributed to Advertising industry representatives via the IPA Professional Development Group and also to other contacts in the industry (including Digital Agency representatives).

- **Skillset's Employment Census 2009** is a biennial survey to measure the size and shape of the Creative Media Industries (excluding Film Production freelancers, Photo Imaging, Publishing and Advertising). Census forms were distributed to companies throughout June for completion on 1 July. A central database of around 26,000 companies was set up at Skillset using a number of available sources including trade association membership lists, screen agency records and other databases. In addition, the Census was publicised in trade journals and national press in order to reach companies outside the membership of industry organisations. Each company was given three weeks to complete and return the questionnaire. Companies that had not responded by Monday 27 July were contacted by a range of media including letters, emails and telephone call (depending on sector and availability of contact information), with a final completion date of 31 July 2009. The 2009 Census achieved a response from 1,010 companies. The estimated percentage coverage of each sector has been used to generate estimates of the workforce in each sector and in the industry as a whole, from the responses received, through the calculation of weighting factors. These take into account all available information about the representation of the response for each sector in terms of numbers and size of companies.

- **From Recession to Recovery 2009** aimed to obtain a picture of the impact of the recession of 2009 on the Creative Media sector, and in particular its implications for the use of skills in the industry. All sectors were covered (with the exception of Advertising which was not part of Skillset's footprint at the time). The research comprised two separate strands: a survey of employers and a survey of trade associations. The fieldwork was conducted during summer 2009 (May – August), by way of an online survey which respondents were invited to complete by email or via Skillset's website. In the interests of expediency, employers with whom Skillset had had previous contact and thus were potentially involved in the skills agenda were primarily targeted, which should be taken into consideration when scrutinising the results. The survey was supplemented by a shorter, largely open ended survey of trade associations covering similar issues. Overall, the survey achieved a response from 262 companies. It is not possible to estimate the number of companies targeted or a final response rate due to the methods used to distribute the survey. The response by sector broadly reflects the respective levels of employment across the industry. Taking that into consideration, and given the relatively low numbers involved, data was not weighted to adjust for variations in levels of response and representativeness across sectors.

- **Film Sector Employers: Skills and Training Needs in Production, Distribution & Exhibition 2009** was undertaken to inform the ongoing development of the Film Skills Strategy and the second phase of *A Bigger Future*, which will run from 2010-2013. Participating employers were selected from a broad range of companies varying by size (number of people employed), location in the UK, interest in mainstream and specialised films, and in production by experience of working at a range of budget levels (from below £500,000 to £5 million+). The fieldwork involved three elements:

  Two focus groups, each lasting two hours, were held with producers, line producers and production managers in January and February 2009.

  Face-to-face or telephone interviews lasting up to an hour were held with senior company executives within distribution and exhibition throughout the period from January to March 2009. Five interviews were held in total within distribution and a total of six interviews were held within exhibition.

  Face-to-face interviews lasting up to an hour were held in March and April 2009 with three senior production and development executives from two national film funding organisations.

- **A Skills Review for the TV & Radio Sector, 2009 -** in October 2008 Ofcom, Skillset and the Broadcast Training & Skills Regulator (BTSR) agreed to conduct a short 'Skills Review' of the TV and radio broadcasting industry. As organisations responsible, in different ways, for supporting, regulating and monitoring the broadcasting sectors it was recognised that major technological, structural and economic changes were at play and that it would be helpful to all three organisations to analyse the impact of these changes on people and skills. The terms of reference established that the TV and Radio Skills Review would be a 'temperature check' on the skills health of the sectors, capturing and summarising as much data and evidence as possible in order to inform the work and actions of the industry itself, the Sector Skills Council and the regulator.

  To support the deliberations of the Review Group, existing research was to be used as the main source of data and evidence. Skillset's Census, Workforce Survey and Employers surveys, BTSR's evaluation data and the wider research carried out by organisations such as NESTA and Spectrum would be used to support the analysis. In order to contextualise this data and ensure currency, the

Review Group invited a small number of Expert Witnesses (both employers and training providers) to provide a rich source of information about employment practice, recruitment issues and skill needs. The Review Group is indebted to the Expert Witnesses for the time they gave and the insight provided.

- **Skillset's Creative Media Workforce Survey 2008** is a biennial survey of the Creative Media workforce and provides the most comprehensive profile of working life in the UK's creative sectors ever produced (excluding Film Production freelancers, Photo Imaging, Publishing and Advertising)[262]. It includes questions on working patterns; training needs and experiences; qualifications; and demographics. In order to provide the perspective and capture the experience of both individuals working at the time of the survey and those available to the workforce but not actually employed at the time of the survey, a self-completion questionnaire was distributed by post or by email to employees and freelancers via two main routes during May 2008. A boost set of questionnaires were sent out to the Commercial Radio sector in October 2008. The first route consisted of the distribution of around 28,500 questionnaires via and with the support of, Trade Associations, Membership Organisations and Unions. Second, over 8,000 paper questionnaires were distributed via approximately 700 industry employers in order to ensure adequate representation from individuals working at the time of the survey. Skillset's Employer Database was used to target companies and the information from Skillset's Employment Census 2006 on numbers of employees and freelancers in each company was used to calculate the number of questionnaires with which to target each company. Employers were asked to distribute the questionnaires internally to their workforce. Approximately 1,000 industry employers received an email direct from Skillset requesting their assistance in terms of circulating a link to the online survey to their workforce. A total of 4,970 completed valid questionnaires were received. To account for non-response and in order to achieve total figures representative of the Creative Media Industries in scope, weightings have been applied to each sector, based on information from Skillset's 2006 Employment Census.

[262] Skillset's Creative Media Workforce Survey 2010 will be published in early 2011 and includes all Creative Media sectors with the exception of Advertising (which was not part of Skillset's footprint when planning for this survey commenced).

- **Skillset/UK Film Council, Feature Film Production Workforce Survey 2008** is a biennial survey conducted as part of a cycle of film production surveys on order to obtain a reliable picture of working patterns, current and future skills development needs, existing provision, and barriers experienced to receiving training and development from film sectors not covered elsewhere by research.[263] The survey covered all individuals working on feature film productions that met the following eligibility criteria:
  - shooting took place within calendar year 2006;
  - the production was 80 minutes or longer in duration;
  - it had a minimum budget of £500,000;
  - it involved UK crew;
  - it was intended for theatrical release.

  There were 102 feature film productions eligible for the survey according to these criteria. Of these a total of 54 productions facilitated the involvement of their crew in the survey, 37 either refused to support the study or it was not possible to establish contact with the production office and a further ten involved few UK based crew.

  Over 6,600 names were gradually compiled from the crew lists for these productions. Duplicate names of individuals appearing on more than one production list were removed, resulting in a list of around 5,500 individual UK crew members.

  Production companies and producers distributed questionnaires to their crew and as a result it is not possible to know for certain how many were sent out, which means an accurate response rate cannot be calculated. However, a total of 1,158 respondents took part in the survey, equivalent to a response rate of 21% if every person on the de-duplicated crew lists received a questionnaire.

- **Skillset's Photo Imaging Workforce Survey 2007** was conducted via postal and online self-completion questionnaires between March – June 2007. The primary sample frame used was Experian's UK company database. This was supplemented by promotion of the survey via key trade associations and

[263] Skillset/UKFC Feature Film Production Workforce Survey 2010 will be published in early 2011.

encouragement of their members to participate. A multi-stage sample design was created whereby questionnaires were sent directly to individual photographers and to individuals working in all other photo imaging sectors via companies listed in the sample frame. A total of 1,041 completed questionnaires were received.

The survey covered all sectors of the Photo Imaging Industry including photographers, photography companies, photographic equipment and manufacture support services, picture libraries and agencies, picture laboratories, photo imaging specific retail companies and design studio hire/image producers.

This data will be updated by the 2010 Creative Media Workforce Survey due for release in early 2011.

- **Skillset's Employment Census 2006** – the last Census conducted prior to 2009, was conducted to measure the size and shape of the Creative Media Industries (excluding Film Production freelancers, Photo Imaging, Publishing and Advertising). Census forms were distributed to companies throughout June for completion on 12 July 2006. A central database of around 13,000 companies was set up at Skillset using a number of available sources including trade association membership lists, screen agency records and other databases. In addition, the Census was publicised in trade journals and national press in order to reach companies outside the membership of industry organisations. Each company was given two months to complete and return the questionnaire. The 2009 Census achieved a response from 2,878 companies. The estimated percentage coverage of each sector has been used to generate estimates of the workforce in each sector and in the industry as a whole, from the responses received, through the calculation of weighting factors. These take into account all available information about the representation of the response for each sector in terms of numbers and size of companies.

- **Balancing Children and Work in the Audio Visual Industries 2006** aimed investigate the factors specific to balancing a career with family life in the Creative Media sector, and in particular to identify and isolate the determinants of whether or not women remain in the industry at each phase of balancing a career with family life. There were two stages to the research. First, the design of the study was informed by structured one to one interviews with representatives from expert, industry, and government organisations. Second, study data were generated via five focus group discussions which took place during the first week of October 2006. Participants were organised characterised by homogeneity of characteristics determined by the purpose of the study and the sample specification (e.g. gender, presence of children), in order to capitalise on participants' shared experiences. In addition, in advance of the focus group discussions each participant was invited to complete a short questionnaire to provide context to the focus group discussions. A non-probability sample was designed. Sub-sectors of the were selected where Skillset research has shown there is either under-representation of women with dependents under the age of 16 (compared to men); the per cent of women working is above average; or there is a high degree of reliance on freelancers.

- **Survey of the Audio Visual Workforce 2005 –** the last workforce survey conducted prior to 2008. The scope of the survey was all people employed in the following sectors: Broadcast, Independent Production for TV, Facilities, Interactive Media, Content for Computer Games, Corporate Production, Commercials, Animation.

  In order to provide the perspective and capture the experience of both individuals working at the time of the survey and those available to the workforce but not actually employed at the time of the survey, a self-completion questionnaire was distributed by post or by email to employees and freelancers via two main routes during March 2005.The quantity of questionnaires distributed was calculated based on the employment estimates reported in the 2004 Skillset Employment Census and an estimated rate of response based on previous experience of similar surveys.

  The first route consisted of distribution of around 74,000 questionnaires via and with the support of various trade organisations. Second, around 8,000 questionnaires were distributed via employers in sectors employing individuals in occupations not sufficiently represented by the trade organisations involved. The Skillset 2004 Employment Census company database was used to target companies and the information from the Census on numbers of employees and freelancers in each company was used to calculate the number of questionnaires with which to target each company. Employers were asked to distribute the questionnaires internally to their workforce. Six weeks following the initial distribution, reminder letters were issued. At this time, the sample was boosted by distributing 39,000 questionnaires to individuals via employers in sectors and occupations where the response was low. Again the information from the 2004 Skillset Employment Census on numbers of employees and freelancers in each company was used to calculate the number of questionnaires with which to target each company.

A total of 6,885 completed valid questionnaires were received. It is not possible to calculate an exact response rate, as the exact number of questionnaires distributed via some channels is unknown.

Annex B: 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 Industries sit in broad classifications that include activity outside of Creative Media preventing any discrete and crucial analysis e.g. Interactive Media, 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 Industries 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 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 e.g. GVA and GDP and so these measures exclude contributions from elements not served well by SIC e.g. Interactive Media, 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 Industries 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 Industries in Scotland where as noted earlier Interactive Media 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 Industries 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.

Table 8 Labour Force Survey and Skillset Creative Media Employment Estimates - Scotland

Labour Force Survey[264]			Skillset[265]		
Industries			Industries		
SIC 2007	**Description**	**Total Employed**	**Main Sector**	**Sub-sector**	**Total Employed**
60.2	TV Programming & Broadcasting activities	2,400	**Television**	Broadcast TV	950
59.11	Motion Picture, Video and TV Prog. Production	3,200		Cable and Satellite	0
59.13	Motion Picture, Video and TV Prog. Distribution activities	*		Independent Production	1,000
	Sub-total	**5,800**[266]		**Sub-total**	**1,950**
60.1	Radio Broadcasting	2,050	**Radio**	Broadcast Radio	1,650
				Independent Production	*
	Sub-total	**2,050**		**Sub-total**	**1,650**
59.12	Motion Picture, Video and TV Prog. Post-	*	**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**	**1,050**
			Film	Film Production[267]	700

[264] ONS Labour Force Survey January to December 2010.

[265] Skillset (2009) Employment Census except for Publishing, Photo Imaging, Advertising, Creative Occupations outside the industry and other business sectors of interest.

[266] This sub-total also includes individuals working in the Film and Video sub-sectors (see 59.11 and 59.13). These figures can not be disaggregated so have been included here.

[267] Secondary analysis of unit lists for 2009 feature film productions (80 minutes or longer) and Skillset (2009) Employment Census.

Labour Force Survey[264]			Skillset[265]		
				Film Distribution	300
				Cinema Exhibition	1,450
				Moving Picture Archives and Libraries	*
				Sub-total	**2,450**
18.20/2	Reproduction of video recording	*****	**Other Content**	Animation	500
				Commercials and Pop Promos	*
				Corporate Production	150
	Sub-total	*****		**Sub-total**	**650**
			Interactive Media	Interactive Media	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[268]**	Photographic activities	
74.20/1	Portrait Photographic activities	*		Portrait Photographic activities	*
74.20/2	Other Specialist Photography not Portrait	*		Other Specialist Photography not	*
74.20/3	Film processing	*		Film processing	*
74.20/9	Other Photographic activities; n.e.c.	*		Other Photographic activities; n.e.c.	*
	Sub-total	**1,900**		**Sub-total**	**1,900**
58.11	Book Publishing	1,700	**Publishing[269]**	Book Publishing	1,700
58.12	Publishing of Directories & Mailing Lists	*		Publishing of Directories & Mailing	*
58.13	Publishing of Newspapers	4,500		Publishing of Newspapers	4,500
58.14	Publishing of Journals & Periodicals			Publishing of Journals & Periodicals	

[268] ONS Labour Force Survey July 2009 – June 2010.

[269] Ibid

Labour Force Survey[264]			Skillset[265]		
58.14/1	Publishing of Learned Journals	*		Publishing of Learned Journals	*
58.14/2	Publishing of Consumer, Business and Professional Journals and Periodicals	3,750		Publishing of Consumer, Business and Professional Journals and Periodicals	3,750
63.91	News Agency activities	*		News Agency activities	*
63.99	Other information Service activities n.e.c.	*		Other information Service activities	*
58.19	Other Publishing	1,700		Other Publishing	1,700
	Sub-total	**13,200**		**Sub-total**	**13,200**
073.10	Advertising Agencies	*****	**Advertising[270]**	Advertising Agencies	*****
73.12	Media Representation Services	*****		Media Representation Services	*****
	Sub-total	**2,250**		**Sub-total**	**2,250**
	TOTAL	**27,950**		**TOTAL**	**29,550**
Occupations outside the Creative Media Industry[271]			**Occupations outside the Creative Media Industry**		
SOC 2000	**Description**	**Total employed**	**SOC 2000**	**Description**	**Total employed**
3431	Journalists, Newspaper & Periodical Editors	1,450	3431	Journalists, Newspaper & Periodical	1,450
3432	Broadcasting Associate Professionals	*	3432	Broadcasting Associate Professionals	*
3434	Photographers & Audio-Visual equipment	2,400	3434	Photographers & Audio-Visual	2,400
1134	Advertising & Public Relation Managers	2,500	1134	Advertising & Public Relation	2,500
3433	Public Relations Officers	3,550	3433	Public Relations Officers	3,550
	TOTAL	**10,600**		**TOTAL**	**10,600**
Industries + Occupations			**Industries + Occupations**		
TOTAL		**38,550**	**TOTAL**		**40,150**

[270] Ibid

[271] Skillset's contract with UKCES states that Skillset has exclusive responsibility for occupations 3421, 3432 and 3434 and primary responsibility for 1134 and 3433.

Other Business Sectors of Interest[272]			Other Business Sectors of Interest [273]		
SIC 2007	**Description**	**Total Employed**	**Main Sector**	**Sub-sector**	**Total Employed**
18.20/3	Reproduction of Computer Media	-	**Content for Computer Games**	Reproduction of Computer Media	-
58.21	Publishing of Computer Games	-		Publishing of Computer Games	-
62.01	Computer programming activities			Computer programming activities	
62.01/1	Ready-made interactive leisure and entertainment software development	1,150		Ready-made interactive leisure and entertainment software development	1,150
62.01/2	Business and domestic software development	10,050		Business and domestic software	10,050
62.02	Computer consultancy activities	11,350	**Interactive Media**	Computer consultancy activities	11,350
63.12	Web portals	-		Web portals	-
	TOTAL	**22,600**		**TOTAL**	**22,600**

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.

[272] Skillset's contract with UKCES does not include responsibility for these SIC outside the Creative Media Industries, they sit within the footprint of e-Skills. The following business sectors represent areas where there is a Creative Media interest.

[273] Ibid

Annex C: Data Sources

Skillset sources:

- ‘A Skills Review for the TV & Radio Sector’, 2009.
- ‘Balancing Children and Work in the Audio Visual Industries’, 2006.
- ‘Creative Media Employer Survey’, 2010 (to be published 2011)
- ‘Creative Media Workforce Survey’, 2010 (to be published 2011), 2008, 2005, 2003.
- Employer and stakeholder qualitative framework 2010
- ‘Employment Census’, 2009, 2006.
- ‘Feature Film Production Workforce Survey, Skillset/UK Film Council, 2008.
- ‘Film Sector Employers: Skills and Training Needs in Production, Distribution & Exhibition, Skillset 2009.
- ‘Mapping Creative Media and Fashion & Textiles Relevant Education and Learning and development Provision in FE, HE, and the Private Sector in the UK, 2010 (to be published 2011)
- ‘Photo Imaging Workforce Survey’, 2007 reported in Skillset (2009) Photo Imaging Labour Market Intelligence Digest
- ‘Profile of the Photo Imaging Sector’, 2008.
- ‘Skills Needs Analysis for the Publishing Sector’, 2008.
- ‘Submission to the Development of MAC Shortage Occupation Lists’, 2010.
- ‘The UK Facilities Sector’, UK Screen (2010).

Third party sources:

- British Photographic Council (2010), Industry Survey of Photographers

- CCS/TBR Workforce Survey, 2009
- ‘Cities, Clusters & Creative Industries: The Case of Film and Television in Scotland,’ Turok (2003)
- ‘Communications Market Report: Scotland’, Ofcom, 2009.
- ‘Communications Market Report: Radio’, Ofcom, 2008
- ‘Creative Industries Key Sector Report’, Scottish Government, November 2009.
- ‘Creative Media: New Talents for the New Economy’, Department for Culture, Media & Sport (2008)
- Creative Scotland (2010) ‘Growing the Television Broadcast and Production Sector in Scotland.’
- DCMS Economic Estimates December 2010
- ‘Digital Britain Final Report’, Department for Culture, Media and Sport, June 2009.
- ‘Digital Inspiration: Strategy for Scotland’s Digital Media Industry’, Scottish Enterprise, 2009
- ‘Government Economic Strategy’, Scottish Government, 2007
- GRO Scotland; Mid-year population estimates (2008)
- HESA 2008/09
- Inter-Departmental Business Register (IDBR) 2009
- Labour Force Survey, ONS, January to December 2010
- ‘Media Predictions', TMT Trends 2009, Deloitte, 2009.
- Raise the Game: The competitiveness of the UK’s games development sector and the impact of governmental support in other countries, NESTA, 2008
- NESTA Annual Review, February, 2009
- ‘Platform for Success’, Scottish Broadcasting Commission, September 2008.
- RAJAR (Radio Joint Audience Research Limited), 2010 Quarter 4

- ‘A Showcase of Publishing in Scotland’, Publishing Scotland, 2009.
- Scottish Affairs Committee, Video games industry in Scotland
- Scottish Employer Skills Survey 2010
- Scottish Funding Council 2008/09
- Scottish Government, ONS (ABS and ABI) 2008.
- Scottish Government, ONS (IDBR) 2010.
- ‘Skills for Tomorrow’s Media’, Skillset/Department for Culture, Media and Sport, 2001
- ‘Small Firm Networking: An Insight into Contents and Motivating Factors,’ Shaw, 2006
- ‘Survey of Television Production in Scotland’, Scottish Broadcasting Commission, 2008
- ‘The Global Animation Industry: facts and stats’ in IMAGINE Nov/Dec 2009
- UK Film Council (2010) Statistical Yearbook
- Universities Scotland (2011) Scotland's Creative Economy: the Role of Universities
- ‘Working Futures 2007-2017 Evidence Report 2’, UKCES, December 2008.

Web Sources:

- www.caledonianmercury.com
- www.daretobedigital.com
- www.news.bbc.co.uk/1/hi/entertainment/8225954.stm
- www.publications.parliament.uk/pa/cm201011/cmselect/cmscotaf/500/50002.htm
- www.scotland.gov.uk/Publications/2011/01/19140602/0
- www.scottishscreen.com/content/main_page.php?page_id=20

- www.scqf.org.uk
- www.skillset.org/facilities/industry/article_6812_1.asp
- www.skillset.org/interactive/industry
- www.skillset.org/interactive/industry/article_6921_1.asp
- www.skillset.org/skillset/press/releases/article_6060_1.asp
- www.youview.com

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